



American Institute of Higher Education – The 6<sup>th</sup> International Conference  
Charleston, SC – April 6 – 8, 2011

# American Institute of Higher Education

## 6<sup>th</sup> International Conference Proceedings

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## **MESSAGE FROM THE CONFERENCE CHAIR**

On behalf of the Conference Organizing Committee, I would like to welcome you to Charleston and to the 6<sup>th</sup> International Conference of the American Institute of Higher Education (AmHighEd). The conference will provide an opportunity for participants to share their ideas and research in the fields of business and education.

The Best Papers selected in the categories of Business and Education will, after incorporation of reviewers' comments, be published in the American Journal of Business Research and the American Journal of Educational Studies, respectively. In addition, the remainder of the top five papers will undergo an expedited review process for possible publication in these journals.

We at AmHighEd believe that research is a cooperative enterprise among scholars and practitioners, which is why we are committed to providing a collaborative environment that fosters the free flow of ideas and constructive feedback among researchers, practitioners, and students. We would like to thank all the attendees whose contributions and participation are essential to creating a stimulating environment at the conference.

I would like to take this opportunity to thank the organizing team that did an excellent job of putting this conference together. I am also indebted to our reviewers who reviewed the manuscripts, sometimes under extreme time constraints, and selected the best papers that fit this conference.

We hope you will find the conference productive, informative, and enjoyable. We also wish you a pleasant stay in Charleston and look forward to receiving your constructive comments that would help us in our future planning. Please visit our website ([www.amhighed.com](http://www.amhighed.com)) to obtain information of future conferences, journals, webinars, and grant-writing services.

Sincerely,

Alireza Lari  
Conference Chair  
American Institute of Higher Education

Program Chairs:  
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## ABSTRACTS



**DEVELOPING A FOCUS ON SERVICE LEARNING IN HIGHER EDUCATION: A MODEL WORTH  
REPLICATING?**

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The purpose of the Doctoral Leadership Department is to provide advanced study in leadership that will prepare graduates to make significant contributions to their organizations and communities by learning about Leading Self, Leading Learning Organization and Leading to Serve. This paper presents the findings of a qualitative research study to evaluate students' commitment to service and its transformational impact after completing a year-long service component of a 3-year Doctorate in Leadership for the Advancement of Learning and Service in Higher Education at Cardinal Stritch University in Milwaukee, Wisconsin. Ten randomly selected graduates of the program participated in a focus group which aimed at discovering the transformational sustainability of the service learning year post program completion. Transformational leaders possess a developed philosophy of service, the ability to critically and comprehensively examine important issues, and the motivation to effectively catalyze long-term, systemic transformation. The service curriculum provides a base from which students can develop the components necessary for transformational leadership.

Following a cohort model, the focus the first year is on advancing students' knowledge of leadership and leading self, followed by the learning year, leading learning organizations. The third year is the service year in which students develop knowledge, skills, and attitudes for effective leadership to build exceptional learning organizations that focus on providing service to the common good – locally, nationally, or internationally. The goal of the service strand of the leadership curriculum is to prepare students to effectively apply their expertise in leadership and learning to the engagement and transformation of self, organization, and community. A learning organization is defined as one in which "people continually expand their capacity to create the results they truly desire, where new



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and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together" (Senge, 1990, p. 3). Developing a service focus within an organization includes an emphasis on both the individual and the culture. The service strand in the doctoral program explores avenues for expanding the definitions, theories, and practical components of service.

Service Learning is defined as curriculum-based community service that integrates classroom instruction with community service activities. The core idea behind service learning is to enrich students' learning by engaging them in civic and community life by providing service to external constituents integrating community service to academic lessons. Findings reveal that service learning contributes to students' academic learning and, by expanding perspectives through action, helps them develop sensitivity to human need and a responsibility to serve. Current students will be our future leaders. Leaders need a sense of ethics and compassion for others in addition to knowledge. This requires more than service learning, but a deeper understanding of the mutual benefits of service that inspire a service attitude.

Richardson (2006) states that "Service learning not only has the power to enrich communities, it also has the power to enrich learning" (p. 38). As a teaching strategy, service learning motivates students by taking them beyond the classroom to address community problems that they care about (Richardson, 2006). From an instructional point of view, service learning applies key elements of effective teaching such as inquiry, where students become active partners in the search for knowledge (Elliot, Kratochwill, Littlefield, & Travers, 1996) and authentic learning, where students acquire essential skills in real-life contexts (Hope, 1999). Service learning provides meaningful learning contexts that support instruction in the formal classroom setting. And in short, service enriches the human side of learning and brings dignity to our work – the work of leadership in a global society.

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**ETHICS AND ECONOMICS: CRITICAL THINKING ABOUT THE BASIS OF POLICY**

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This paper investigates the difficulties encountered by economics majors when asked to critically evaluate the ethical precepts of modern, orthodox economic theory. Its principal findings are that students have great difficulty identifying the ethical precepts of the economics discipline that support the discipline's advocacy of positions such as free markets and free trade. In addition, they have great difficulty identifying how arguments against the discipline's policy positions are simultaneously arguments against the discipline's implicit ethics. What makes these symmetrical findings so disconcerting is that these student learning difficulties exist *despite* a concerted effort to address these very problems.

In pursuing this economics/ethics/policy problem, this paper relies on and extends earlier work by Carrithers and Peterson ("Conflicting Views of Markets and Economic Justice: Implications for Student Learning," *Journal of Business Ethics* (2006) 69:373–387.) In this earlier work, Carrithers and Peterson identify an "educational disconnect" in the teaching of issues related to market economics and social justice. Carrithers and Peterson find that this disconnect exists between those faculty who support market-based economies and those who believe capitalism promotes economic injustice and suggest that this disconnect is so wide that students are trapped into choosing one or the other position (or neither) and are left unable to link the two sides of the discussion. This earlier paper concludes with suggestions for curricular reforms aimed at easing the disconnect. One of the suggested curricular reforms suggested by Carrithers and Peterson focused on the teaching of the History of Economic Thought. The authors call upon instructors of the discipline's ideas to emphasize in their classes the broader discussions of social welfare that were so central to earlier economists but have been displaced as the discipline narrowed and became more technical in the 20<sup>th</sup> century.

After summarizing the results of the earlier work of Carrithers/Peterson, the current paper describes curricular changes adopted to promote student understanding of the relationship between ethics and the policy positions of the economics discipline. It then describes the extremely discouraging results obtained from one-hour oral exams conducted by three members of the economic faculty with each graduating senior. The paper then describes how John Bean, Professor of English, and Marc Cohen, Assistant Professor of Philosophy, join Carrithers and Peterson in crafting further curricular reforms aimed at reducing the difficulties. (Bean's current research focuses on problems



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of “transfer of learning” as students move through and across a curriculum and on the development of institutional assessment strategies that promote productive faculty conversations about teaching and learning. Cohen’s recent work focuses on social contract theory and exploitation in business ethics, and more general questions in moral/ political philosophy.) The paper concludes with presentation of the results obtained from these curricular reforms.



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**EARLY FAMILY AND LABOR MARKET EXPERIENCE ON ADULT ENGAGEMENT AND RETENTION**

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Retention and engagement of employees, especially young newly hired employees, are major concerns for all businesses today. Employers continue to create compensation packages, alternative work arrangements, and internal career building opportunities that will satisfy, engage, and ultimately retain their employees. Concurrently a growing body of social science literature points to the relevance and significance of early childhood family and work experiences as precursors and predictors of adult labor market success. This study utilizes a sample of 1,200 25 year old men and women from the NLSY97 longitudinal dataset. Using a multi-step testing procedure, the author demonstrates that employees's perceptions and acceptance of these employer packages, etc. are directly and indirectly affected by early childhood and labor market experiences.



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**DEVELOPING A LATERAL LEADERSHIP DEVELOPMENT PROGRAM**

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This paper examines the operation of lateral leadership in a particular small business organization. The owners of the organization desire to institute a process of lateral leadership throughout their organization. The paper seeks to align existing leadership development concepts and processes with the owners' efforts to deliver a lateral leadership development program for their employees. The outcome is the presentation of an integrative model illustrating methods to develop a lateral leadership perspective, while maintaining the development of essential foundations of leadership.



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**PREPARING COLLEGE STUDENTS TO WORK IN TEAMS**

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Most contemporary organizations organize their employees around the concept of "teams." Yet many college graduates are ill prepared to work in those teams. Studies related to college student development show that students are often ill equipped for the complexities of face to face communication and exhibit a general lack of self-awareness and interpersonal maturity. Furthermore, today's students are less inclined to receive feedback in a productive way. This presentation will discuss the importance of preparing students for team membership and will identify the typical challenges of such training. In addition to teaching about team concepts such as structure, leadership, goal setting, communication, decision-making and the like, students can benefit from participating in a moderately stressful team environment in which they are given an opportunity to reflect upon their experience and improve their interpersonal skills.



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**COMMUNICATION AT THE CENTER OF A CROSS-CULTURAL BLENDED LEARNING LEADERSHIP  
PROGRAM**

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This presentation highlights the significance of communication in a cross-cultural blended learning graduate leadership program. The researchers present multiple dimensions of a blended learning environment emphasizing computer-mediated communication and interaction (Grooms, 2000) along with Jacobi's (1991) 15 mentoring functions, variables examined in light of sustained student success. This study resulted in a cross-cultural leadership sustainability model that accounted for the virtual dimensions of online blended learning along with other intervening and moderating factors that effected leadership sustainability.



**UNDERSTANDING THE ROLE OF TECHNOLOGY IN THE LIVES OF OLDER CONSUMERS**

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Baby boomers are the largest group of consumers around the globe and their patterns of consumption and behavior in the marketplace will help define the landscape of society for generations to come. How these consumers use and integrate technology into their lives is the focus of this ongoing research. Using person-assisted surveys, baby boomer participants will detail what types of technology they use and how they integrate it into their lives. Gerontechnology combines the content areas gerontology and technology to typically explore three broad areas: computer and internet based activities, clinical activities and caregiver activities (Cohen-Mansfield and Biddison 2007). We expand the scope of gerontechnology to include consumption activities such that we better understand what types of technology older consumers' use and how they integrate the technology into their lives. This study contributes to knowledge in the areas of consumer behavior, gerontology, marketing and public policy. A convenience sample of 50 older consumers (ages 65+) will be recruited from an area senior center with varying demographics and psychographics. Person-assisted surveys is a method frequently used and quite appropriate for working with older consumers as it gives them an opportunity to ask questions, to clarify confusing questions and to articulate their responses beyond the frame of the survey (Burns and Bush 2010). In addition to the survey, the session will be digitally audio-taped so that the participants can have the opportunity to verbally articulate any additional information not covered in the survey that they may want to share. Once the data is coded and analyzed, any necessary modifications will be made before the survey is administered in other markets. The goal is to talk to get a representative sample of baby boomers in 4-5 markets such that the implications of our recommendations can be broadly considered by marketers, policy makers and caregivers.

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**INTEGRATING INTERNATIONAL CONTENT INTO AN UNDERGRADUATE BUSINESS COURSE**

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Undergraduate business students have been well indoctrinated with the idea that the marketplace is global. Businesses compete globally customers come from around the globe and, what happens in one part of the world can and does affect the way business is conducted in another part of the world. And, while some students are able to travel abroad as a part of their matriculation, scores of others rely on course content to expose them to their international neighbors. For many students the reality of this global marketplace is at best an arms' length away from their own. This research explores how international content is integrated into an undergraduate consumer behavior course and considers the student's point of view in reviewing the variety of teaching methods used to deliver the course content and assessing student reported learning outcomes. In the spring semester 2011, 27 undergraduate consumer behavior students in the business school of an HBCU located in North Carolina work in small groups throughout the semester to read, analyze and present their recommendations on the Harvard Business School case entitled "Can Bollywood Go Global?" The case is an in-depth opportunity for students to explore the development of the Indian film industry and its attempts to appeal to a global market. In addition to the case work, students write a pre- and post- case essay (detailing their experiences, thoughts and stereotypes about India and its people), watch footage from select Bollywood films, participate in sessions with class speakers from India and hear from a travel agent who specializes in travel to India. The students will also act as agents of the Indian film industry interviewing their peers about the appeal of Indian films to US consumers. The study concludes with a summary of the effectiveness of the variety of teaching techniques based in part on student surveys and recommendations.



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**ENHANCING UNDERSTANDING OF THE OUTCOMES FOR A TEAC ACCREDITED EDUCATIONAL LEADERSHIP PROGRAM: RE-THINKING THROUGH SEP, UBD, DSRP, AND A SERVICE MODEL**

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Our initial program logic model (presented at the March, 2010, AIHE Conference) offered an overview of an Educational Leadership program in terms of inputs, processes, outputs, and outcomes as well as the Teacher Education Accreditation Council (TEAC) Quality Principles, Inquiry Brief components, and the six main Interstate School Leaders Licensure Consortium (ISLLC) standards. Following success in the accreditation endeavor, we now probe deeper into both the educational processes that undergird the program and the outcomes that distinguish the effectiveness of the program.

The systems evaluation partnership (SEP) model flows naturally from the program logic model. SEP seeks to illuminate the pathways of influence and address the interaction of theory and practice. By associating evidence with possible causal pathways and relating measurement to nodes within the model, the SEP provides a better focus on those aspects of the program that act as through-lines and hubs for understanding how our educational leadership efforts actually impact the autoptic preference – the performance of the students in the schools that our program's graduates lead.

Utilizing Understanding by Design (UbD) principles forces us to focus upon our outcomes and adjust our idea of the autoptic preference, both locally and globally. Based on feedback from conference attendees and our own application of Cabrera and Colosi's DSRP (Distinctions, Systems, Relationships, Perspectives) model, we have now begun the process of re-conceptualizing our outcomes from the prior two models under the umbrella of four foci for our students: executing the king's orders, changing the king's mind, becoming the king, and serving The King. The king (with a small "k") represents the federal, state, or local governing authorities that set requirements for school systems. As a Christian institution, the King (with a capital "K") is Christ.



**COLLABORATIVE LEADERSHIP IN HEALTH AND HEALTH CARE IMPROVEMENT**

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Collaboration is a form of behavior providing advantages in capturing synergies of value contributions. Leadership embracing collaboration as a working philosophy supports organizational and societal synergies. In the area of health care improvement broad value contribution to both organizations and society are possible when the collaborative processes are implemented. This paper reviews the principles collaboration and leadership as a means to improve health and health care. A review of trends in health and health care provides a context to the examination of literature of leadership and collaborative processes. The author will present the results of a qualitative research process that examines specific organizations participating in the health and health care industries. Descriptive and prescriptive statements will be included in the paper, providing points for discussion in health and health care policy formulation and implementation.



**THE EFFECT OF SERVICE-LEARNING IN AN URBAN PUBLIC SCHOOL ENVIRONMENT ON MAJOR  
VERSUS NON-MAJOR HIGHER EDUCATION STUDENTS**

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Service-learning research frequently studies the impact of the experience on homogeneous groups of participants. This study extends the research by investigating the impact of service-learning on majors versus non-majors enrolled in college multicultural literature courses. These courses integrated the higher education curriculum with the elementary curriculum standards established by the community partner.

This research study was conducted at a private liberal arts college in the United States in two multicultural literature courses that incorporated service-learning. One course was comprised of college students who identified education as their chosen major. The other course contained non-education major students. The focus of the course was on multicultural children's and adolescent literature. Based on constructivist learning theory, the service activities provided concrete experiences, opportunities for reflection, and the abstract analysis of community, as a social system, needs. The service-learning was conducted in a high need, high poverty, public elementary school located in a large city in the southern United States. The course was designed to meet general education criteria in literature for non-education majors; it also met an education department course requirement for education majors.

Research data for the study was collected through surveys, written reflections, and course evaluations. The survey was administered in a pre and post fashion. A pre-survey was administered prior to the first service-learning experience; the post at the conclusion of the semester. The data was analyzed to determine the relative change in attitudes towards service-learning in major versus non-major students. To provide additional information not measured on the surveys, the students also completed written reflections during the experience. At the end of the semester, students in both groups reflected on and evaluated the entire course experience including critical thinking, perception, engagement, challenge, participation, and individual performance.

This qualitative research project focused on one overarching question--how does the service-learning experience enhance the learning process for education majors versus non-majors? Several sub-questions are embedded in this main question. These include if major versus non-major service-learning experiences: influence student understanding of the importance and responsibility regarding community service as a long-term commitment; assist students in recognizing the need for community service and feel their contributions were valued; and, would students understand how the concepts learned in the higher education classroom apply to real world environments.

*Keywords:* Service-Learning, Higher Education, Urban School



**NEW CHANGES AFFECTING SMALL AND MEDIUM BUSINESSES**

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The purpose of the study is to determine whether or not increased utilization of computer-based decision support systems contribute to the success of the small business organization. Many small business firms have turned to computer systems for assistance in their managerial tasks. The computer has made a major impact on how managers now make decisions simply by making the information more readily available. The increased role computer systems play in assisting the small business manager is recognized. However, decision-making is one of the central responsibilities of management. Managers must continually make a variety of decisions. The quality of managerial decisions directly contributes to the success or failure of the organization they manage. Information technology, through DSS, can facilitate management decisions by integrating software into an effective system that can assist semi-structured decisions making. Consequently, effective utilization of decision support systems can have a direct effect on the success of any organization. Managers of small businesses frequently must consider using information technology in different circumstances than managers of larger firms. The sample size is 150 surveys. The procedure used is survey questions mailed to the businesses obtained from the Sprint Yellow Pages and from the South Carolina Chamber of Commerce.

The majority of the people who answered the survey were from retail businesses, followed by construction and service. The average areas of business computer utilizations payroll was number one, followed by spreadsheet, and then accounting. Fifty-two percent was the average of businesses that utilized spreadsheet programs to aid decision-making based on all 150 businesses surveyed. The primary computer system business utilized for decision-making support based on the businesses surveyed was the personal computer. Also, the average spreadsheet function based on decision support utilization show financial analysis was most popular followed by raw materials; merchandise ordering, and personal scheduling. The average level of formal education for the principal user of computer-aided decisions making were computer related college degree or higher and significant formal computer education. The other finding showed average software spreadsheet program businesses utilized for decision support was Excel, and the businesses utilized the spreadsheet program to make decisions 6 or more times per day. The average level of computer experience for the principal user was between 3 to 8 years. Also, the other finding included average improvement made in quality decisions making as a result of utilizing a spreadsheet based decision support was significant. Finally, the average increase in profitability as a result of utilizing the spreadsheet based decision support system was loss or no increase to 5% increase. Also, the average estimate of change in the number of employees in the business since utilizing the spreadsheet based decision support system was less than 10%.



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This study supports the research that increased computer utilization results in improved organizational performance when organizational performance is measured as a factor of organizational profitability. Also, the study supports the research relating to increased organizational size, user participation in computer development, level of user computer experience, and increased levels of user computer education with increased computer usage within the organization. Since the results of this study indicate that usage of computer based decision support systems by small businesses improves the organizational success, this may encourage small business operators who are computer phobic to implement this technology to the benefit of themselves and their businesses.



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**REVISITING FOREIGN AID PROJECTS IN SUB-SAHARA AFRICA: COLLABORATIVE FRAMEWORK**

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This paper highlights the significance of local community participation in foreign aid projects. The focus of the paper is that aid projects in sub-Saharan Africa (SSA) need effective project management method. The importance of local communities' participation in a collaborative monitoring environment is argued. The aim of the paper is to challenge existing practice, contribute to, and discuss the pragmatics of local communities' involvement in foreign aid projects. Moreover, the need for local communities' voice reaching the international arena is crucial. Surveys and interviews from an interpretive perspective were used as data collection methods to support the argument. The intellectual framework of this study suggests that stakeholder collaboration can improve foreign aid project management practices in sub-Saharan Africa.



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**SHOULD WE CONTINUE TO USE VIOLENCE TO TEACH NONVIOLENCE IN THE U.S. PUBLIC SCHOOLS?**

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Classroom management is an ongoing challenge in today's traditional public schools. This challenge is compounded by several factors. Research has pointed to society's glorification of social deviance as a factor that has slowly worn away at the standards of respect to which many educators have grown accustomed. It is argued that social deviance in the form of violence (both in the media and other forms of entertainment such as gaming) has made bullying more visible, and in many cases it has been glorified (E.g., the Grand Theft Auto game series. Millennial teachers also state that the difficulty motivating students is also a contributing factor. Methods of classroom management in the United States that de-emphasize discipline in favor of cooperation and character education have become increasingly popular. Increasingly, alternative educational programs, charter schools, and some of magnet schools across the country offer nontraditional, nonviolent approaches to classroom management. These programs emphasize student involvement, cooperative school-wide problem solving and even curricula from the military. Since 1999 for example, Chicago has opened five military academies serving students in grades 2 – 12. These schools emphasize a military curriculum with classroom management reflecting that philosophy. Instead of the usual negative reinforcers like detentions, suspensions or corporal punishment, these schools rely upon personal responsibility and accountability. Despite these trends, there remain twenty states that still feature legal corporal punishment of students in the public schools. In forty percent of the country, the use of violence (via paddles and sticks) is employed in order to teach students nonviolent principles. In view of the documented success of innovative programs across the country, the feasibility of this practice and the congruency of the practice with the message to students are called into question.



**ARAVIND ADIGA'S "WHITE TIGER":  
INCORPORATING EASTERN LITERATURE IN INTERNATIONAL BUSINESS CLASSES**

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Along with the growth of international business has also been a growing awareness of literature from the East and the Middle East by the Western world. The fields of literature and business should not remain isolated entities in the world of academia. Good literature allows for a deeper and more genuine understanding of a culture. A specific example of a literary work that can be incorporated into an International Business class is Aravind Adiga's "White Tiger," the winner of the 2008 Man Booker Award. This book traces the rise of a man, Balram, from abject poverty to great wealth through some extremely amoral methods. In tracing the process of this climb, we are introduced to a cross-section of India: the poor, the powerful, and the politicians. This book gives us a glimpse into the complexities embodied in an eastern culture with its varying religions and castes and languages. Aravind Adiga states in an interview, "The book is a novel: it's fiction. . . . But it's built on a substratum of Indian reality . . . I've tried hard to make sure that anything in the novel has a correlation in Indian reality. The government hospitals, the liquor shops, and the brothels that turn up the novel are all based on real places in India that I've seen in my travels." All that Adiga attempts to address in his novel takes us beyond scenarios available in case studies. The suggestion here is not that literature be used in place of traditional textbooks in international business classes but that literary works be used as supplements to help create a more genuine comprehension of the world in which our students seek to engage. This paper will explore aspects of Adiga's work that can lead to a better understanding of an Eastern culture.



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**COMMUNICATION AT THE CENTER OF THE CONSTRUCTIVIST CULTURE IN A LEADERSHIP  
DEVELOPMENT PROGRAM**

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This presentation highlights the significance of communication in the constructivist culture of a graduate-level leadership development program. From the foundation that "learning is an active process of constructing ... knowledge and ... [communication] is a process of supporting that construction" (Duffy & Cunningham, 1996), through a case study the researchers share what they did to facilitate leader growth and leadership sustainability through a constructivist approach to learning, concluding with insights and lessons learned.



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### TUTORIAL ON LIVESCRIBE PULSE SMARTPEN

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A company named Livescribe has unveiled its new Pulse Smartpen. The pen is a fully functioning 1.3-ounce writing instrument with computing power built in and has 2 GB of flash memory. The pen uses an onboard camera to track user handwriting and page position. It has an integrated microphone that allows for recording conversation such as lectures, depositions, interviews, etc. By associating audio stream with handwriting, the pen can fundamentally change the process of taking notes. It has the ability to tie written notes to audio. The recordings can be uploaded to a computer along with the handwritten file associated with it.

The pen records audio that is instantly linked to your handwritten notes. You tap the record button, and then start taking notes. You can hear the recording again—even months later—simply by tapping a word on the page. The pen replays the audio from precisely when you jotted down the note, so you don't have to waste time searching through hours of recordings just for a specific point.

Drawings can be recorded and played back as a movie. It works as a calculator and can answer equations that are typed out. It can draw a piano and tap the keys to play an arpeggio.

There is a translation program whereby it can take written English words and translate them into Spanish or other languages and display them on the OLED screen and speak them over the onboard speaker. Excellent for taking along on vacation.

You can create pencasts and share them on your blog or website. This is great for teachers who want to explain an idea or concept to someone using pen and paper. Click on a word in your notes, and the matching audio plays, just like Paper Replay in your notebook. This time, though, your pen strokes reappear in real time, as if animated. When you watch a pencast, you relive your lecture. You can upload a pencast to Livescribe Online and share it as a URL, an embedded Flash movie, or even a post on Facebook. The medium is ideal for tutorials and cartoons.

#### Educational Uses

1. Special Education – students can have limitless access to teacher instruction, they can record their own voice for fluency exams and oral reports.
2. English language learners – students can speed up, slow down, or replay lectures to more effectively develop both oral and written skills.
3. Used for parent-teacher communication to improve communication with parents.
4. Oral book reports
5. Substitute teacher lesson plans
6. Facilitate sharing of best practices among staff.



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7. Create asynchronous solution for peer mentoring relationships.
8. Simplify data collection to obtain a balanced portfolio of oral, written, graphical, and other measures.

The Pulse Smartpen also digitizes your notebook. It connects to your computer—via a very well-designed USB dock—and uploads an image of every page to the Livescribe Desktop software. In the program, your handwriting appears exactly as you wrote it. Click on a word, and the accompanying audio plays, just as if you were listening to it on your pen. If you change something in your paper notebook, the software will update the digital version. You can even export the pages as PDFs and e-mail.

You can download a variety of free and low-cost applications such as quizzes, games, and other simple programs.

Livescribe Pulse Smartpen:

- Lets you share notes and audio with friends
- It contains both a voice recorder and a camera
- It plays sound from its built-in speaker and you can also attach headphones.
- You can jump to the beginning, middle, or end of a recording; 10 seconds forward or back.
- It can be used at home, in the boardroom, in the classroom.

The tutorial will include having an actual Livescribe Pulse Smartpen with all of the equipment that goes along with it, a laptop computer, a projector, and a PowerPoint presentation discussing and demonstrating the use of this wonderful piece of technology.



**TEACHERS-AS-RESEARCHERS: HOW TO GET THERE**

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This study describes how a group of teachers transform themselves into teachers-as-researchers through a series of school-based action research projects. The paper focuses on the question: in what aspects, the teachers had changed while they were conducting school-based action research projects and grown into teachers-as-researchers. In addition, the paper also discusses what factors of early childhood education settings tend to support and/or discourage the growth of teachers-as-researchers. The study was conducted in a top day-care center in Beijing of China. The data was collected from multiple resources: including teaching reflection journals, video-taped classes and related documents (e.g., lesson plans), individual interviews, and focus group interviews. The acquired data was analyzed by Grounded Theory approach. The major findings of the study are as follows. First, the process in which the teachers grow into teachers-as-researchers was a socially-constructive process, which is characterized by two features: from originally externally-driven to internally-driven, from team-dependent to gradually independent. Secondly, the teachers were found to have major changes in their awareness of spotting classroom problems, teaching style, teaching efficacy, work commitment and satisfaction, and professional development path during the transformation process. Finally, the study identified the key factors in early childhood education settings that facilitate the growth of teachers-as-researchers. The study has important theoretical and practical implications. Theoretically, the study sheds light on how teachers-as-researchers differ from other teachers. Practically, the study provides unique insights on how school administration could be changed to facilitate teachers' continued professional development through on-site research activities.



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**INTRODUCTION TO COUNSELING 101:  
A CONCEPTUAL MODEL FOR RETAINING AND GRADUATING AFRICAN AMERICAN COLLEGE  
STUDENTS**

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Often times on college campuses, Counseling Services and Student Support Services are underutilized by African American students (Sue & Sue, 2008). Such underutilization of Counseling Services and Student Supportive Services by African American college students may be due in part to the fact that within the African American community, counseling has been perceived as "taboo." For the most part, African Americans have been socialized at an early age that it is unacceptable and inappropriate for them to "air their dirty laundry" to non-family members. Therefore, a large number of African American college students are less likely to seek counseling services for issues that affect them psychologically and/or physiologically. If psychological and physiological issues are not appropriately addressed, these issues can contribute to African American college students prematurely withdrawing and/or dropping out of school. Therefore, the purpose of this presentation is to discuss a conceptual model that has been used to retain and facilitate the graduation of African American college students.



**EDUCATING TOWARDS GLOBAL CITIZENSHIP**

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As part of a college-wide, five -year Strategic Planning Initiative, a subcommittee has been tasked with identifying principles and practices that contribute to “preparing the students for a global society.” Discussions ensued as to the definition of “global,” “globalization,” and “a global society.” What are the objectives for a college with a mission that combines business (the fashion industry) and liberal arts? In order to gain greater clarity, we reviewed programs developed by other colleges and universities, examined the college’s study abroad program, and reviewed literature that would inform the business and liberal arts curriculum. This paper is a discourse analysis of studies selected from diverse disciplinary fields that address issues concerning global education and global citizenship.

What kinds of pedagogical strategies are needed to cultivate a global perspective? What is needed in the business curriculum that will enable a student to successfully negotiate the international fashion industry marketplace? How can the liberal arts curriculum contribute to a habit of mind that challenges and explores cultural assumptions? How do we define our learning outcomes? What kinds of competencies convey the successful education of a global citizen?

Discussions in the literature of character education, moral education, and citizenship education address fundamental ideas of how to school towards embracing guiding principles that will shape intellectual, social, political, and civic involvement (Althof & Berkowitz, 2006; Boston, 2005; Colby *et al*, 2003). These principles may then extend to an understanding of global citizenship (Wood & Lewellyn, 2006; Walker & Thompson, 2008). Any understanding of why we are even considering “global” must include a discussion of the role communication technologies have in structuring social relations and identity formation. Humans evolve in relation to their tools. The “tools” of the twentieth century are communication technologies. The “virtual” impact on business practices, individual expectations, social interactions and cultural sovereignty continue to create opportunities even as these reflexive technologies re-define our social environment (Ackland & Buxton, 1998; Evans, 2004; Jackson, 1999; Nunes 2006; Ong, 1982; Wood & Solomon, 2009).

What are the pedagogical implications? Within the field of business ethics and social responsibility is a call to change the culture within the business curriculum to a human-centered world view which interrogates the criteria for “a good business decision.” This approach proposes a more emancipatory economic agenda which focuses on individual and corporate well-being (Renner *et al*, 2010; Giacalone & Thompson, 2006; Harmon & Hormann, 1990; Koehn 2002; Kolb *et al* 2005). Additional considerations for formulating a global educational initiative include a re-formulation of the liberal arts curriculum (Stearns, 2010). It would require a comparative analysis of cultures, both



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similarities and differences, as well as cultivating awareness of levels of causation (historical, social, economic, geographical, religious) that influence both perception and behavior.

A commitment to evaluating the pragmatic and philosophical issues of global citizenship, business education, liberal arts, communication technologies, and the search for living “the good life,” can coalesce in a curriculum that does in fact prepare students for a global society.

Just as each shift in communication technology foreshadow shifts in society, so, too, do our educational programs need to shadow that change if they are to create both a habit of mind for the new generation and a generative social sphere for our own undertakings.

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**AN EMPIRICAL STUDY INTO THE DIFFERENCES BETWEEN SHANGHAI RESIDENTS' COGITIONS ON  
CRUISE SHIP TOURISM AND YACHTING TOURISM**

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As two fast developing water tourism projects in recent years, yachting tourism and cruise ship tourism have gained more and more attention in the globe. How Shanghai residents cognize yachting tourism and cruise ship tourism and what differences and links exist between the cognitions are the main focus of the paper. The research carried out a survey among Shanghai residents with the adoption of a 7-point Semantic Differentiation Scale, and analyzed the collected data through descriptive analysis, factor analysis and correlation analysis, so as to better understand Shanghai residents' differences in their cognition of yachting tourism and cruise ship tourism, on the basis of which marketing strategies have been put forward for the reference of relevant departments and organizations.



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## Full Papers



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### ECONOMIC DEVELOPMENT MODELS AND THE SOUTH CAROLINA EXAMPLE

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#### ABSTRACT

Economic development is receiving increasing interest during the current economic cycle. This paper reviews some of the worldwide efforts by governments at every level to increase the success of their economic development activities. The economic development programs of the State of South Carolina are used as a focal point and as excellent examples useful for discussing the general concept of economic development models. The term “Enterprise Zone” (EZ) is used to describe these economic development programs. Examples of some cooperative economic development efforts among various levels of government are provided, including a discussion of the role of the federal government and its relationship with the states. The impact of the federal government on state program implementation is also considered.

Information from South Carolina’s economic development programs showing the focus of development in terms of industry type, size of firms recruited, and incentives offered will be discussed. The impact of the relative size of businesses recruited and incentives offered will be explored. Differences in economic development incentives offered by different states and countries will be addressed by using the South Carolina model as a standard for comparison.

Whether economic development programs are actually achieving their objectives is an issue of current interest and debate. These issues will be discussed, and some perceived shortcomings of the programs will be identified, along with actions which are continually being taken to correct these shortcomings. Concerns such as conflicts between the various levels of government over authority, accountability, contribution of funds, size and duration of incentives, and other relevant factors will be investigated.

*Keywords:* Economic Development, Development Models, Economic Incentives, Attracting New Businesses

#### Introduction

As competitive pressures increase, and as the demand for support of economic development at local and state or provincial levels increases as well, it is important for everyone involved be aware of



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current programs that can serve as models for economic development. Stakeholders include those businesses seeking competitive advantage, business development consultants, educators, and localities seeking to improve their economic situation through business development.

It has been typical for governments worldwide and at various levels from community governments on up to national governments to offer incentives for business start-up and expansion. These incentives are offered for the purposes of attracting new industry to both developed and underdeveloped areas, as well as to increase job creation in the particular areas of concern. One popular approach various levels of government have used involves the creation of "Enterprise Zone" (EZs). Enterprise Zone programs typically use tax incentives of various types, among other incentives, to attract industry.

Whether EZs have achieved their purpose is a subject of continuing debate. Some feel that the programs are fragmented and do not include the appropriate agencies at various levels of government (Irons, 1994). One of the primary difficulties in the United States has been achieving agreement on the roles of various government agencies. At the heart of this disagreement is the concept of "home rule"; local governments want to have a significant voice in how development programs are implemented, and they also want some control over the resultant monetary impact on the services and the infrastructures of their local governments. One of the more thorough examinations of EZ programs is found in the book *State Enterprise Zone Programs: Have They Worked?* by Peters and Fisher (2002). This work reviews 75 programs in thirteen states.

Although most EZ programs have been enacted in recent years, the concept has been with us for over 40 years. For example, Scotland reacted to the decline of its heavy industry in the 1960s by shifting its emphasis to high-technology industries. Electronics industries have been particularly prized additions to the economy of Scotland. A company named "Locate in Scotland" was formed in 1981 to solicit business through the offering of attractive monetary packages. Additionally, Scotland has developed research consortiums among companies and universities (Young, 1995).

One of British Prime Minister Margaret Thatcher's earliest actions as Prime Minister in 1979 was to set up urban development corporations with the goal of reviving declining city centers (Bredin, 1996). The inner city areas were declared as EZs. The result in the London docklands area is that about 24 million square feet of commercial and industrial space have been made available for buildings, and 55 miles of new and improved roads have been built. Employment in the area rose from 27,000 before the project to 68,000 by 1996.

EZs have also been established in St. Petersburg, Russia (Anonymous, 1994), the Peoples Republic of China (Yetsko, 1996), and many other countries, including seemingly unlikely countries such as Laos. Many of these efforts have been reported by Lorincze (1996) for Eastern Europe; Lee (1996) in Korea; Doh (1993) for Singapore; Alford and Bebensee (2007) for Japan, Korea, and U.S., and many others. Newton (1993) reported on the genesis of Enterprise Zone efforts in 1993 and provided information on Enterprise Zone activities involving New Jersey (state), Newark, New Jersey (city), Louisville, Kentucky (city), and Louisiana (state) programs. Potter and Moore (2000) reported that United Kingdom EZ tax incentives attracted inward investors and described the positive impact of such activities.



### **Enterprise zone modeling**

One of the difficulties involved in establishing EZs has been developing models that could accurately reflect the various impacts of different levels of government involvement and participation in EZ actions. As one local government economic development board official stated, "We need to know at what point the incentives we offer will outweigh the benefit to our community." While there have been a number of efforts to properly model the EZ, two models look especially promising. One was provided by Gee (1995). Gee analyzes the direct and indirect impacts of urban EZs on regional development. Hirasuna and Michael (2005) reviewed the history of EZ programs and arrived at some recommendations for establishing the programs.

The United States Congress (2005) passed legislation establishing National Enterprise Zones for the purpose of allowing states and municipal governments to invite federal participation in the programs. The direct and indirect impacts of urban EZs on regional economies in areas such as job creation, urban development, agricultural wage, and changes in the intermediate goods sector must be considered. A complex model is used for the empowerment zone of Louisville, Kentucky. Louisville uses the computer mapping and data analysis resources of the Louisville and Jefferson County Information Consortium, a group that has built one of the most comprehensive metropolitan geographic databases in the United States (Johnson, 1995).

A review of the literature indicates that the South Carolina Enterprise Zone Act (SCEZA) is still a viable model because it was based upon a comprehensive study of the successes and failures of a number of models developed by a number of United States and international agencies, and the SCEZA is reviewed and updated annually as indicated by a review of the current South Carolina Department of Revenue website. A description of the South Carolina Enterprise Act which established the South Carolina Enterprise Development Model is presented below. Information indicating some results of employing this model will follow.

### **The South Carolina Enterprise Zone Act**

The State of South Carolina studied programs in place such as those mentioned above, plus programs in Alabama, Mississippi, and other county and municipal governments in developing the SCEZA. The act serves an especially good model for agencies at all levels seeking to provide programs aimed at increasing economic development in their respective areas. Additional laudable features of the SCEZA are the clarity of its language and the fact that different levels of government are participants in the program. A unique feature of the South Carolina Enterprise Act is that it provides for programs for small and medium enterprises (SMEs) as well as for larger firms. This reduces duplication of programs. Another very important feature of the act is that specific activities on the part of county and municipal governments in regard to taxes and fees are covered. This protects these governments from revenue loss and provides them an opportunity to actively participate in the programs covered in the act.



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The SCEZA has three distinct components: (1) The Enterprise Zone Act, (2) the Economic Impact Zone Community Development Act, and (3) provisions relating to apportionment of income. The essential sections of the act are presented here to establish the framework of the model.

### Enterprise zones

Section 1 provides state income and property tax relief, as well as other financial incentives for "qualifying businesses" which locate in an "enterprise zone." These terms are defined as follows:

*Enterprise Zone* - any one of the following:

- A census tract in which either the median household income is 80 percent or less of the state average or in which at least 20 percent of the households are below the poverty level.
- A county is classified as "less developed" pursuant to the Jobs Tax Credit Act if it meets the following criteria. (The Department of Revenue annually ranks the counties for purposes of the Jobs Tax Credit Act; the counties qualifying as "Less Developed")
- A federal military base or installation in which employment was reduced by 3,000 or more jobs since December 31, 1990. Note that only the base itself qualifies as a zone under this provision.
- A census tract in which at least 50 percent of the employment is in textile or apparel jobs.
- A census tract in which certain catastrophic job losses have occurred, including where a manufacturing facility has closed resulting in job losses of at least 25 percent of the workforce.
- A census tract any part of which is within 20 miles of a federal facility which has reduced its civilian workforce by 3,000 or more jobs after December 31, 1990. For example, this includes all of Aiken and Charleston counties and most of Berkeley and Dorchester counties in South Carolina.
- A census tract in which a penal institution operated by the South Carolina Department of Corrections has closed.

*Qualified Business* - A business which locates in an enterprise zone and meets the following criteria: The business must qualify for the Jobs Tax Credit Act; qualifying businesses include corporations operating manufacturing, tourism, processing, warehousing, distribution, research and development and corporate office facilities. The business must provide health care benefits to full-time employees. (The act does not specify any minimum benefit levels.) In addition, the business must enter into a revitalization agreement with the Advisory Coordinating Council for Economic Development if it wishes to collect Job Development Fees, and the Council must certify in such cases that the incentives are appropriate for the project and that the total benefits of the project exceed the costs to the public.

### Income tax incentives

First, with reference to state income tax incentives, if at least 51 percent of the full-time employees hired for the project either reside in an enterprise zone at the time of employment have a household income that is 80 percent or less of the median household income for the county prior to employment, or have been a recipient of AFDC (Aid For Dependent Children) payments within the past 12 months, the business is entitled to the maximum Corporate Income Jobs Tax Credit (\$1,000 annually per employee): in addition the business is entitled to an additional \$500 per year tax credit



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in the third, fourth, and fifth year of any AFDC recipient's continued employment with the business. These credits are in addition to any other credits for which the business is entitled.

### **Property tax incentives**

Second, with reference to property tax incentives, the business is eligible to negotiate for Fee-in-Lieu of property tax advantages if it meets one-half the requirements of the current Fee-in-Lieu statute. The Fee-in-Lieu of Property Taxes Act provides a mechanism by which companies which make the requisite investment within a five- year period might enter into an agreement with a county under which the company pays the county a reduced fee instead of the usual county property taxes. The Fee-in- Lieu Act can save a company substantial property taxes by allowing the company to negotiate an assessment ratio as low as 6 per cent (instead of the normal 10.5 percent), as well as "freezing" the applicable millage rate and the value of the property for up to 20 years.

The Fee-in-Lieu Act now applies on a tiered basis. Qualifying businesses locating in an Enterprise Zone may negotiate with the respective county government for a Fee-in- Lieu contract if they:

- create 100 new full time jobs and invest a minimum of \$30 million
- create 150 jobs and invest \$20 million
- create 200 new jobs and invest \$10 million; or
- invest \$42.5 million.

Businesses are also eligible to use special source revenue bonds under the Fee-in-Lieu Act.

### **Financial incentives**

Qualifying businesses may also collect and expend Job Development fees by retaining certain employee withholdings which would otherwise be going to the State of South Carolina. In order to collect the fee, the business must enter into a revitalization agreement which allows such withholdings, and the funds must be held in an escrow account with an FDIC insured bank. Employers might use the withheld amounts for any of the following purposes:

- training cost and facilities
- acquiring and improving real estate
- improvements to both public and private utility systems, including water, sewer, electricity, and communications
- fixing transportation facilities including highway, rail, water and air; and construction and improvements for the purpose of complying with environmental laws.

### **Economic Impact Zone Community Development Act**

Section 2 of the act provides a state income deduction for persons who purchase stock in a small business that locates in an EZ that includes areas within 50 miles of certain federal military installations which have closed. These Zones must also be certified by the Budget and Control Board.



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Section 2 provides that an individual may receive a state income tax deduction for 20 percent of the purchase price of certain stock up to \$10,000 a year (\$100,000 lifetime).

The stock must be issued by a small corporation which uses the proceeds to purchase property in an economic impact zone.

The bill also provides for all businesses located in a zone (and not just small businesses) an investment tax credit of up to 5 percent of the cost of obtaining certain manufacturing and other tangible property that is constructed or acquired for use in a zone.

### **Apportionment of income**

Section 3 modernizes the South Carolina law for apportionment of income for taxpayers who do business in multiple states. The first part of this section applies to existing taxpayers. The second part of the section allows a taxpayer to negotiate an allocation or apportionment of income agreement with the Department of Revenue if the company is planning a new facility or an expansion of an existing facility and the Coordinating Council certifies that the benefits to the public exceed the costs.

### **The Rural Development Act**

The major provisions of the Rural Development Act are:

1. The entire state is made an Enterprise Zone;
2. Job Tax Credits are increased for almost every county, and are greatly increased for the poorest counties;
3. County Council may approve 4% assessment ratios (was 6%) for Fee-in-Lieu agreements for the very largest investments (\$400 million and 200 new jobs).
4. A Rural Infrastructure Fund is established to provide infrastructure for projects which locate primarily in the two poorest tiers of counties.
5. The Fee-in-Lieu program is made much simpler and more flexible.

### **Special provisions for rural development**

Rural Infrastructure Fund grants will primarily be available to benefit counties designated as "least developed" or "under developed". The Fund shall be administered by the Coordinating Council to provide "financial assistance to local governments." The funds may be used for (1) training costs and facilities; (2) improvements to regionally planned public/private water/sewer systems; (3) improvements to both public/private electricity, natural gas, and tele-communications systems; and transportation facilities including highway, rail, water, or air.

The Job Development Fees (JDF) Section allows development authorities for closed or realigned military installations to keep job development fees collected from their federal tenants instead of passing them on to the state. The Fees in-Lieu of taxes section requires that the county council of the affected county, with the assistance and advice of the Department of Revenue or the Board of Economic Advisors, determine the benefit of the fee project.



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It also allows certain qualified investors to receive the availability of a 30-year fee agreement. Also, the same qualifying businesses will be granted an eight-year period to meet the minimum investment requirements. The section allows for a minimum assessment ratio of four percent (4%) for qualifying businesses (1) investing \$200 million and having invested \$200 million previously, and creating 200 new full-time jobs; (2) investing at least \$400 million and creating 200 new full-time jobs; (3) a Limited Liability Company investing \$400 million and creating 100 full-time jobs with an average salary of at least \$40,000 in a county classified as either least developed or under developed; or (4) a business which meets the minimum investment totals which pays at least 50% of the taxes in the county for more than 25 previous years is not required to meet the job creation levels.

It further clarifies the distribution of fee payments to local governments, and it allows a county to use a portion of the fee payment for infrastructure improvements as provided in Section 4-29-68, without the requirement of issuing special source revenue bonds.

The JDF liberalizes the taxpayer's ability to transfer or assign an interest in an inducement agreement, millage rate agreement, lease agreement, or property to which such agreement relates. It also requires county approval before the transfer can take place.

The job taxes section increases from three to four the tiered classification system for the jobs tax credit. Counties, with exceptions, are ranked using unemployment and per capita income rates. The 12 counties with the combination of highest unemployment rate and lowest per capita income are designated as least developed (Tier 1).

The minimum job creation requirement in urban counties is reduced to ten jobs statewide.

### Allocation of Jobs Tax Credit

<u>County Classification</u>	<u>Tax Credit Per New Job</u>
Tier I Least Developed	\$4,500
Tier II Under Developed	\$3,500
Tier III Moderately Developed	\$2,500
Tier IV Developed	\$1,500

An additional \$1,000 credit is available for jobs created in a multi-county industrial park.

Retail establishments and service related industries in least developed counties (Tier I) qualify for the Jobs Tax Credit. In addition, a service-related industry that creates at least 250 jobs in any county now qualifies. A cap of \$5,500 tax credit per job applies.

### Allocation of job development fees

<u>County Class</u>	<u>Rural Infrastructure Fund Gets</u>	<u>Business Keeps</u>
Tier I	0%	100%
Tier II	15%	85%
Tier III	30%	70%
Tier IV	45%	55%



### **Special source revenue bonds (property taxes)**

Special Source Revenue Bonds may be used for acquiring or constructing improved or unimproved real estate used in the operation of a manufacturing or commercial enterprise.

#### **Examples of success**

South Carolina has had positive results in business recruitment by using the SCEZA as a tool to encourage firms to locate in South Carolina. Increased activity has taken the form of both new facilities and the relocation of existing businesses from other states or countries.

State, national, and local media report regularly on the new businesses attracted to South Carolina. Some of these include: Boeing Aircraft, BMW, Daimler, Fujifilm, Roche, Michelin, Bosch, Google, and many other global companies. The major companies bring in a host of supplier and support businesses. All totaled, there are now more than 640 foreign-owned companies representing 40 countries with a presence in South Carolina (Gassaway, 2010).

The South Carolina State Government, acting in concert with county and local governments, educational institutions, and businesses, worked together to improve cooperative efforts between the various levels of government. A prime mover in helping with this progress is the South Carolina Power Team. The Power Team is an alliance of the state-owned utility Santee Cooper and 20 electric cooperatives in South Carolina working together for economic development (Gassaway, 2010). A further indication of the positive results of SCEZA programs is reflected in the fact that South Carolina was selected as one of four states to participate in a federal study conducted by Harvard University examining the role of industry clusters in economic modeling (WRHI, 2011).

#### **Conclusion**

In the present economic environment, governments at all levels are increasingly interested in finding new ways to promote economic development. It is important for government leaders, businesses, consultants, and educators to become better informed about possible approaches for attracting new businesses to their communities, thereby providing new sources of employment and income. One popular approach involves the creation of Enterprise Zones which offer various types of incentives to attract new businesses. Whether Enterprise Zones are an efficient way to achieve their objectives is a matter of some debate, and in some countries (the United States, for example) one difficulty with such programs involves potentially conflicting agendas among local, state, and federal government officials.

The State of South Carolina studied programs in several other areas in an attempt to identify “best practices” among other regions before putting together the South Carolina Enterprise Zone Act. The South Carolina programs have several desirable characteristics: (1) different levels of government are involved, and specific activities on the part of different levels of government are covered; (2) the Act provides programs to attract small and medium enterprises as well as larger firms; and (3) the



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language in the Act is relatively clear, compared to the language in similar development programs from other regions.

South Carolina has had positive results in business recruitment by using the SCEZA as a tool to encourage firms to locate in South Carolina. Increased activity has taken the form of both new facilities and the relocation of existing businesses from other states or countries. Examples of SCEZA successes in attracting businesses to South Carolina include Boeing Aircraft, BMW, Daimler, Fujifilm, Roche, Michelin, Bosch, Google, and many other global companies. The major companies bring in a host of supplier and support businesses, thereby generating a multiplier effect for the surrounding economies.

The South Carolina Legislature reviews the SCEZA model annually and, with the assistance of the SC Department of Revenue, makes revisions and improvements to its provisions. However, even with its significant progress, The State of South Carolina still faces a significant task in educating local government agencies about the application of its EZA and improving the quality and level of education of state citizens.

Despite the state's successes, major efforts must continue to be made to ensure that existing firms and new venturers are aware of the changes in the models and how these changes can be utilized. Toward this end, assistance should be solicited from business promotion groups such as county and local economic development agencies, chambers of commerce, Small Business Institutes, Small Business Development Centers, and educational institutions which teach courses and conduct programs in business development and entrepreneurship.

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**SERVICE-LEARNING IN A MARKETING RESEARCH COURSE:  
THE BENEFITS THAT ACCRUE TO STUDENTS**

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**ABSTRACT**

An important issue surrounds the impact of service-learning on the academic and life skill development of undergraduate students, and ultimately, their preparedness for the professional arena. Empirical research in this area is scarce, especially in marketing. Marketing Research is an important course and often requisite for an undergraduate marketing degree. Yet no research has explored the value of experiential learning in this course. This study serves to fill that void. The same questionnaire was administered to students using a pre- and post-test design who had completed a service-learning project. Utilizing a seven-point Likert scale, students were questioned about their intentions and attitudes toward volunteer work and involvement with their community. A paired t-test was employed to analyze the results, and it was found that there was a significant increase in their intention to volunteer and to become involved with their community. Moreover, significant increases in social responsibility, intent to help others and their confidence level with problem solving and conflict resolution were also found. One of the most significant outcomes was that students believed that they could make a difference in the world. The findings were a direct result of the experiential learning component integrated into the Marketing Research course.

*Keywords:* Service-Learning, Marketing Pedagogy, Experiential, Research

**Introduction**

Volunteerism is consistent with the mindset, value system, and motivation of the Millennials or Generation Y segment, representing about 80 million or roughly 30 percent of the American population (Gerdes, 2006). Upon graduation, they gravitate towards companies with corporate cultures that stress social responsibility, diversity, and environment (Gerdes, 2006). Further, community service and serving the greater good are among their top priorities (Gerdes, 2008). In short, they strive to “do good, while doing well” (Gerdes, 2008, p. 1).

Blending civic engagement with academia is one of the challenges facing higher education during the 21<sup>st</sup> century. Colleges and universities are under pressure to revisit their historic commitment to service (Hinck & Brandell, 2000). Indeed, developing partnerships between the campus and external organizations is at the heart of renewing community engagement (W.K. Kellogg Foundation, 1999), and advancing civic responsibility (Gronski & Pigg, 2000). The Richard Stockton College of New Jersey



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(hereafter referred to as “Stockton”) has embraced this initiative; in fact, service-learning has been formally incorporated into the curriculum for well over a decade.

Marketing Research, a required course for all business students specializing in marketing, has been designed to weave a service-learning component into the curriculum since 1994. Real-world problems, data, and applications are taught in a real-world context; specifically, the course is used as a platform to advance institutional goals (i.e., evaluate student satisfaction with housing and amenities; gain insight about the commuter student experience; explore the most effective communication methods for disseminating information to the student body; etc.). The perspective is at odds with the traditional notion of service-learning that embodies a collaborative effort among faculty, students, and external organizations. The “external” organization, in this case, is Stockton, the academic institution where the business students are pursuing a bachelor’s degree. The logistics of conducting a marketing research study on campus offers certain advantages that a traditional service-learning project does not. Students and the various Stockton constituencies they serve are “housed” on the same campus, streamlining the communication process and facilitating various research tasks such as experience surveys and focus groups. Moreover, all parties have a common goal; namely, to improve the quality of campus life.

Student teams apply the quantitative reasoning and marketing skills acquired in Marketing Research and other relevant coursework to topics of interest at the college. The students generate a comprehensive marketing research study, and interact with faculty, administrators, and staff throughout the semester as dictated by the project schedule. At the end of the semester, written and oral reports are delivered to the appropriate members of the Stockton community. The findings and recommendations of the student teams are used by the college to formulate action plans to secure funding for new initiatives (i.e., an on-campus shuttle service; use of electronic portfolios for performance assessment), and improve upon existing facilities/services (i.e., dining services and offerings). To date, 125 investigations have been undertaken, and the process has proved mutually beneficial. Students gain knowledge and experience through a primary marketing research study, and generate a high-quality report in the process for their portfolio (averaging about 100 pages). Stockton faculty, administrators, and staff are able to explore topics that have implications for the quality of student life at the college. Recognizing the “lifetime value of the [student] customer” has gained momentum in recent years in education marketing (Hayes, 1996). Marketing investments contribute to building enrollment and retention rates, and developing greater degrees of “customer” satisfaction.

It has been noted that service-learning is particularly relevant to marketing courses given the discipline’s interest in social causes. Unfortunately, business faculty have been less inclined to incorporate the experiential method into their coursework than their social sciences and liberal arts counterparts (Klink & Athaide, 2004), although a review of the business literature noted that the field of marketing, among others, has numerous service-learning applications relative to course-earning objectives (Andrews, 2007). Further, in accordance with Kolb’s experiential learning model, Petkus (2000) noted that advanced-level marketing courses “...can make an even greater contribution to the marketing efforts of a non-profit organization. Students at this level have a greater breadth and depth of marketing knowledge and skills... (from other course projects, internships, etc.) to draw on for reflection” (p. 65). A void exists in the literature relative to empirical explorations of service-



learning in specific marketing courses. This was validated by Petkus (2000) in a review that examined the service-learning literature in marketing, and reiterated by Hagenbuch (2006).

Initially, a review of the service-learning literature is presented. It focuses on a definition of the service-learning construct, a brief overview of the foundations of service-learning, and empirical investigations that link the service-learning experience with desired outcomes such as satisfaction, enhanced sense of civic responsibility, and academic and life skill development. Then, a discussion ensues about the structure and evolution of the Marketing Research course. Finally, the research design and empirical results are delineated.

### **Literature review**

The service-learning construct encompasses a teaching method that integrates community service with academic study. Service or experiential learning projects expand teaching and learning beyond traditional classroom activities into a real-world forum (Berson, 1994; Giles & Eyler, 1998; Kinsley, 1994). Service-learning is defined as a course-based, credit-bearing educational experience in which students participate in an organized service activity that meets identified community needs while simultaneously gaining a broader understanding of course content within a given discipline and an enhanced sense of civic responsibility (Bringle & Hatcher, 1995).

Fertman (1994) proposed that the historical roots of service-learning may be traced to the philosophy of John Dewey. The seminal work of Dewey (1967) addressed the challenges associated with providing quality education in a democratic society. In drawing a connection between professional and public lives, he argued that education for a democratic way of life was essential for advancing society. Dewey's (1967) theories focused on experiential and citizenship education relative to community service and volunteerism.

Almost three decades later, The Wingspread Report (Wingspread Group on Higher Education, 1993) noted that a gap continued to exist between societal needs and the offerings of higher education institutions. The Wingspread Report recommended that colleges and universities collectively endorse three basic objectives: taking values seriously, putting student learning first, and creating a nation of learners.

Building on the Wingspread Report (Wingspread Group on Higher Education, 1993), Boyer (1994) reaffirmed the need for the higher education community to serve American society. Boyer encouraged research and discovery of new knowledge in addition to integrating, communicating, and applying knowledge through professional service (Coye, 1997). He called on members of the faculty to adopt a “reflective practitioners” mindset, oscillating between theory and practice to bring the daily problems of real people in real neighborhoods into the university classroom. Service “is not just something students do in their spare time; it connects back to the core curriculum and the search for shared values” (Boyer, 1990, p. 26). The growth of service-learning on college campuses during the 1990s is indicative of a renewed emphasis on campus-community partnerships (Bringle & Hatcher, 2004a).



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The notion of civic responsibility is intertwined with a service-learning perspective. Civic engagement initiatives have awakened renewed interest in promoting institutional citizenship, building new campus-community programs, and promoting a broad sense of civic responsibility in higher education (Bringle & Hatcher, 2002). A literature review undertaken by Hervani and Helms (2004) indicated that service-learning has been applied in a wide variety of disciplines and courses including writing and composition, finance, engineering, psychology, science and mathematics, accounting, nursing, Spanish, political science, and liberal arts. Service-learning projects have also been developed for economics (Hervani & Helms, 2004), management (Angelidis et al., 2004; Madsen & Turnbull, 2006); marketing (Easterling & Rudell, 1997; Petkus, 2000; Klink & Athaide, 2004; Barr, 2008a; Barr 2008b), personal selling (Hagenbuch, 2006), and advertising (Lopez & Lee, 2005) courses.

Easterling and Rudell (1997) provided the first examination of service-learning in a marketing context. The authors developed an extensive background and justification for integrating service-learning into the marketing curriculum as well as the benefits that accrue to all parties. A specific program is suggested for a marketing internship. Petkus (2000) extended the work of Easterling and Rudell (1997) into other facets of marketing including principles of marketing, marketing/management strategy, marketing research, personal selling/sales management, integrated marketing communications, and consumer behavior. It is noteworthy to mention that Petkus (2000) provided a general framework for the design and implementation of service-learning courses in marketing, and Hagenbuch (2006) and Barr (2008a, 2008b) advanced specific pedagogical models for personal selling, marketing research, and strategic marketing courses, respectively.

As noted earlier, the number of empirical investigations undertaken in marketing has been sparse. So a review of the empirical service-learning literature is warranted to determine the impact of the experiential technique on the academic and personal development of students, as well as other desired outcomes. It is noteworthy to mention that Gelmon (2000) stressed the need to establish a comprehensive research program to gain knowledge about service-learning assessment, including a conceptual framework of best practices principles (and necessary refinement), and operationalization of variables.

Service-learning outcomes have focused on two broad areas: 1) student outcomes related to intellectual skills; and, 2) student personal outcomes (Rama et al., 2000). The first taxonomy includes an assessment of cognitive competencies including traditional textbook knowledge, as well as critical-thinking and decision-making skills. Students engaged in service-learning projects are more inclined to resolve “real” problems that they consider significant and personally relevant. Moreover, they gain a greater understanding of course material due to the contextual relevance of the service-learning experience. And, ultimately, students are challenged to reevaluate or reaffirm their own perspectives as a result of interfacing with people from diverse backgrounds. The second classification, student personal outcomes, include an evaluation of various values-related qualities that may be enhanced due to the service-learning experience including honesty, ethical conduct, and a desire to foster constructive social change. Heightened self-awareness, appreciation of and tolerance for individuals from diverse backgrounds are potential positive personal outcomes. Likewise, students feel a stronger connection to the broader community, establishing relationships with site supervisors, faculty and peers (honing teamwork and communication skills). Finally, as



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students become more aware of social issues and recognize that their own actions can make a difference, it is likely that their leadership skills will improve (Rama et al., 2000).

A comprehensive, longitudinal study of 22,236 students, culled from a national sample of baccalaureate-granting colleges and universities, explored the effects of service-learning and community service on the cognitive and affective development of participants during their undergraduate years. It was found that service participation had significant positive effects on all 11 outcome measures including academic performance, values, self-efficacy, leadership, choice of a service career, and plans to participate in service following college. Moreover, students conveyed a heightened sense of civic responsibility as a result of their service experience (Astin et al., 2000). The findings of two cross-sectional studies mirrored the results of the large-scale exploration; specifically, undergraduate students who participated in service-learning experienced improved academic development and life skill development, a greater sense of civic responsibility (Astin & Sax, 1998), stronger values, and a stronger understanding of social issues (Eyler et al., 1997). Likewise, a qualitative analysis of ten in-depth student interviews supported the premise that service-learning in a management course is effective and beneficial (Madsen & Turnbull, 2006).

Research on the impact of service-learning on students' moral development has been inconsistent. An examination of the relationship among service-learning, moral development, and moral orientation did not reveal significant findings. However, students reported becoming more compassionate and sensitive, gained a greater appreciation of and ability to solve social problems, and were more motivated to make the world a better place (Bernacke & Jaeger, 2008).

### **The service-learning project**

Marketing Research is a requirement for Stockton business students earning a bachelor's of science degree with a concentration in marketing. The prerequisites for the four-credit course are Marketing Principles and Quantitative Business Methods, and it is designated as both a quantitative-reasoning and writing-across-the-curriculum course.

The primary challenge faced by the instructor when preparing to teach the course for the first time in 1994 was how to engage students in a rigorous, real-world application of a comprehensive marketing research study during a single semester. Pedagogically, the instructor was convinced that "learning by doing" was requisite for students to gain an understanding of the marketing research process. The instructor's goal was to incorporate all the components of a primary research study (using the survey method) into the course as well as secondary and qualitative research components. It was anticipated that data collection would prove particularly burdensome for students in light of the single semester constraint. Consequently, a decision was made to gather data from the Stockton student body (or portions thereof). Collecting data through online surveys during the last several years has also vastly expedited the process.

The primary objective of the course is to have students apply the fundamental theories and techniques learned in the course via the textbook and lectures to an original marketing research study in a service-learning setting. The topics are generated through a brainstorming session with various campus representatives (i.e., administrators, members of the student senate, etc.). The class



fills a void at the college since a formal marketing department does not exist per se. The civic engagement forum piques student interest in a quantitatively-oriented topic that may otherwise bore and frustrate them. The quantitative reasoning components are crystallized through application, making the course more digestible and manageable for students. Consequently, the classroom experience becomes more relevant, interesting, and understandable. Secondary objectives include the opportunity to conduct web-based survey research, gain practice in teamwork, and develop written and oral communication skills.

The project is undertaken in three phases. Phase 1 encompasses the introduction, secondary and exploratory research, as well as development of a conceptual framework and hypotheses. Phase 2 comprises all aspects of methodology including operationalization of variables, questionnaire design, research design, and sample selection. Phase 3 includes data collection, statistical analysis, presentation of findings and conclusions, acknowledgement of study limitations, and recommendations for future research. Each phase is evaluated, graded, and returned so that feedback is ongoing. Students revise and resubmit Phases 1 and 2 with Phase 3 at the end of the semester to complete the final project. The teams are also required to deliver a 20-minute oral report. [Note: a detailed course development model including project design, formation of teams, instructor's role, and evaluation and grading is elucidated in Barr, 2008a.]

The last week of the semester, the student teams reflect on the project experience. Overall, they have reported positive experiences associated with their service-learning tasks in the research course. Students conveyed that the projects were both challenging and rewarding. They take pride in improving the quality of campus life for future Stockton students, and are eager to share their ideas about potential topics for future Marketing Research classes. Students have also communicated the value of building their portfolio in such a competitive job market. Many have used the research project as a platform for securing an interview. Other students have applied the transferable skills they learned in the course to an internship setting. The only areas of concern expressed by students about the course have centered on group dynamics, group diversity, and the ability to manage the workload.

Written comments on the instructor's student evaluations have generally indicated that students liked the format (the detailed syllabus and project outline helped them stay on task); valued the release time from class; felt the project was demanding and extensive but valuable; thought their knowledge was broadened in the subject area; and, believed the team project was essential for preparing them for a job in the field.

The primary benefits realized by the members of the Stockton community are the ability to gain ideas and assistance on various projects. As noted at the beginning of the paper, the findings and recommendations of the student teams are used by the college to formulate action plans to secure funding for new initiatives and improve upon existing facilities/services.

## **Methodology**

As noted earlier, Petkus (2000) recommended that future service-learning research focus on empirical studies tailored to marketing courses. Hagenbuch (2006) established a paradigm for



examining the use of service-learning in a personal selling course. The inputs and outcomes of a sales project provided the foundation for the study. Qualitative and quantitative analyses supported the notion that the class project is beneficial to both the students and the non-profit partners. Recently, Mottner (2010) found that a service-learning project was perceived by students as being the optimal pedagogical tool (compared to case studies, lectures, etc.) in terms of increasing students' knowledge and understanding in a nonprofit marketing course.

The purpose of this paper is to assess the impact of the service-learning experience on the desired intellectual and personal outcomes for students including problem solving, critical thinking, propensity to volunteer, and sense of social responsibility. [The framework for this study was delineated in a prior conceptual paper (Barr, 2010).]

A convenience sample of 64 undergraduate juniors and seniors were queried using a basic pretest-posttest methodology during the Spring and Fall 2010 semesters. Several hypotheses were tested as detailed in the following section.

The first day of the course, students completed a survey. The treatment occurred throughout each respective semester through the service-learning research project. On the last day of the course, students completed the same survey. The survey instrument was developed from a compilation of scales used to study students in service-learning classes (Bringle et al., 2004). The reliability and validity of the scales were tested in prior studies. Further, the survey was comprised of multiple-item, interval scales as well as nominal scales to capture demographic information.

The data was analyzed using paired-observation t-tests, given the anticipated sample size of about 30 each semester. Student responses were compared between the first survey administration and the second. The pairing of observations is a more sensitive experimental design than a standard t-test, so it will convey more information (Aczel and Sounderpandian, 2005).

## **Findings**

The hypotheses were tested to determine changes in student attitudes and specific behaviors. Of the 64 surveys collected seven were not considered due to incomplete information. For each question a seven-point Likert scale was utilized with a "1" representing strongly disagree and a "7" representing strongly agree.

H<sub>1</sub>: The service-learning project will have a significant positive impact on student commitment to serving their community and making a positive difference.

Students were specifically asked about their intended involvement in community service. The pre-test indicated that the mean was 4.78 and the post-test mean was 5.28. This difference was significant ( $p < .03$ ). Although the pre-test indicated that students generally agreed with the statement that they do intend to become involved in their community, the service-learning experience significantly increased their intended commitment. Students were then asked about their commitment to making a positive difference in the community. The pre-test mean was 5.44 while the post-test mean was 5.72. This difference was significant ( $p < .02$ ). The conclusion reached was that



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although this generation of young people tends to generally be committed to serving their community and making a positive difference, the service-learning experience in the Marketing Research course significantly increased their intentions.

H<sub>2</sub>: The service-learning project will enhance student intentions regarding their desire to help others who are in a difficult situation.

Students were asked if they plan to help others in the community who are in difficult situations. The effect of the service-learning experience was very significant in this area. The pre-test mean was 5.37 while the post-test mean was 5.92 ( $p<.01$ ). It is again noted that this generation of students generally intends to help people in the community who may be in difficult situations. The service learning experience did, however, significantly increase their desire to help.

Students were then asked about their views concerning other members of the community's desire to help those in difficulty. The results were only marginally significant. Students were asked whether they thought other members of the community ought to help others. The pre-test mean was 4.46 while the post-test mean was 4.78. The difference was marginally significant ( $p<.10$ ). A similar result was found when students were asked whether they thought adults in the community should give some of their time for the good of the community. The pre-test mean was 4.55 while the post-test mean was 4.89. Again this was marginally significant ( $p<.10$ ). The conclusion is that the service-learning experience did significantly increase the student's intention to help others, but the experience had only a marginal effect on the student's view of the responsibility of others in the community toward those in need.

H<sub>3</sub>: The service-learning project will have a positive significant impact on student intentions concerning their involvement in programs to generally solve social problems and to specifically clean up the environment.

Students were asked about the responsibility that they have to help solve social problems. The results indicated that this generation of students tends to feel that they do have a social responsibility to give back. The service-learning experience did, however, add significantly to this belief. The pre-test mean was 5.62 while the post-test mean was 6.11 ( $p<.02$ ). This indicated that the service-learning experience tended to significantly increase the student's view of social responsibility.

Cleaning the environment seems to be a social problem that is of great concern to many members of the community, especially today's youth. Students were asked if they plan to become involved with programs to help clean the environment. The pre-test mean was 5.16 while the post-test mean was 5.41. This difference was significant ( $p<.05$ ). The findings for these questions indicated that students generally have an intention to help solve social problems and are specifically concerned with the environment. The service-leaning experience did significantly increase their intentions in both areas.

H<sub>4</sub>: The service-learning project will have a positive significant impact on student outcomes related to their perceived ability to successfully resolve conflicts with others and thinking logically when solving problems.



It was hypothesized that the service-learning experience would increase the perception students had regarding their ability to resolve conflict. The authors believed this because in many of the service-learning situations students were confronted with problems for which they had little or no preparation. When asked about their perceived ability to resolve conflicts, the pre-test mean was 5.22 and the post-test mean was 5.88. This was a significant difference ( $p<.01$ ). The follow-up question produced similar results. Students were asked about their perceived ability to think analytically when solving problems. The pre-test mean was 4.67 while the post-test mean was 5.34. This difference was very significant ( $p=0$ ), and likely due to the nature of the problems encountered by the students during the service-learning experience. In addition, students were enrolled in the Marketing Research course, so it would be expected that upon completing a course that emphasizes critical thinking, students would perceive themselves to be more logical when solving problems.

$H_5$ : The service-learning project will have a positive impact on student's belief that they can make a difference in the world.

In this area, the service-learning experience had perhaps the most significant impact. Prior to the experience students were asked if they thought that their actions could make a difference in the world. The pre-test mean was 5.30. After the service-learning experience the post-test mean was 6.02. This difference was very significant ( $p=0$ ). The service-learning experience apparently allowed students to become more confident that their actions could make a difference. This is likely due to the positive results the students realized from their efforts during the service-learning experience.

### **Conclusion**

The pedagogical model used to deliver the Marketing Research course within a service-learning context has proven mutually beneficial. Students learn about the marketing research process through direct experience, and gain a greater appreciation for civic engagement. They also have the opportunity to collaborate with other team members, learn about the challenges associated with undertaking primary research, and generate a quality report for their portfolio. Members of the college community use the findings to improve existing services, secure funding for new initiatives, and, ultimately, enhance the quality of student life at the college.

The anecdotal evidence and feedback on student evaluations about the service-learning component in Marketing Research have been reinforced empirically in this study. It was found that there was a significant increase in students' intention to volunteer and to become involved with their community. Moreover, significant increases in social responsibility, intent to help others in need and their confidence level with problem solving and conflict resolution were also found. And one of the most significant findings was that students believed they could make a difference in the world following the service-learning experience.

Recommendations for future research include empirical analyses of the impact of experiential learning on student engagement as well as the benefits that accrue to students in other advanced-level marketing courses. Another area that warrants investigation is the perceived value of the service-learning experience and resultant outcomes from the perspective of the members of the Stockton community who assist the research teams.



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## **PERCEPTIONS REGARDING THE PURPOSE OF SCHOOLING**

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### **ABSTRACT**

This paper examined the changes in perceptions of school principal candidates regarding the purpose of schooling over a period of time. A survey instrument was developed based upon a review of the literature and administered to students in 1999 and 2009 who were beginning their program of study to become school principals. Of the twelve broad domains covered by the instrument a significant difference was found in five between the two administrations. The authors speculate that school reform efforts, especially No Child Left Behind, may have contributed to the different perceptions regarding the purpose of schooling. The results could have implications for designing or refining future principal preparation programs.

*Keywords:* Principal Preparation, Schooling, NCLB

### **Introduction**

The role of the public school has changed significantly over the past 40 years. Schools are expected to assume an ever increasing role and responsibility in raising children (Clayton, 2002). Starting with the Elementary and Secondary Education Act of the 1960s, the Nation at Risk report of the 1980s, and, most recently, the No Child Left Behind Act, the call for school reform has continued. Principal preparation programs have especially been targeted for reform since the literature indicates that effective school leadership is a key ingredient of effective schools (Plank, 1987). The role of the principal has changed from that of primarily being a school manager to that of being an educational leader. Studies indicate that the building principal has tremendous influence over the school climate and culture (Deal & Peterson, 1990; Leithwood & Jantzi, 1997). An effective principal, by today's standards, is one who can address diverse administrative issues needing immediate attention, while concurrently creating school communities and cultures that optimize opportunities for teaching and learning (Ubben, Hughes, & Norris, 2001). His or her attitude and support of the school is one of the greatest determining factors influencing academic achievement (Roberson, 2003). An individual's leadership style is very personal. As Spears (1998) pointed out, 'leadership has to do with who you are—your character, your motivation and your relationships with people'. An individual's style of leadership is often complex incorporating a variation of styles ranging from the traditional authoritarian model to empowerment, participatory, transformational and distributed leadership.

Becoming a principal is a somewhat predictable career step for many educational practitioners who seek greater responsibility and organizational mobility in their work (Ortiz, 1982). However, many aspirants often do not realize that the process of becoming a principal involves not only completing



professional training but also engaging in personal transformation (Browne-Ferrigno, 2003a; Crow & Glascock, 1995; White & Crow, 1993). As teachers make the transition from the classroom to administrative positions, it is imperative that preparation programs have an awareness of the individuals' perceptions of schooling. School purposes change as different levels of attention are given to schooling by the private and public sectors (Labaree, 2000). As a result, school purposes – what is emphasized in a school, how and what students are expected to learn, and so forth – differ across communities and over time. As the conceptualization of schooling changes, so do the demands placed upon the principals (Beare, 2001; Caldwell, 2005). An individual's perception of schoolings is likely to be biased by his or her own cultural background, life experiences, and expectations. Surprisingly, little information is available concerning the perceptions held by principal aspirants regarding the purpose of schooling, how these perceptions might impact principal preparation programs, and how the perceptions may have changed over time. The purpose of this study was to identify perceptions of teachers who were in the beginning stages of preparation to become school administrators regarding the purpose of schooling, to possibly identify areas that need to be addressed in programs of study, and to determine if changes in the perceptions have occurred over a ten-year period.

## **Methods**

The authors developed a School Purpose Survey instrument based on the works of Goodlad and McMannon (1997) and Miller (1997). Using the instrument 60 students were surveyed in 1999 and 172 students were surveyed in 2009 in their first administrator preparation class. The survey consisted of 12 broad topics and the respondents were to indicate the level of emphasis that they thought should be given to each one. The scale was 0 for no emphasis, 1 for some emphasis, 2 for significant emphasis, and 3 for critical emphasis. Simple descriptive statistics were computed. Using the Chi Square statistic the data was then analyzed to determine if any significant differences existed between the 1999 and 2009 groups.

## **Findings**

The responses for each choice in the 1999 and 2009 surveys are given in Table 1. Since no one chose "No Emphasis" to any of the topics in either year's survey, the "No Emphasis" option is omitted from the results.

When asked how much emphasis in the schools should be devoted to promoting respect for individual, ethnic, racial, gender, age, and cultural diversity, 85% in 1999 said significant or critical emphasis should be given to the topic compared to 89% in 2009. The mean rating for 1999 and 2009 was 2.33 and 2.20 respectively. There was no significant difference in responses given.

When asked how much emphasis in the schools should be devoted to instilling academic skills and knowledge, 100% in 1999 said significant or critical emphasis should be given to the topic compared to 99% in 2009. The mean rating for 1999 and 2009 was 2.83 and 2.73 respectively. There was no significant difference in responses given.



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Table 1

*Changes in Attitudes Concerning the Amount of Emphasis to be Placed on the Purposes of Schooling,  
Expressed as Percentages*

			Some Emphasis	Significant Emphasis	Critical Emphasis	n	$\chi^2$	p
1	Promoting Respect	1999	15.0	36.7	48.3	60		
		2009	20.6	38.8	40.6	170	1.606	.448
2	Academics	1999	0.0	16.7	83.3	60		
		2009	0.6	25.6	73.8	172	3.047	.218
3	Self- discovery	1999	23.3	60.0	16.7	60		
		2009	33.5	46.7	19.8	167	3.753	.153
4	Prepare for Work	1999	5.0	30.0	65.0	60		
		2009	19.8	28.7	51.5	171	10.425	.005*
5	Critical Thinkers	1999	0.0	8.3	91.7	60		
		2009	12.3	31.8	55.9	170	34.755	.000*
6	Global Citizens	1999	20.0	55.0	25.0	60		
		2009	28.2	43.6	28.2	163	2.906	.234
7	Removing Barriers	1999	31.6	46.7	21.7	60		
		2009	29.0	36.7	34.3	169	4.146	.128
8	Social Values	1999	26.7	50.0	23.3	60		
		2009	35.9	47.9	16.2	167	2.673	.263
9	National Goals	1999	54.2	39.0	6.8	59		
		2009	28.7	42.5	28.8	160	21.590	.000*
10	Moral Standards	1999	25.0	45.0	30.0	60		
		2009	12.5	40.8	46.7	169	8.008	.018*
11	Creative Endeavors	1999	23.3	46.7	30.0	60		
		2009	30.0	46.5	23.5	170	1.632	.442
12	Facilitating Technology	1999	3.3	33.3	63.4	60		
		2009	17.0	32.7	50.3	171	10.761	.005*

\*p < .05



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When asked how much emphasis in the schools should be devoted to facilitating self-discovery within the context of personal freedoms, rights, and responsibilities, 77% in 1999 said significant or critical emphasis should be given to the topic compared to 66% in 2009. The mean rating for 1999 and 2009 was 1.93 and 1.86 respectively. There was no significant difference in responses given.

When asked how much emphasis in the schools should be devoted to readying citizens for productive work and civic responsibilities, 95% in 1999 said significant or critical emphasis should be given to the topic compared to 80% in 2009. The mean rating for 1999 and 2009 was 2.60 and 2.32 respectively, a significant difference from the responses given in 1999 when 65% thought critical emphasis should be given to the topic compared to 52% in 2009.

When asked how much emphasis in the schools should be devoted to producing critical, independent thinkers capable of life-long learning, inquiry, and problem solving, 100% in 1999 said significant or critical emphasis should be given to the topic compared to 88% in 2009. The mean rating for 1999 and 2009 was 2.92 and 2.44 respectively, a significant difference from the responses given in 1999 when 92% thought critical emphasis should be given to the topic compared to 56% in 2009.

When asked how much emphasis in the schools should be devoted to instilling skills and values that facilitate global citizenship, 80% in 1999 said significant or critical emphasis should be given to the topic compared to 72% in 2009. The mean rating for 1999 and 2009 was 2.05 and 2.00 respectively. There was no significant difference in responses given.

When asked how much emphasis in the schools should be devoted to removing or overcoming social, genetic, and physical barriers to self-actualization, 68% in 1999 said significant or critical emphasis should be given to the topic compared to 71% in 2009. The mean rating for 1999 and 2009 was 1.90 and 2.05 respectively. There was no significant difference in responses given.

When asked how much emphasis in the schools should be devoted to transmitting social values/cultural heritage to enhance social cohesiveness, 73% in 1999 said significant or critical emphasis should be given to the topic compared to 64% in 2009. The mean rating for 1999 and 2009 was 1.97 and 1.80 respectively. There was no significant difference in responses given.

When asked how much emphasis in the schools should be devoted to accomplishing national policies/goals, 46% in 1999 said significant or critical emphasis should be given to the topic compared to 71% in 2009. The mean rating for 1999 and 2009 was 1.53 and 2.00 respectively, a significant difference from the responses given in 1999 when only 7% thought critical emphasis should be given to the topic compared to 29% in 2009.

When asked how much emphasis in the schools should be devoted to promoting an appreciation for moral standards, 75% in 1999 said significant or critical emphasis should be given to the topic compared to 88% in 2009. The mean rating for 1999 and 2009 was 2.05 and 2.34 respectively, a significant difference from the responses given in 1999 when 30% thought critical emphasis should be given to the topic compared to 47% in 2009.

When asked how much emphasis in the schools should be devoted to developing or enhancing abilities for and appreciation of creative endeavors, 77% in 1999 said significant or critical emphasis



should be given to the topic compared to 73% in 2009. The mean rating for 1999 and 2009 was 2.07 and 1.94 respectively. There was no significant difference in responses given.

When asked how much emphasis in the schools should be devoted to facilitating literacy in technology, 97% in 1999 said significant or critical emphasis should be given to the topic compared to 83% in 2009. The mean rating for 1999 and 2009 was 2.60 and 2.33 respectively, a significant difference from the responses given in 1999 when 63% thought critical emphasis should be given to the topic compared to 50% in 2009.

### **Conclusions**

The findings regarding the perceptions of this group of educators point to phenomena that deserve additional study with other groups of educators and policy makers. Of the twelve areas covered by the survey there was a significant difference between the groups surveyed in 1999 and 2009 survey in five areas concerning the amount of emphasis that should be placed on the subject.

The importance of readying citizens for productive work and civic responsibility has diminished in importance. Perhaps the struggle to achieve Annual Yearly Progress (AYP) via high stakes testing has diminished attention on vocational education and civics. Surviving the test, not life, may be an unintended consequence of No Child Left Behind.

The importance of producing critical independent thinkers capable of life-long learning, inquiry, and problem solving has diminished in importance since 1999. The authors are more disturbed by this phenomenon than any other found in this study and fear the reason might be the increased emphasis on high-stakes tests. Preparing students to pass the test may have usurped providing students with experiences to think critically and solve problems. In avoiding failure to achieve annual yearly progress (AYP), schools may be failing to pursue success in producing life-long learners.

Accomplishing national policies/goals has increased in importance since 1999. Perhaps the reason for this change can again be attributed to schools attempting to avoid failing to achieve AYP, a component of No Child Left Behind legislation. The national goal to compete economically on the global stage, to be first in math, science, etc. via high-stakes testing could possibly be one explanation for this rise in importance over the last decade.

Promoting an appreciation for moral standards has increased since 1999. During the past decade, America has become more conservative and more embroiled in religious diversity. This perhaps has enhanced the perception that schools need to be involved in instilling morals by providing character education. Ironically, the diversity also complicates the school's involvement in this endeavor. The primary issue is whose sense of morality receives emphasis in this climate of diversity and separation of church and school.

Facilitating literacy in technology has decreased in importance since 1999. This may be due to the fact that students are using technology more in their lives outside and inside school than in 1999. This exposure diminishes the need for the school's intervention.



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A review of the data in this study indicated a shift in perceptions regarding the purpose of schooling has occurred during the past ten years in five of the twelve areas surveyed. The authors believe that the high-stakes testing requirements of No Child Left Behind has influenced the perceptions of principal aspirants. It is recommended that further research be conducted to determine the factors behind the changes in perceptions. The results could impact principal preparation programs for the future.

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## FACTORS INFLUENCING BUSINESS STUDENT MOTIVATION ON LOW-STAKES ASSESSMENT EXAMS

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### ABSTRACT

We investigate factors that contribute to the motivation of business majors to make a reasonable effort to answer questions on low-stakes business-program assessment exams. The assessment literature has long recognized that lack of motivation, on the part of exam participants, represents a serious threat to the validity of assessment exam results. As assessment-related accreditation standards become more prominent, the issue of student motivation on low-stakes exams becomes increasingly important. Anonymous, post-exam survey responses, collected from 140 business majors that had just completed the ETS major field exam in business, provide the data for the study.

We find that effort expended on the ETS exam exceeds typical values reported in other contexts. While most students are motivated, it is not necessarily intrinsic and the extrinsic efforts that we make to motivate the students do improve overall motivation. This study fills a void in the literature concerning the analysis of motivational effects of specific efforts to enhancing business student motivation to take low-stakes assessment exercises seriously.

*Keywords:* Assessment, Motivation, ETS exam, Business Curricula, AACSB Accreditation

### Introduction

Learning outcomes assessment has received renewed attention at many business schools. The most recent accreditation standards, adopted by the Association to Advance Collegiate Schools of Business International (AACSB), include assessment requirements; these are referred to as Assurance of Learning (AoL) standards (AACSB, 2005). These new assessment standards have added a sense of urgency to the need for business schools, hoping to achieve or renew accreditation, to take the learning outcomes assessment process more seriously. Pringle and Mitchell (2007) report that 83% of accredited business programs indicate that they are increasing their assessment efforts as a result of the new standards. The issue is germane to non-accredited programs as well, as regional accreditation bodies and other stakeholders continue to make increased demands related to assessment.

The evolving assessment efforts of business schools will be subject to the same challenges that have been discussed for some time in the K-12 assessment literature. In particular, concerns about the impact of student motivation, on the validity of assessment results, has long been discussed in the assessment literature. Business schools will need to address the issue of student motivation as they develop their assessment protocols and many will find the issue to be daunting.



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Lack of student motivation, when participating in assessment exercises, will cloud the assessor's ability to draw meaningful inferences concerning the degree to which learning objectives have been achieved. For example, poor performance on an assessment exercise might be due to the participant being of low proficiency, or it could be due to an examinee, of much higher proficiency, not trying very hard to demonstrate the target learning outcomes. As discussed within, the issue of motivation is particularly germane in the context of "low-stakes" assessment exams, where test performance has little or no real impact on the test taker.

In meeting the new AACSB AoL standards, business programs must be able to demonstrate responsiveness to assessment results. In cases where substantial proportions of students are unable to demonstrate a particular learning outcome, a remedial response should follow. AACSB refers to this concept as "closing the loop". The motivational issue raises the question of whether the "loop is open" because students have not learned the materials or whether it is open because students are not making good faith efforts when participating in assessment exercises. As such, understanding the motivation of business students in the assessment context is important to interpreting assessment results and developing remedial responses.

The author's experience at AACSB sponsored assessment workshops and training symposia suggests that the issue of student motivation is of concern to business school assessment practitioners. Often, the conversation will turn to each school's experience with the Educational Testing Service (ETS) Major Field Exam in Business, which is utilized by 33% of business programs (Pringle and Mitchell, 2007). During these conversations, a report of high-level performance on the ETS exam is inevitably followed by someone asking how the school motivates their students to take the test seriously. Various motivations, such as a "prize for high score" or "extra credit" might be delineated at this point of the conversation. However, it is readily apparent that no one really knows the degree to which their students are motivated or how effective the sundry motivational schemes are. What is clear, from these conversations, is that 1) practitioners are concerned about motivation, and 2) the contention, that that motivation is a necessary precedent to high performance, is eagerly assumed.

The conversations characterized above provide much of the motivation for this work. We have been fortunate in that our students routinely score in the top fifteenth percentile on the ETS exam, and sometimes in the top 10<sup>th</sup> percentile, suggesting that our students must be (at least comparatively) motivated to do well. However, prior to this study, we could not articulate what policies or actions on our part, if any, actually motivated the students to do well on the exam.

Our goal is to develop a better understanding of the degree to which business majors are motivated to make a bona fide effort to answer questions on low-stakes business program assessment exams. Further, we investigate factors that contribute to the students' motivation.

### Vernacular and Literature

Henceforth, when using the term "assessment", we will be referring to ***learning outcomes assessment***, i.e. the determination of the degree to which students actually learn the knowledge and skills imparted in their degree program. We contrast ***learning outcomes assessment*** with ***program***



**outcomes assessment**, which attempts to measure broader program such as student retention, alumni satisfaction and employer perceptions of academic program quality.

In pursuing assessment, measurement of learning may be **direct** or **indirect**. **Direct measures** require that students actually demonstrate a learning outcome. In contrast, assessment protocols may rely instead on **indirect measures**, such as a student testimonial indicating that the outcome was achieved (e.g., on an exit survey). The AACSB AoL standards require direct assessment of learning.

Another notion that is central to our discussion is the concept of **low stakes testing**. Low stakes testing refers to testing environments where test performance has little or no real impact on the test taker. Participation in the testing exercise may be optional and, depending on circumstances, performance generates no reward or punishment to the test taker (Bracey, 1996).

Low stakes testing situations are typical when **downstream testing** is employed, i.e. students are tested some significant time period after learning was supposed to have occurred, perhaps in a capstone course or at some significant milestone (e.g. the end of the senior year of high school). Unfortunately, since downstream exams are often embedded in courses having little to do with the subject matter being assessed, it is difficult to legitimately integrate performance on the exam into the grading scheme of the course in which the exam is administered. The students' motivation to expend serious effort on the assessment exercise is, therefore, suspect.

Some authors advocate **embedded** assessment, i.e., assessment exercises embedded as normal activities within a course. In theory, if assessment can be embedded within existing courses, administrative efficiency is gained as it is not necessary to develop (or procure), administer, evaluate, and analyze separate assessment exercises. Further, if course grades are influenced by the assessment exercise, student motivation may be improved. Pringle and Mitchell (2007) suggest that AACSB recommends the use of embedded assessments.

Embedded assessments, however, introduce their own set of limitations and challenges. First, it is unlikely that the results of locally developed and embedded assessments will be comparable with assessment results from other schools, making benchmarking comparisons impossible. Second, in-class assessments may actually be measuring a student's short-term memorization skills rather than assessing true (retained) learning. Finally, relying solely on embedded assessment processes can pose significant problems for schools (such as ours) with large transfer populations, where certain courses, e.g., introductory accounting and economics courses, are likely to be transferred from a junior college by many students. While a sampling approach is legitimate for assessment purposes, sample results should be externally valid and suggest, to stakeholders, that a substantial majority of graduates of a business program have achieved predefined learning goals. For the sake of comparison, between transfer and native students, some downstream assessment of transfer and native populations is required.

Our discussion now turns to the issue of motivation. There have been many models proposed concerning the specific physiological mechanisms and cognitive processes that result in motivation. There is some agreement, however, on the result of motivation. Much of the motivation research



links motivation to the choices we make (what we choose to do), the effort we expend (how hard we try to do it), and/or the persistence that we lend to a task (how long we stick with it). These three motivational outcomes have obvious consequences for student participation in downstream assessment activities. As discussed in Wise (2005), lack of motivation represents a key source of construct-irrelevant variance that will bias the interpretation of an otherwise valid assessment instrument.

With regard to academic motivation, there is also some agreement that motivation may be extrinsic (generated from outside) or intrinsic (generated from within). Grades, punishments, and extra credit are examples of extrinsic motivation. Love of learning and a wish to better one's self are examples of intrinsic motivation. A particular type of intrinsic motivation, achievement motivation, might also be labeled as competitiveness. While it is possible for one to simply want to do their best without regard to the performance of others, achievement motivation would also include wanting to achieve in order to do better than others, i.e. the thrill of victory. See Ryan and Deci (2000) for a deeper discussion.

Finally, there is also agreement that motivation is not static at the individual level. Kiplinger and Linn (1995) found that thirty percent of the eighth-graders said that they tried "harder" or "much harder" on the National Assessment of Educational Progress mathematics test than on other math tests, while only 20% said that they tried "not at all hard." In contrast 45% of twelfth graders said they tried "not at all hard." The increase is not surprising, 67% of the twelfth graders rated the test as only "somewhat important" or "not very important"; intrinsic motivation is clearly lacking among the seniors. An obvious question is how achievement motivation changes for students that participate in exams such as ETS.

Studies that attempt to investigate the link, between participant motivation and assessment exam scores, generally fall into two categories. The first includes studies where the mean performance score of a group of participants (believed to be more motivated) is compared with the mean score of a group that is believed to be less motivated. A treatment applied to the motivated group (e.g. payment for performance) is assumed to provide the differential motivation. However, there is no attempt to actually measure the level of motivation of the participants. Differences in performance, between the two (otherwise homogeneous) groups, is then attributed to motivational differences induced by the treatment regimen. The second category of studies attempts to measure the correlation between some measure of the motivation of the individual and the individual's assessment scores. These studies typically rely on some type of post-test survey to measure motivation, which is then correlated with individual performance. See Wise and Demars (2005) for a good meta-analysis.

The literature has detailed a number of drawbacks to the second approach. For example, it has been argued that participants who believe that they did poorly on an assessment exercise, and are therefore embarrassed by their performance, may report low motivation as an excuse for their poor performance. Further, in environments where giving less than one's best effort has a negative connotation, students may be less than forthcoming in reporting their true level of motivation. Popham (1993) asserts that a student's perception of anonymity is pivotal if one wishes to secure truthful responses on self-report instruments dealing with sensitive subjects.



To summarize, while the literature on motivation is vast, the literature on the impact of motivation on low-stakes assessment results is rather limited; the number of studies is relatively small and focused on K-12. The results are mixed concerning whether motivation impacts performance. There are virtually no studies that provide guidance on how to effectively motivate individuals in the low stakes context. None of the studies involved undergraduate business majors.

### **Context and Motivational Methods**

At our school, assessment efforts have evolved over a span of twenty years. We believe that strong assessment protocols need to incorporate both embedded and downstream assessments. Downstream assessment is an important component of a robust assessment program in that it provides 1) a more honest metric of retained knowledge and skills, 2) a method of assessing the retained knowledge of transfer students, and 3) the opportunity to compare our program with others by employing normative comprehensive tests such as the ETS Major Field Exam in Business. However, the issue of motivation must be addressed.

In addition to embedded assessments, our current assessment protocols employ downstream, low stakes assessment exams at two milestones in our business curriculum.

- 1) Topics in the business foundation curriculum (accounting 1 and 2, Economics 1 and 2, etc.) are assessed down-stream via examination in our core Principles of Corporate Finance course. The finance course is a convenient place to do the assessment because it is rarely transferred and it lists the foundation curriculum as a prerequisite, i.e., we can be certain that students in the finance course have already taken the courses that are being assessed.
- 2) The business core curriculum (finance, marketing, organizational behavior, legal environment, international business, and quantitative methods) is assessed in Strategic Management, our capstone course.

We assess one foundation topic and one core topic each semester, administering the corresponding exams on a rotating basis. We administer the ETS Major Field Exam in the capstone course every fourth semester. Our sampling approach yields a sample of approximately 150 students for any given exam.

With regard to student motivation, we use extrinsic approaches, including both “carrots” and “sticks” and also appeal to the students’ self-interest in making the case for what they should give their best effort on an assessment exam.

- 1) We have attempted to establish a culture where participation in assessment is expected and accepted as a regular part of being a student in our programs. Both our college catalog and the policies section of the application students complete, when applying to our programs, contain strong wording indicating that serious participation in assessment exercises is required as a condition of course enrollment.



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- 2) Prior to each assessment exam, a letter is distributed to each student that informs them of when and why the test is being administered. The letter, from the Department Chair and the Assessment Coordinator, makes an appeal as to the importance of assessment and their serious participation. Students are informed that they will receive a report of the test results, on letterhead, and that the results will include their raw score, their percentile rank vs. students at our school as well as their percentile rank vs. students at other schools that use the ETS exams. In doing so, we are trying to appeal to their achievement motivation.

We also attempt to make the following impressions within this notification letter.

- That assessment results will be used to improve the quality of their education;
  - That assessment result will be used to enhance the reputation and value of their degree;
  - That assessment helps maintain program accreditation;
  - That their strong performance provides opportunity to distinguish themselves on a graduate school or job application;
- 3) As far as direct incentives, students are informed that the name of the high scorer(s) will appear on an awards plaque in the Department office and in various campus publications. A prize (\$50.00 Barnes and Nobel® gift certificate) is awarded to the high scorer(s) and randomly to 4 students scoring in the top 25<sup>th</sup> percentile.

We have also used various use extra-credit schemes as a motivator for performance on our locally-developed assessment instruments, but because of the particulars of how the ETS test is administered and scored, we do not offer that incentive with the ETS exam. Because our students have consistently been in the top 15% in terms of average exam score, we believe that our efforts to motivate the students have borne fruit, i.e. if they were not motivated to do well, we would be unlikely to see comparatively high scores on the exam.

### Data Collection

A brief, anonymous, post-exam, survey was used to collect motivation-related data from 140 undergraduate business majors that had just completed the ETS Major Field Exam in Business. We chose to use an anonymous survey to promote honest answers per Popham (1993). Clearly, asking someone to reveal that they gave a superficial effort on a test, that you just told them is important, is more likely to occur under the veil of anonymity. Students may also be embarrassed to admit that they were motivated by a prize or by competitive instincts. Anonymity precludes the possibility of directly linking motivation to performance.

Given the potential negative impact of testing fatigue on post-exam survey participation, brevity was a paramount concern in designing the survey; this also limited the number of demographic control variables to be included on the survey. Another casualty of brevity is that we chose not to use multiple items to measure single constructs, which limits the development of formal validity measures. However, to enhance validity, we did use established scales for the primary measure of motivation, borrowing from the attitudinal questions used in a study by the New Jersey State Department of Education, which assessed student motivation for a reading exam.



The survey questions appear in Exhibit 1. The first question is an indicator of effort expended. The literature suggests that effort expended is a primary result of motivation, regardless of its source (intrinsic or extrinsic). The second question is intended to provide a measure of intrinsic motivation. If intrinsic motivation, to perform well on the exam, is low then devising effective extrinsic motivators becomes more important in pursuing the goal of serious student participation. In contrast, if intrinsic motivation is high, then perhaps motivational speeches and prizes are not necessary to achieve meaningful assessment results. The third question is designed to determine which of the motivational methods and arguments that we employ turn out to be salient to the student. The exception is the last choice on the list (I like doing better than other people on exams), which is intended to provide a measure of achievement motivation. Demographic questions were limited to gender, transfer status, and self-report GPA. Our experience (on other, non-anonymous instruments) is that there is a 0.85-0.90 correlation between self-reported and actual GPA for our students

## Results

### *How motivated are the students?*

At least on a self-report basis, the students generally tried hard to do well on the exam, with 61% indicating they strongly agree, and 31% indicating that they agree with the statement “I gave my best effort in answering the questions on this exam”. We argue that the anonymous nature of the survey and the high average performance on the exam lends some credibility to the self report measures. Our results are in stark contrast to the findings of Kiplinger and Linn (1995), where 45% of students reportedly tried “not hard at all”. Obviously, something is motivating these students.

### *Is the motivation intrinsic or extrinsic?*

While 92% of the students expended a reasonable effort on the task, only 75% are intrinsically motivated to do so. Only 17% indicated that they strongly agreed with the statement “It is important to me that I performed well on this test”. Fifty-nine percent agree with the statement and 22% disagree (2% strongly disagree). This indicates that at least some of our extrinsic motivational policies have compensated for a lack of intrinsic motivation.

### *What specific factors motivate the students?*

The third question on the exam provided students with a list of possible motivating factors and asked them to indicate any and all factors that motivated them to do well on the exam. Results appear in Table 2. Two items on the list are internal to the student and, as such, not controllable by our assessment practices. One of these, personal pride, was the modal motivator with 60% of students indicating its importance. About half as many students (29%) indicated that achievement motivation (desire to outscore others) was a motivating factor. The least salient factors were getting one’s name on an awards plaque (11%) for achieving the high score and the gift certificates motivated on 15% of the students. It is not clear whether these factors are simply unimportant to the student or whether they are perceived as unattainable, unrealistic events whose probabilities are so low as to mitigate any motivational impact.



Table 1

*Survey Questions*

- |   |
|---|
| <p>1) I gave my best effort in answering the questions on this exam.</p> <p>a. Strongly Agree<br/>b. Agree<br/>c. Disagree<br/>d. Strongly Disagree</p> <p>2) It is important to me that I performed well on this test.</p> <p>a. Strongly Agree<br/>b. Agree<br/>c. Disagree<br/>d. Strongly Disagree</p> <p>3) Did any of the following motivate you to do well on this exam? (check <u>all</u> that apply)</p> <p><input type="checkbox"/> The gift certificate prizes<br/><input type="checkbox"/> Personal pride<br/><input type="checkbox"/> The opportunity to distinguish myself with a high score on a competitive exam<br/><input type="checkbox"/> Enhancing the reputation of the school by doing well<br/><input type="checkbox"/> Enhancing the value of my degree by doing well<br/><input type="checkbox"/> I want to help the school improve its business curriculum<br/><input type="checkbox"/> Having my name on an awards plaque and in various publications<br/><input type="checkbox"/> I didn't want to get in trouble for not trying<br/><input type="checkbox"/> I like doing better on exams than other people</p> |
|---|

In somewhat of a surprise to us, a little over a third of the students said that helping the school improve its curriculum was motivating to them. While we do explain how the exam results might be used to direct improvements in the curriculum, we were surprised that this issue was salient to as many students as it was. A little less than a third suggested that the opportunity to enhance the reputation of the school, and the value of their degree, was a motivating factor. Finally, about a quarter of the students wanted to avoid getting in trouble for not trying their best on the exam, suggesting that there is a place for negative sanctions, even if only implied.

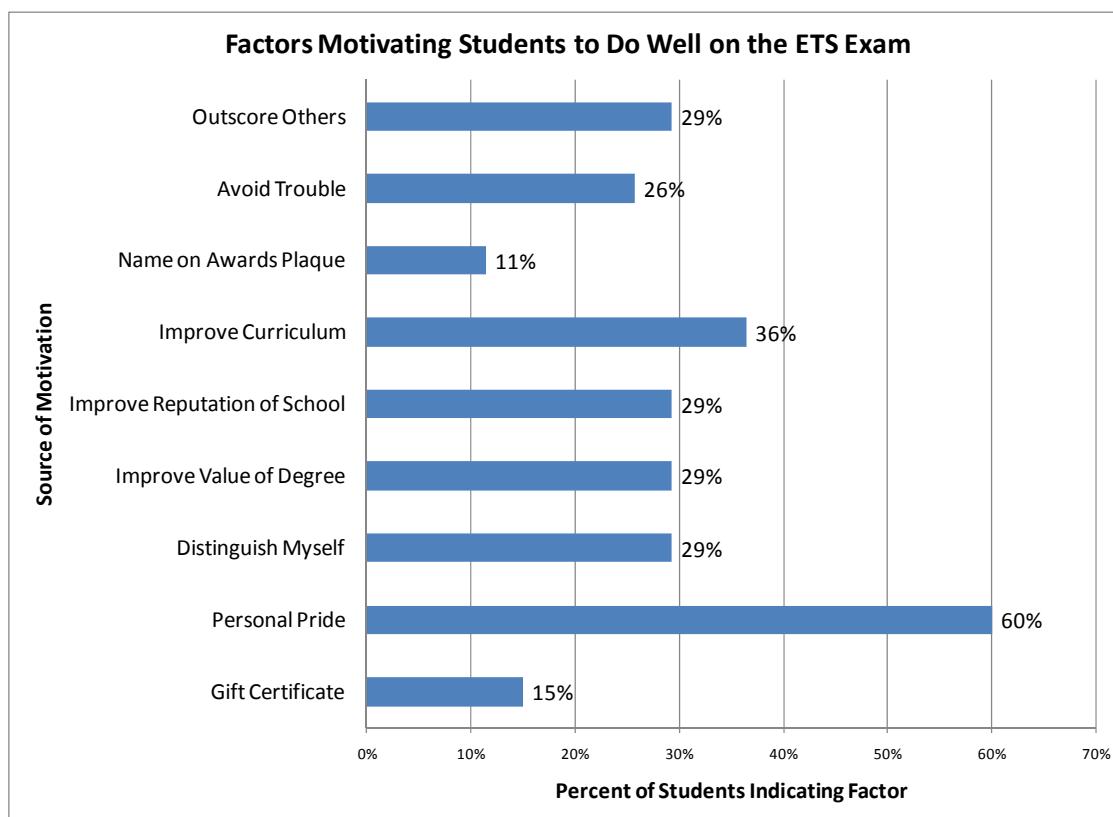


Table 2  
*Factors motivating effort on exam*

Controls included gender (male/female), transfer status (native student/transfer student) and self-reported GPA (0-4). We could not find any significant effects or differences in the motivating factors based on these controls. The point-biserial correlations between the factors appear in Table 3.

Table 3  
*Correlations Between Motivating Factors*

	<i>Gift Cert</i>	<i>Pride</i>	<i>Dist Self</i>	<i>Val Degr</i>	<i>Schl Rep</i>	<i>Imprv Curic</i>	<i>Award Plaque</i>	<i>Avoid Troub</i>	<i>Competative</i>
<i>Gift Cert</i>	1.00								
<i>Pride</i>	0.10	1.00							
<i>Dist Self</i>	0.30	0.04	1.00						
<i>Val Degr</i>	-0.05	0.04	-0.10	1.00					
<i>Schl Rep</i>	0.08	0.11	-0.03	0.79	1.00				
<i>Imprv Curic</i>	0.14	0.01	0.07	0.30	0.49	1.00			
<i>Name on Plaque</i>	0.16	0.25	0.16	0.16	0.16	0.05	1.00		
<i>Avoid Troub</i>	0.03	0.05	0.12	-0.06	-0.02	0.10	0.15	1.00	
<i>Competative</i>	0.04	0.08	0.03	0.24	0.34	0.10	0.31	0.12	1.00

The majority of correlations are low to weak. Unsurprisingly, students who are motivated to improve the value of their degree are also motivated to improve the reputation of their school and, to a lesser degree, the curriculum of that school. Students with a competitive streak are more likely to be motivated to improve the school's reputation.



### **Summary and Conclusions**

In this research, we attempted to gain a better understanding of motivational issues associated with undergraduate business students taking low-stakes assessment exams. Based on student responses to a brief, anonymous, post-exam survey, we found that while the intrinsic motivation to perform of these students is markedly better than that reported in other studies, there is still room to apply extrinsic motivational methods in order to improve the degree to which students are willing to give their best effort on an assessment exam. With regard to specific methods, we learned that prizes, recognition, and awards may be useful on the margin but it is probably more effective to simply and purposefully communicate what assessment is and how it can be used to 1) improve the educational product that the student is paying for, 2) the reputation of the school, and 3) the value of the student's degree. Appealing to the students' competitive nature, where it exists, may also be useful. Personal pride was the factor cited most frequently by the students as a motivational force.

**References: Available from author on request.**



## Differences in Procrastination & Motivation between Undergraduate & Graduate Students

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### ABSTRACT

The present study used a self-regulated learning perspective to compare undergraduate and graduate students of their procrastination types and the associated motivation. Sixty-six undergraduate and sixty-eight graduate students responded to a packet of questionnaires concerning their experience in a college class. The results show that students' beliefs about the usefulness of procrastination were a better predictor of academic procrastination than self-efficacy beliefs and achievement goal orientations for both undergraduate and graduate students. Student age was related to procrastination types. Among the undergraduate procrastinators, the younger students were more likely to engage in active procrastination while the older students tended to engage in passive procrastination. Implications and future research directions were discussed.

### Introduction

Recent research continues the search for a better understanding of the nature of academic procrastination and its effects on students of different age groups and grade levels. A popular view defined procrastination as the voluntary yet irrational delay of an intended course of action (Steel, 2007) which frequently resulted in unsatisfactory performance and emotional upset (Chu & Choi, 2005; Solomon & Rothblum, 1984; Wang & Englander, 2010). The majority of the research on procrastination focused on personality variables. This research shows that more than half of university undergraduate students procrastinate academically. Their procrastination was associated with fear of failure, difficulty in making decisions, and laziness (Özer, Demir, & Ferrari, 2009). This research also shows that academic procrastination was related to students' gender, emotional intelligence, and coping styles in dealing with academic challenges and interpersonal relationships (Burns, Dittmann, Nguyen, & Mitchelson, 2000, Deniz, Traş, & Aydoğan, 2009; Senécal, Julien, & Guay, 2003).

In addition to the personality variables, this research included motivation variables. Eunju (2005) reported that intrinsic motivation had significant unique effects on procrastination. Lack of self-determined motivation and low incidence of flow state was associated with high procrastination. Similarly, Brownlow and Reasinger (2000) found that low extrinsic motivation, together with perfectionism, external locus of control, and attribution style, contributed to the tendency of delaying school tasks. Similar to their undergraduate counterparts, a high percentage of graduate students reported problems with procrastination. For graduate students, the procrastination occurred mostly in **writing term papers, studying for examinations, and completing weekly reading assignments**. Their procrastination was related to fear of failure, self-efficacy,



task aversiveness, task values, and test and class anxiety (Collins, Onwuegbuzie, & Qun, 2008; Onwuegbuzie, 2004).

Existing research demonstrates that academic procrastination involved undergraduate and graduate students. However, no research study was found that compared these two groups of the behaviors and motives associated with academic procrastination. The present study addressed this gap by using a self-regulated learning theory (Pintrich, 2000) to examine procrastination types and the associated motivation of undergraduate and graduate students simultaneously.

To facilitate the comparison, two different types of procrastinators were distinguished: passive procrastinators and active procrastinators. *Passive procrastinators* were those who fell in the traditional view as a failure of self-regulation. They did not intend to procrastinate, but they often ended up postponing tasks because of their inability to make decisions quickly and to thereby act on them quickly (Chu & Choi, 2005; Knaus, 2000; Seneca, Koestner, & Vallerand, 1995; Steel, 2007). *Active procrastinators* included those who chose fell in an alternative view that they procrastinated for the adaptive values, such as enhanced interest in course materials, more concentrated effort, greater amount of flow-like experiences, and eliminated distractions (Chu & Choi, 2005; Lay, 1990; Schraw et al., 2007; Tice & Baumeister, 1997). They procrastinated because they were capable of acting on decisions in a timely manner. Therefore, their procrastination could be viewed as a success of self-regulation.

Self-regulated learning (SRL) refers to the “active, constructive process whereby learners set goals for their learning and then attempt to monitor, regulate, and control their cognition, motivation, and behavior, guided and constrained by their goals and the contextual features in the environment” (Pintrich, 2000, p. 453). This model suggests that SRL involves students’ metacognitive processes and motivation attributes concerning willingness, effort, and persistence. In this study, student motivation was examined through metacognitive beliefs about procrastination, self-efficacy, and achievement goal orientations. Bandura (1986) was the first to introduce the association between procrastination and self-efficacy beliefs—judgment of their capability to accomplish tasks and succeed in activities. Self-efficacy beliefs influence students’ motivation to initiate and sustain self-regulatory efforts and predict academic performance (Bandura, 1997). Existing research found inverse relationships between self-efficacy belief and academic procrastination among college students (Seo, 2008; Tan et al., 2008; Tuchman, 1991). Passive procrastinators had significantly lower self-efficacy than the active procrastinators (Chu & Choi, 2005).

Metacognitive beliefs refer to the information individuals hold about their own cognition and internal states, as well as the coping strategies they activate in problematic situations (Wells, 2000). Current theory specifies two subcategories of metacognitive beliefs about procrastination (Fernie & Spada, 2008). Positive metacognitive beliefs are concerned primarily with the usefulness of procrastination in improving cognitive performance. These beliefs may be involved in the delay of task initiation as a form of coping. Negative metacognitive beliefs are concerned primarily with the uncontrollability of procrastination. These beliefs may play a role in propagating procrastination through the initiation of verbal activity that fixes attention on procrastination itself which simultaneously consumes executive resources necessary for increasing flexible control over thinking and coping. Specific positive and negative metacognitive beliefs about procrastination were found



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in chronic procrastinators (Fernie, et al., 2009; Spada, Hiou, & Nikcevic, 2006). Yet, the influence of metacognitive beliefs about procrastination on students' behaviors and motivation has not been well researched.

Achievement goal orientations refer to cognitive representations of the different purposes students may adopt for their learning in achievement situations (Elliot & McGregor, 2001). The *mastery-approach goal orientation* includes those seeking to improve ability and learn all there is to learn. The *mastery-avoidance goal orientation* describes a perfectionist mentality that strives to avoid failing to learn course materials. The *performance-approach goal orientation* describes those determined to perform better than peers. The *performance-avoidance goal orientation* includes those focusing on avoiding performing worse than peers (Ames & Archer, 1988). The *work-avoidance goal orientation* describes those striving to minimize the effort for academic tasks (Wolters, 2003). Research shows that procrastination is negatively correlated with a general mastery orientation (Schraw et al., 2007); but either positively correlated or uncorrelated with a performance-approach orientation (McGregor & Elliot, 2002).

Recently, research on procrastination started to examine academic procrastination from the self-regulated learning perspective (Schraw et al., 2007; Wolters, 2003). This research distinguished different procrastination types and examined motivation factors associated with passive and active procrastination (Chu & Choi, 2005). However, the existing research was limited mostly to a single age group or education level. The present study compared undergraduate and graduate students of their procrastination types and associated motivation factors by addressing the following research questions: (1) How procrastination types were associated with motivation for undergraduate and graduate students? (2) Which motivation factors predicted different types of procrastination for undergraduate and graduate students? (3) What were the differences in motivation among the different types of procrastinators between undergraduate and graduate students?

### Method

Sixty-six undergraduate students and sixty-eight graduate students enrolled in two educational psychology classes in a US university voluntarily participated in the study. Standard IRB procedures were followed to ensure the privacy and anonymity of the participants. Of the undergraduate students, 54 were female (82%) and 12 male (18%). Forty-three (80%) were of White, 10 (15%) of Black, and three (5%) of other ethnic backgrounds. They majored in early childhood (55%), middle grades (24%), secondary (4%), special education (7%), and other majors (10%). Their age ranged from 20 to 59 ( $M=27.21$ ,  $SD=9.28$ ), suggesting inclusion of the non-traditional students.

Of the graduate students, 57 were female (84%) and 11 male (16%). Forty-three (64%) were of White, 18 (27%) of Black, and five (9%) of Hispanic and other ethnic backgrounds. They majored in counseling (65%) and other education majors (35% e.g., early childhood, art education, social studies). Their age ranged from 22 to 56 ( $M=32.12$ ,  $SD=9.04$ ).

### Measurement and Procedure

Participants were invited to respond to a survey packet during the last class. The packet included the following measurement instruments. An *Educational Psychology Self-Efficacy* inventory consisted



of eight items answered on a 5-point Likert scale. Sample items included “I am sure that I can learn educational psychology” (Cronbach  $\alpha=.79$  for the total; .92 for the graduate, and .68 for the undergraduate, hence after).

*Metacognitive beliefs about Procrastination Questionnaire* (Fernie et al., 2009) consisted of two-factors of eight items each measuring metacognitive beliefs about procrastination. The first factor (Cronbach  $\alpha=.81;.74/.86$ ) represented positive metacognitive beliefs about procrastination (e.g., Procrastination allows creativity to occur more naturally), while the second factor (Cronbach  $\alpha=.80;.78/.82$ ) represented negative beliefs about procrastination (e.g., Procrastination increases my worry). Participants were asked to express their level of agreement with the statement on a Likert scale ranging from 1 (not at all true) to 7 (very true).

*Achievement Goal Orientations Questionnaire* consisted of 16 items on a 7-point Likert scale (Cronbach alpha=.79;.79/.77). The questionnaire included 12 items (Elliot & McGregor, 2001) that measured the mastery- and performance-approach vs. mastery- and performance-avoidance goal orientations, plus four items measuring the work-avoidance goal orientation (Wolters, 2004).

*Academic Procrastination.* Tuckman's (1991) 16-item Procrastination Scale (Cronbach  $\alpha=.87;.90/.83$ ) was used to measure “the tendency to waste time, delay, and intentionally put off something that should be done” (p. 479). Participants were asked to indicate agreement on a Likert scale ranging from 1 (not at all true to me) to 7 (very true to me) on a statement (e.g., “I needlessly delay finishing jobs, even when they're important.”) of passive procrastination.

*Active Procrastination.* Choi and Moran's (2009) 16-item scale was used to identify active procrastinators (Cronbach  $\alpha=.83;.73/.86$ ). This 7-point Likert scale measures four defining characteristics of active procrastinators: (a) preference for pressure (e.g., “I tend to work better under pressure”), (b) intentional procrastination (e.g., “I intentionally put off work to maximize my motivation”), (c) ability to meet deadlines (e.g., “Since I often start working on things at the last moment, I have trouble finishing assigned tasks most of the time” [reverse coded]), and (d) outcome satisfaction (e.g., “I feel that putting work off until the last minute does not do me any good” [reverse coded]). A composite score of these four subscales was used to assess the overall tendency toward active procrastination.

## Results

Pearson correlation procedures were used to address the first research question. No significant correlation was found between academic procrastination and active procrastination either for undergraduate or graduate students, suggesting that Academic Procrastination Scale and Active Procrastination Scale measured a different construct. Correlation results show that undergraduate students, academic procrastination is positively correlated with positive metacognitive beliefs about procrastination ( $r=.56, p<0.00$ ), performance-avoidance goal orientation ( $r=.29, p<0.02$ ), and work-avoidance goal orientation ( $r=.35, p<0.00$ ); but negatively correlated with test performance ( $r=-.26, p<0.04$ ) and age ( $r=-.25, p<0.04$ ). Active procrastination is positively correlated with positive metacognitive beliefs about procrastination ( $r=.29, p<0.02$ ); but negatively correlated with negative metacognitive beliefs ( $r=-.51, p<0.00$ ) and age ( $r=-.34, p<0.01$ ).



Undergraduate students' educational psychology self-efficacy beliefs are positively correlated with test performance ( $r=.46, p<0.00$ ) and mastery-approach goal orientation ( $r=.31, p<0.01$ ); but negatively correlated with mastery-avoidance goal orientation ( $r=-.416, p<0.00$ ), performance-avoidance ( $r=-.27, p<0.03$ ), and work-avoidance goal orientation ( $r=-.25, p<0.04$ ). Their positive metacognitive beliefs about procrastination are positively correlated with performance avoidance ( $r=.33, p<0.01$ ) and work-avoidance goal orientation ( $r=.41, p<0.00$ ), but negatively correlated with test performance ( $r=-.36, p<0.00$ ), age ( $r=-.37, p<0.00$ ), and mastery-approach goal orientation ( $r=-.39, p<0.00$ ).

For graduate students, academic procrastination is positively correlated with positive metacognitive beliefs about procrastination ( $r=.72, p<0.00$ ), performance-avoidance goal orientation ( $r=.39, p<0.00$ ), and work-avoidance goal orientation ( $r=.52, p<0.00$ ); but negatively correlated with mastery-approach goal orientation ( $r=-.32, p<0.01$ ). Active procrastination is positively correlated with educational psychology self-efficacy ( $r=.37, p<0.00$ ). Their positive metacognitive beliefs about procrastination are positively correlated with mastery-avoidance goal orientation ( $r=.27, p<0.03$ ), performance avoidance ( $r=.42, p<0.00$ ), and work-avoidance goal orientation ( $r=.49, p<0.00$ ); but negatively correlated with age ( $r=-.35, p<0.00$ ) and mastery-approach goal orientation ( $r=-.25, p<0.04$ ). Their negative metacognitive beliefs about procrastination are positively correlated with mastery-approach goal orientation ( $r=.27, p<0.02$ ).

A three-step hierarchical regression analysis was used to address the second question. The results show that positive metacognitive beliefs about procrastination were the sole predictor of academic procrastination for both undergraduate students in step one ( $\beta=.56, t_{(63)}=5.19, p<.001$ ), step two ( $\beta=.54, t_{(62)}=4.92, p<.001$ ), and step three ( $\beta=.50, t_{(57)}=3.75, p<.001$ ); and graduate students in step one ( $\beta=.73, t_{(65)}=8.16, p<.001$ ), step two ( $\beta=.72, t_{(64)}=8.03, p<.001$ ), and step three ( $\beta=.60, t_{(59)}=5.53, p<.001$ ). For undergraduate students active procrastination was predicted by negative metacognitive beliefs about procrastination in step one ( $\beta=-.47, t_{(63)}=-4.25, p<.005$ ), step two ( $\beta=-.47, t_{(62)}=-4.26, p<.001$ ), and step three ( $\beta=-.45, t_{(57)}=-3.89, p<.001$ ), plus mastery-approach goal orientations in step three ( $\beta=-.32, t_{(57)}=-2.31, p<.025$ ). For graduate students, active procrastination was predicted by positive metacognitive beliefs ( $\beta=.26, t_{(64)}=2.30, p<.025$ ) and educational psychology self-efficacy ( $\beta=.39, t_{(64)}=3.48, p<.001$ ) in step two; but only by educational psychology self-efficacy ( $\beta=.36, t_{(59)}=3.16, p<.002$ ) in step three.

In order to address the third research question about the differences among different types of procrastinators, a two-step process was used to categorize the participants into three subgroups for undergraduate and graduate students (Chu & Choi, 2005). In the first step, participants' responses on Academic Procrastination Scale (Tuckman, 1991) were used to distinguish procrastinators from non-procrastinators. The undergraduate participants ( $n=66$ ) who scored less than the median score (3.00) on the Tuckman Scale were grouped as non-procrastinators ( $n=30$ ) and those who scored equal or greater than 3.00 were grouped as procrastinators ( $n=36$ ). In the second step, participants' responses on Choi and Moran (2009) Active Procrastination Scale were used to distinguish passive procrastinators from active procrastinators. Among the 36 procrastinators, those who scored less than the median score (3.75) on the Active Procrastination Scale were grouped as passive procrastinators ( $n=16$ ), and those who scored equal or greater than 3.75 were grouped as active procrastinators ( $n=20$ ). The same procedure was used to distinguish the procrastinator groups for



the graduate students. Among the 68 graduate students, 33 were identified as non-procrastinators, 15 as passive procrastinators, and 20 as active procrastinators.

Analysis of covariate (ANCOVA) procedures were used to examine differences of the major variables among non-procrastinators, passive procrastinators, and active procrastinators separately for undergraduate and graduate students. Because the undergraduate group included untraditional students ( $M=27.21$ ,  $SD=9.28$ ) and a significant difference was found among the three procrastination groups ( $F_{(2,62)}=9.084$ ,  $p=.004$ ;  $\eta^2=.128$ ), student age was used as a covariate to control the age effect on procrastination and motivation for the undergraduate group.

For the undergraduate students, the ANCOVA results revealed a significant omnibus effect among the three procrastination groups on metacognitive beliefs, educational psychology self-efficacy, achievement goals, and test performance (Wilks's  $\lambda=.541$ ,  $F_{(2,62)}=2.154$ ,  $p=.008$ ,  $\eta^2=.264$ ). A significant difference was found among the three procrastination groups in positive metacognitive beliefs about procrastination ( $F_{(2,62)}=9.18$ ,  $p=.001$ ;  $\eta^2=.228$ ); negative metacognitive beliefs about procrastination ( $F_{(2,62)}=5.637$ ,  $p=.006$ ;  $\eta^2=.154$ ); mastery-avoidance goal orientation ( $F_{(2,62)}=3.503$ ,  $p=.036$ ;  $\eta^2=.102$ ); and work-avoidance goal orientation ( $F_{(2,62)}=4.193$ ,  $p=.020$ ;  $\eta^2=.119$ ).

The Bonferroni procedures were used to further examine differences among the three groups. The pairwise comparisons show both passive procrastinators (Group 2,  $M=3.43$ ,  $p = .040$ ) and active procrastinators (Group 3,  $M=4.02$ ,  $p = .001$ ) reported a significantly higher level of positive metacognitive beliefs about procrastination than the non-procrastinators (Group 1,  $M=2.78$ ). However, active procrastinators (Group 3,  $M=3.95$ ) reported a significantly lower level of negative metacognitive beliefs about procrastination than passive procrastinators (Group 2,  $M=5.02$ ,  $p = .007$ ) and the non-procrastinators (Group 1,  $M=4.72$ ,  $p = .028$ ). A significance was also found in the mastery-avoidance goal orientation between passive procrastinators (Group 2,  $M=5.27$ ) and active procrastinators (Group 3,  $M=4.13$ ,  $p = .032$ ); and in the work-avoidance goal orientation between non-procrastinators (Group 1,  $M=3.53$ ) and active procrastinators (Group 3,  $M=4.60$ ,  $p = .017$ ).

For the graduate students, the ANOVA results revealed a significant omnibus effect among the three procrastination groups on metacognitive beliefs, self-efficacy, achievement goals, and test performance (Wilks's  $\lambda=.455$ ,  $F_{(2,62)}=3.004$ ,  $p=.001$ ,  $\eta^2=.326$ ). A significant difference was found among the three procrastination groups in positive metacognitive beliefs about procrastination ( $F_{(2,64)}=18.871$ ,  $p=.001$ ;  $\eta^2=.371$ ); mastery-approach goal orientation ( $F_{(2,64)}=4.063$ ,  $p=.022$ ;  $\eta^2=.113$ ); performance-avoidance goal orientation ( $F_{(2,64)}=4.828$ ,  $p=.011$ ;  $\eta^2=.131$ ); and work-avoidance goal orientation ( $F_{(2,64)}=8.682$ ,  $p=.001$ ;  $\eta^2=.213$ ).

Again, the Bonferroni analyses show that both active procrastinators (Group 3,  $M=3.78$ ,  $p = .001$ ) and passive procrastinators (Group 2,  $M=3.63$ ,  $p = .001$ ) reported a significantly higher level of positive metacognitive beliefs about procrastination than the non-procrastinators (Group 1,  $M=2.33$ ). In addition, the non-procrastinators (Group 1,  $M=5.65$ ) reported a significantly higher level of the mastery-approach goal orientation than passive procrastinators (Group 2,  $M=4.71$ ,  $p = .018$ ). However, the non-procrastinators reported a significantly lower level of the performance-avoidance goal orientation (Group 1,  $M=3.88$ ,  $p = .016$ ) and work-avoidance goal orientation (Group 1,  $M=2.63$ ,  $p = .001$ ) than active procrastinators (Group 3,  $M=5.32$ ,  $M=3.94$ , respectively).



## **Discussion**

The present study used a self-regulated learning perspective to compare undergraduate and graduate students of their procrastination types and the associated motivation. The purpose was to achieve a better understanding of the nature of procrastination and the motivation of procrastination among undergraduate and graduate students. The results would contribute to the research on procrastination and self-regulated learning; and have a significant impact on teaching and learning.

Results to the first research question show that among undergraduate and graduate students, academic procrastination was more likely to occur for those who possessed a higher level of beliefs that procrastination were beneficial and would improve their cognitive performance. These students also had a higher tendency to avoid performing worse than others and minimize effort for academic tasks. Interesting differences were found on the negative correlates with academic procrastination between undergraduate and graduate students. The younger undergraduate students were more likely to procrastinate than their more elderly counterparts who were mostly untraditional students. In addition, procrastination of the undergraduate students was negatively associated with test performance. Among the graduate students, a negative correlation was found between academic procrastination and mastery-approach goal orientation, suggesting that graduate students who seek to improve their knowledge and learn all there is to learn were less likely to procrastinate.

These findings are consistent with the existing literature that academic procrastination is negatively correlated with a general mastery orientation (Schraw et al., 2007, Wolters, 2003); but positively correlated with avoidance goal orientations and test performance (Solomon & Rothblum, 1984; Wang & Englander, 2010). More importantly, the present study found that positive metacognitive beliefs about procrastination presented the strongest correlation with academic procrastination both for undergraduate and graduate students. These findings suggest that students' metacognitive beliefs about the adaptive values of procrastination play a more important role in propagating academic procrastination than other motivation variables included in the study.

More differences were found on the correlates of active procrastination between undergraduate and graduate students. Among the undergraduate students those who believed more in the usefulness of procrastination, and those who had less concerns about uncontrollability of procrastination were more likely to engage in active procrastination. These procrastinators tend to be younger undergraduate students. Among the graduate students those who were more confident about their ability to learn the class content were the more likely to engage in active procrastination. These findings support the observation that self-efficacy beliefs were positively associated with active procrastination (Chu and Choi, 2005), suggesting that students' confidence beliefs about their abilities to learn the class content may contribute to their motivation to procrastinate.

Results to the second research question confirmed the findings of the first research question. Positive metacognitive beliefs about procrastination were the sole predictor to academic procrastination even when self-efficacy and achievement goal orientations were considered for both undergraduate and graduate student. This finding suggests that metacognitive beliefs play a more



important role in academic procrastination than self-efficacy and academic achievement goal orientations among all college students.

Similar to the correlation results above, the regression results on active procrastination varied between undergraduate and graduate students. Undergraduate students tended to engage in active procrastination when they were not concerned about uncontrollability of procrastination. This finding complements the previous research that active procrastination was related to the adaptive values of procrastination (Chu & Choi, 2005; Choi & Moran, 2009). It suggests that beliefs about controllability in dealing with the challenges associated with procrastination are an important motivation factor for procrastination among undergraduate students. On the other hand, beliefs about their abilities to learn the class materials motivated graduate students to engage in active procrastination, a finding consistent with Chu and Choi (2005) observation.

Results to the third research question addressed differences among the three procrastinator groups between undergraduate and graduate students. Compared to the non-procrastinators, passive procrastinators and active procrastinators possessed a significantly higher level of beliefs about the usefulness of procrastination in improving cognitive performances for both undergraduate and graduate students. At the same time, these procrastinators had a significantly higher tendency to minimize their effort for academic tasks than the non-procrastinators, a finding consistent with the previous research (Schraw et al., 2007; Wolters, 2003).

However, differences among the three procrastinator groups varied for undergraduate and graduate students. Among the undergraduate students, the active procrastinators were the youngest in age of the three procrastination groups, and they were significantly younger than the passive procrastinator group. This finding suggests that among the undergraduate procrastinators the younger students tended to engage in active procrastination while the older students tended to engage in passive procrastination. Furthermore, active procrastinators had the least concerns about the uncontrollability of procrastination among the three procrastinator groups; and their concerns were significantly lower than those of the non-procrastinators and passive procrastinators. Surprisingly, passive procrastinators reported a significantly higher level of perfectionist mentality that strives to avoid a failure to learn all the class materials than the active procrastinators. This finding is inconsistent with the existing research that students engaged in active procrastination for its adaptive values (Chu & Choi, 2005; Choi & Moran, 2009), and it raised a question about the influence of master-avoidance goal orientations in active procrastination.

Two findings stood out for differences among the three procrastination groups for the graduate students. Active procrastinators reported a significantly lower level of mastery-approach goal orientations than passive procrastinators, but a significantly higher level of performance-approach goal orientations than the non-procrastinators. While the finding concerning performance-avoidance is consistent with the previous research (Ames & Archer, 1988), the finding about the mastery-approach goal orientations is inconsistent with the previous research that active procrastination was associated with adaptive values of procrastination (Chu & Choi, 2005; Choi & Moran, 2009).



In summary, the findings of the present study extend the research on procrastination by providing a more in-depth look at procrastination types and the associated motivation among undergraduate and graduate students. The present results suggest that students' beliefs about the usefulness of procrastination play a more important role in propagating academic procrastination than other motivation variables for both undergraduate and graduate students. In contrast, different motivation factors, including metacognitive beliefs, self-efficacy, and achievement goal orientations, were involved in active procrastination for undergraduate and graduate students. In addition, student age was related to procrastination types among undergraduate students. Among the undergraduate procrastinators, the younger students were more likely to be active procrastinators while the older students tended to be passive procrastinators. The present results support the traditional view of procrastination as related to undesirable and motivation factors that hinder learning (Ferrari, 2001; Knaus, 2000; Lay, 1990; Steel, 2007); and they offered mixed support to the notion that active procrastination is associated with adaptive values of procrastination (Chu & Choi, 2005, Choi & Moran, 2009) and motivation factors conductive to learning (Schraw et al., 2007; Wolters, 2003).

However, the present results should be interpreted with caution. The present study was limited to a relatively small sample observed in one subject area for a short period of time. Studies with larger samples across different subject areas and tasks over time will expand the research on procrastination, motivation, as well as self-regulated learning. In particular, further research is needed to investigate the notion of active procrastination for a better understanding of the nature of procrastination. Also, more studies are needed to examine whether self-efficacy functions as a motivational factor that encourages students to procrastinate, or as a deterrent that discourages them to procrastinate in academic situations.

Because the present study involved only university undergraduate and graduate students, the results may not generalize to other student populations or to procrastinations in non-academic settings. Nevertheless, the present findings suggest implications for educational practice. In particular, interventions designed to curtail academic procrastination among undergraduate students might be more successful if they focus on decreasing students' beliefs that procrastination is helpful in improving cognitive performance, and if they pair the younger students with more elderly untraditional students. The present findings also raise questions about the role of procrastination in the college classroom. One is whether teachers and students should be more accepting of procrastination or even attempt to promote the "safe" active procrastination. The present results show that active procrastination was related to metacognitive beliefs about procrastination for undergraduate students, and with self-efficacy beliefs in learning class content for graduate students. Interventions to reduce procrastination need to focus on different variables for undergraduate and graduate students.

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## QUALITATIVE RESEARCH COUNTS

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### ABSTRACT

The concept of qualitative research methods is relatively new, in comparison to quantitative methodologies. The evolution of the former approach was partially based in a progression of thoughts regarding the relationship between organizations and humans and a need for answers that the latter mode was unable to fully provide. A new paradigm in research emerged, as a result of that movement and need and the concurrent necessity for new ways to measure phenomenon, from that new perspective, for a new purpose. That change in means of inquiry then engendered change in the definitions of measurement, a shift in thinking about the meanings of objectivity and subjectivity, and a different approach to research results. Participation in the many-dimensional imperatives, meanings and outcomes of the shifts from quantitative-only methods to both quantitative and qualitative theories and practices are in process. All in all, these various shifts are shaping education in the future, thus our organizations and our communities, with no end in sight.

*Keywords:* Qualitative Research Methods, Paradigm Change, Mixed Research Methods

### Introduction

#### A Story of Stories

Each story has a beginning, middle or body, and ending. While each story seems complete, whole, unto-itself because we perceive a beginning, middle and ending and sense a meaning, those boundaries are arbitrary, the meaning personal and subjective. In addition, within and beyond those parts lies a core, essence, or heart, of every story.

How a story starts, what particulars are told and when the story ends are decisions made by the storyteller. So, stories are, to a small or large degree, contrived symbols or representations. Writers use images to describe and readers use them to know of an event, person, place or thing.

Stories tell of discrete events and, also, of time-developmental processes. Stories are actually boundary-less wholes. Stories are actually complex, interwoven, intricate. Stories are actually incomplete, regardless of the fact there seem to be beginnings and endings. Every story could begin anywhere, anyplace, anytime, could be told in a myriad of ways and could go on and on and on. Also, meaning is multi-formed, many dimensioned. Stories evolve out of inspiration, imagination, experience and a point of view.

Conducting research studies is a means of creating stories about what is being examined, or explored, or analyzed, or assessed. Researchers tell stories through their problems and hypotheses,



their questions, their methodologies and results. Each word, each number in their studies is part of a process, part of a story. Each compilation, each concept adds to a story. Queries are powerful, in that they bring about answers, which often change the story.

### **A Story of Research**

With the story of stories in mind, a chronicle of the transformation of research methods will be relayed. The shift that occurred was the result of the need to measure differently, because our collective perceptions about human beings, in general, and humans within organizations, specifically, underwent radical changes over time, and still are.

In the early 1900s, primarily based on Taylor's research into the efficiency and management of work, businesses and their employees were viewed as machines, consisting of readily interchangeable parts. Morgan (1997) helps us to understand how this view came about and how it persists.

While the classical management theorists focused on the design of the total organization, the scientific managers focused on the design and management of individual jobs. It is through the ideas of these theorists that so many mechanistic principles of organization have become entrenched in our everyday thinking. (p. 25)

In the meantime, a new perception began, with regards to humans in the workplace and the workplace environment, or culture. Kleiner (1996) termed the shift in thinking and being that occurred in the early to late-20<sup>th</sup> Century "The Age of Heretics." While that shift was on the move, a concomitant, and as heretical a one in many ways, was occurring within society in general. Some major changes were: women gained the vote; men went off to fight in world wars, leaving women behind to care for their families and for the American business economy; the desegregation movement began and grew; the population of many nations diversified with influxes of immigrants from many parts of the world; global communications spurred connections never before thought possible.

Management and leadership practices had to change, to handle the transformations that were occurring, at an often rapid pace, at least for major paradigm shifts. New organizational terms entered our business vernacular, such as, self-esteem; empowerment; learning organization; servant leadership; innovation and creativity; participatory leadership; participative employees; enrichment; self-fulfillment, quality of life; life-work balance; globalization; diversity in both thought and workplace, open and closed systems; feedback loops and many others.

The idea of integrating the needs of individuals and organizations became a powerful force...bureaucratic structures, leadership styles, and work organization...could be modified to create 'enriched,' motivating jobs that would encourage people to exercise their capacities for self-control and creativity...alternatives to bureaucratic organizations began to emerge. (Morgan, 1997, p. 42)

Research into what those new structures, styles and means of organization could be and could result in had to be conducted. Lincoln and Guba (1985) addressed the interrelatedness of theory and



action. “For if a new paradigm of thought and belief is emerging, it is necessary to construct a parallel new paradigm of inquiry” (p. 16). And, measuring subjective concepts such as job satisfaction, individual ideas of motivation, empowerment and all the other concepts and practices that flowed into and out of organizations during that time became challenging, because the only acceptable means of measurement during those years was quantitative methodologies, embedded in objectivity. Knowing how many employees are satisfied (the number of them) versus what qualities, activities, values, brought them satisfaction (the why of them) is very different. Many years passed before the shifts in approaches to studying what was happening caught up with what was actually occurring.

In Leedy's Third Edition of *Practical Research*, written in 1985, there is no mention of qualitative research. The topic is neither listed in the index, nor discussed, in any manner throughout the book. The term measurement is defined as the “quantifying of any phenomenon, substantial or insubstantial, and involves a comparison with a standard” (p. 18).

In the Sixth Edition of the same text, published twelve years later, qualitative research methodologies are described in detail. Measurement is defined as “limiting the data of any phenomenon – substantial or insubstantial – so that those data may be examined mathematically and, ultimately, according to an acceptable qualitative or quantitative standard” (Leedy, 1997, p. 26).

In the 1997 edition, Leedy limits all data to only mathematical examination. At the same time, in explaining data, he states they are, by nature, elusive and ephemeral, and this is so whether the data are gathered and garnered through qualitative or quantitative methods. Measurement is time, place and situation bound.

The Ninth Edition, published in 2010, was written by Leedy and Ormrod. The definition of measurement evolved from that in the previously mentioned editions, over the course of some 25 years. Measurement is presented as the process of limiting data regarding any substantial or insubstantial phenomenon, in order that interpretation and eventual comparison of the findings can be made to certain qualitative or quantitative standards.

### **Emphasis on Quantitative Research**

During the last few centuries, the focus in education and intellectual development is that the natural sciences and mathematics form the foundation for the ideal model of what and how a body of knowledge should be. Emphasis has been placed on objective measurement, on the necessity for neutrality in research methodology (Phillips, 1987). Phillips (1987) wrote, regarding this belief system, “Knowledge...was identified with authority; either the authority of experience or that of reason” (p. 17). The empiricists took a stand that knowledge was sound, if based on experience; rationalists stood on the belief that knowledge was sound when founded and supported through reason. Neither data collection perspective took into account the understanding that experiential and rational knowledge are, in the end, a result of individual interpretation, occurring either consciously or unconsciously, or a combination of both. We may be unaware that this internal process occurs yet, indeed, as Phillips (1997) declared, “it must occur”. Silverman (1993) expressed



his belief. "...there are no 'pure' data; all data are mediated by our own reasoning as well as that of participants" (p. 208).

### **Advancements in Qualitative Research**

In the last three decades, advancements in epistemology, the study of the foundation, scope and validity of knowledge, both created and answered questions, discovered both truths and errors. One understanding is that, rather than truth being truth because it is based on what appears to be a firm foundation, truth is truth simply because it remains, as yet, unrefuted. Phillips (1987) postulated "Knowledge grows not by a process of proving items to be true, but by the 'weeding' process of error eliminations" (p. 7).

Another theory, which evolved out of quantum physics, is that truth is not discovered through the comparison or correlation of variables from a position of objectivity or neutrality. Objectivity and neutrality are beliefs built on neither the soundness of experience nor reason. All of life exists in a relational, participatory, rather than neutral, environment. Wheeler, a renowned physicist stated:

We used to think that the world exists 'out there' independent of us, we the observer safely hidden behind a one-foot thick slab of plate glass, not getting involved, only observing. However, we've concluded in the meantime that that isn't the way the world works...What we thought was there is not there until we ask a question. (as cited in Vrobel, 2007)

### **Researching Truth**

Can truth be both substantial and insubstantial, rather than either/or? Is truth not to be firmly grasped, as if bedded in a rock of experience or reason? This move away from the concrete basis and enactment of truth toward a more ephemeral fulfillment of what is known to be true, at this moment, for this individual or group, helped to create new research methods, so that we could learn, based on this new perspective of reality. And these means of discovery both express the both/and perspective and bring about its manifestation (Argyris, Putnam & Smith, 1985).

Quantitative research theory dictates data collection and compilation, based on proving or disproving an established theory, on verifying what are considered facts. The purpose of hypotheses is to limit the data field to the most possible sources of information that could resolve the problem being researched. Explanations are added after the research is completed. Phillips (1987) addressed a major issue with inductive thinking. "...the heart of the problem of induction lies in whether we have sound reason to believe that evidence about the past can throw any light at all on the future" (p. 12).

Qualitative research methodology tends to be deductive in nature. Theory is discovered, or deducted, from data. Theories change through data; new stories evolve out of the past. The future pulls the processes and processors into itself. The thinking is: "What are the data telling me? What does the data explain or predict?". In qualitative studies, research generates explanations, rather than concludes with them. Glaser and Strauss (1967) and Strauss and Corbin (1990) addressed the



creative nature of qualitative research. Glaser and Strauss (1967) believed that qualitative methods are “an ever-developing entity” in which the process and the processor are an interactive creation.

Lincoln and Guba (1985) addressed concerns regarding the value of qualitative discovery methods. They proposed that the new paradigm of thought, belief and inquiry requires that some beliefs be accepted at face value, regardless of whether or not they can be consistent with “nature,” or empirically based, or logically consistent with some other “truth,” or ethically based and conforming to some moral or professional principles of conduct. A new idea cannot be fully supported by the old paradigm; a different vision tells another story.

Silverman (1993) discussed his belief that quantitative research “may neglect the social and cultural construction of the ‘variables’ which they seek to correlate” (p. 21). Silverman (1993) stressed that the researcher and the environment act to create the outcomes. He believed that “the myth of value-freedom is shattered not only by the researcher’s own commitments but by the social and political environment in which research is carried out” (p. 173).

Phillips (1987) discussed the complexity of data/theory processes, in citing the network analogy of the Duhem-Quine thesis.

Evidence does not impinge on any particular individual item or theoretical element in science, it impinges on the whole net...it is the theory as a whole, as a single complex entity that interfaces with evidence. The theoretical elements are not isolable; they always travel with the other items. And so it is as an interrelated whole that they face up to the test of experience. (p. 13)

The ambiguity, creativity and sensitivity called for in qualitative research can make the process seem without standards and lacking precision. Strauss and Corbin (1990) detail the criteria for judging qualitative research. While there are dangers in the “new” methods, dangers are inherent in any means of discovery whatever we count, in whichever way. Strauss and Corbin (1990) believe that each theorist is responsible for developing standards and the procedures necessary to attain and maintain that research mode.

Silverman (1993) queried: “If everything derives from forms of representation, how can we find any secure ground from which to speak” (p. 210)? He realized that open-ended processing is challenging at this point in human development, as that approach calls for us to stand midstream between the norm and the new, and research our way to a new perspective. And, he stressed that researchers are capable of producing intelligent work, utilizing disciplined methods while “on the very edge of the abyss” (p. 210). Quinn (2004) assured us that secure ground exists when insecurity is accepted as the norm.

### **Conclusion**

The heart of this story about the evolution of research methodologies is that our exploration into who we are as humans, within all aspects of the life we share, within, in particular, our organizations is, as it has been, ongoing. Leedy’s thinking, as a researcher and teacher, adapted over time to meet



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the changes in the world environment. Both quantitative and qualitative methodologies count, albeit different aspects, factors, approaches, in somewhat to very different ways. Both assist us in learning more about ourselves and our stories, thus shaping education, our organizations, and our communities, with no end in sight.

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**INFLUENCES OF INSTRUCTIONAL LEADERSHIP, TRANSFORMATIONAL LEADERSHIP, AND THE  
MEDIATING EFFECTS OF SELF-EFFICACY ON STUDENT'S ACHIEVEMENT**

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**ABSTRACT**

Instructional and transformational leadership are the two most categorical fields that have been used to group building principals and assistant principals leadership styles. Leaders in education are under intense pressure to maintain or improve student achievement scores on assessments. The purpose of this inquiry was to examine the influences of instructional leadership, transformational leadership, and the mediating effects of teacher self-efficacy while utilizing third through fifth grade students' math achievement on the Maryland School Assessment (MSA). A theoretical path was hypothesized between the independent variables (instructional and transformational leadership), the mediated variable (teacher self-efficacy), and the dependent variable (Maryland School Assessment math scores). Using mediated regression, the hypothesized relationships were tested with data collected. The findings suggested that instructional leadership and transformational leadership had a more direct impact on students' math achievement rather than a mediated impact through teacher self-efficacy. In addition, the findings suggested that teacher self-efficacy had a significant, direct impact on students' math achievement.

*Keywords:* Instructional leadership, transformational leadership, self-efficacy

**Introduction**

One of the more difficult tasks of being a school leader is engaging followers to impact students' learning (Robinson, 2007). According to Wu (2006), leadership is a phenomenon that has been studied extensively. Many theorists have provided various connotations for leadership (Stewart,



2006; Offerman, Kennedy, & Wirtz, 1994). Johnson (2001) makes the distinction between leader and follower in his writing regarding leadership, “Leadership is the exercise of influence in a group context...leaders are change agents engaged in furthering the needs, wants, and goals of leaders and followers alike” (p.6). In contrast, Johnson offers a definition of the role of the follower. He writes, “Important follower functions include carrying out group and organizational tasks, generating new ideas about how to get jobs done, engaging in teamwork, and providing feedback” (p.6).

## **Literature Review**

In recent years, educational leaders have been under intense scrutiny to improve standardized assessment scores of their students (Ylimaki, 2007; Brewster & Klump, 2005). The assessment scores are being used as a measuring tool of a school’s success (Simpson, LaCava, & Graner, 2004). Stewart (2006) writes, “School reform and accountability movements pressure school principals to improve student achievement, yet no information is provided on best practices for achieving this” (p. 7). In addition, states have the autonomy of selecting the state mandated assessment used for accountability (Lee, 2006). In turn, states are required to look closely at their satisfactory learning results (Ruebling, Stow, Kayona, & Clarke, 2004). Because of this scrutiny, administrators are being forced to be more critical of every organizational facet that would potentially have an impact on the teachers’ ability to teach and the students’ ability to learn (Ruebling et al., 2004).

The focus on instructional leadership has been renewed by the expectations of competing in a global marketplace and increasing student achievement (Gray, 2009). According to the United States Department of Education (2002), “International comparisons such as the Third International Mathematics and Science Study show middle and high school students in America performing at or below the average level” (p.24). Brewster and Klump (2005) write, “The instructional leadership model attempts to draw principals’ attention back to teaching and learning, and away from the administrative and managerial tasks that continue to consume most principals’ time” (p.5). According to Stewart (2006) “Instructional leaders focus on how administrators and teachers improve teaching and learning” (p.4). Kruger, Witziers, and Sleegers (2007), believe instructional leaders are characterized by the number of activities that are positively connected to student achievement, such as “emphasis on basic subjects, coordination of instructional programs, and orientation towards educational development and innovation” (p. 2).

According to Hallinger (2003), “Transformational leadership focuses on developing the organizational’s capacity to innovation rather than focusing specifically on direct coordination, control and supervision of curriculum and instruction” (p. 330). Transformational leadership involves the transformation of followers’ and leaders’ attitudes and beliefs. It requires the assessment of followers’ needs and treating them equally as human beings (Northouse, 2001). Hopkins (2001) refers to the transformational leadership style as one who tries to change the perception and the culture of the organization. The ultimate goal of a transformational leader is to transform the state of mind of the followers (Hopkins). Stewart (2006) writes, “Transformational leaders focus on restructuring the school by improving school conditions” (p.4). Gunter (2001), referring to transformational leadership, indicates that the intention is to find the link between the influence of administrators, as leaders, on followers’ behavior and on student learning outcomes.



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Teacher self-efficacy beliefs can have an impact on a teacher's instructional practices that could alter student learning (Gibson & Dembo, 1984). Tschannen-Moran and Woolfolk Hoy (2001) claim the following regarding teacher self-efficacy, "Teacher self-efficacy has proved to be powerfully related to many meaningful educational outcomes such as teachers' persistence, enthusiasm, commitment and instructional behavior, as well as student outcomes such as achievement, motivation, and self-efficacy beliefs" (Abstract). Self-efficacy is a concept made popular by Albert Bandura, but coined by Downton (Northouse, 2001). Bandura (1997) writes, "Perceived self-efficacy refers to the beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments" (p.3).

While these constructs of leadership are mentioned in the literature review there needs to be a theoretical framework to divulge their origins.

### **Instructional Leadership**

The instructional leadership approach is grounded in the Path Goal Theory. Path Goal Theory serves as the driving theory for instructional leadership for the purpose of this research study. Path-goal theory was developed by Robert House. The theory's principles rest in the leaders' ability to communicate goals to the followers, and a path to achieve the goals. House (1996) describes the theory's principle:

The essential notion underlying the path-goal theory is that individuals in positions of authority, superiors, will be effective to the extent that they complement the environment in which their subordinates work by providing the necessary cognitive clarifications to ensure that subordinates expect that they can attain work goals and that they will experience intrinsic satisfaction and receive valent rewards as a result of work goal attainment. (p. 326).

### **Transformational Leadership**

Bernard Bass later developed the term transformational leadership, made popular by James Burns (Liontos, 1992). This approach fostered the higher-level needs of individuals such as esteem, fulfillment, and self-actualization (Liontos). Transformational leadership creates a positive belief throughout the organization through idealized influence, motivation, and stimulation (Johnson, 2001). Transformational leadership is developed through individualized consideration, inspirational motivation, intellectual stimulation, and idealized influence (Northouse, 2001). Stewart (2006) writes, "Transformational leaders focus on restructuring the school by improving the conditions" (p.4). Furthermore, the "transformational approach to leadership is a broad-based perspective that encompasses many facets and dimensions of the leadership process" (p.144). Northouse adds that the transformational approach "describes how leaders can initiate, develop, and carry out significant changes in organizations" (p.144).

### **Self-Efficacy**

The theoretical foundation of self-efficacy is found in the constructs of social cognitive theory (Bandura, 1986). Social cognitive theory was originally labeled social learning, but modified to recognize the thinking component (McInerney, 2005). Bandura (1986) infers that social cognitive



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theory is the interactions between the person's environment, personal influences, and personal behaviors. Lord, Vader, and Alliger (1986) summarize, "The social cognitive perspective explains social perceptions in terms of perceiver information processing, paying particular attention to selective attention, encoding, and retrieval of information" (p. 403).

### Research Question

Many research questions were answered in this study however none were as relevant as the relationship between the aforementioned leadership constructs. The research question is: To what extent is instructional and transformational leadership mediated by teacher self-efficacy?

### Research Participants

The participants for this study, in a convenience sampling, were school administrators and third, fourth, and fifth grade math teachers in schools located in Maryland. School administrators and elementary math teachers were selected as the sample population for two reasons. First, a focus on organizational leadership positions in the public school system was a priority. Second, the Maryland School Assessment is administered in Grades 3 through 5, at the elementary level, to measure students' math achievement. There were 57 school administrators (principals and assistant principals) and 177 elementary math teachers that participated in the study from six counties located on the Eastern Shore of Maryland. Fraenkel and Wallace (2003) suggest, "A sample of at least 50 is deemed necessary to establish the existence of a relationship" (p. 109). The teachers selected were educators who teach math in some capacity in a regular educational setting.

### Design and Instrumentation

The research design of this study was a non-experimental causal design with the use of mediation. The instruments used were the Principal Instructional Management Rating Scale, the Leadership Practice Inventory, and the Teachers' Sense of Efficacy Scale. These instruments were used in many other studies (Hallinger, 2005; Kouzes & Posner, 2002; & Tschannen-Moran & Woolfolk Hoy, 2001). A mediated regression was used to examine the influences of instructional leadership (independent variable), transformational leadership (independent variable), and the mediated effects of teacher self-efficacy (intervening variable) on third through fifth grade students' math achievement (dependent variable) on the Maryland School Assessment (MSA). First, the independent (exogenous) variables for this study were instructional leadership and transformational leadership. Second, the mediating (intervening) variable was teacher self-efficacy. Third, the dependent (endogenous) variable was third through fifth grade students' math achievement scores on the Maryland School Assessment.

### Principal Instructional Management Rating Scale

The Principal Instructional Management Rating Scale (PIMRS) was developed by Phillip Hallinger and consists of 50 items divided into ten categories. Hallinger (2008) outlines the ten categories which comprise the PIMRS - frame the school goals; communicate the school goals; supervise and evaluate instruction; coordinate the curriculum; monitor student progress; protect instructional time;



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maintain high visibility; provide incentives for teachers; promote professional development; and provide incentives for learning (Hallinger, 2008).

### Leadership Practice Inventory

The Leadership Practice Inventory (LPI) was developed through a number of quantitative and qualitative studies by James Kouzes and Barry Posner. Kouzes and Posner (2002) provide a validated and theoretical position for analyzing transformational leadership. They initially used managers for the purpose of categorizing potential transformational characteristics. Through this baseline characterization, the LPI was developed. The LPI questionnaire contains 30 behavioral statements, six for each of the five areas.

### Teachers' Sense of Efficacy Scale

The Teachers' Sense of Efficacy Scale was developed by Tschannen-Moran and Hoy. This survey instrument was formerly known as the Ohio State Teacher Efficacy Scale. The long form of this scale contains 24 items. The scale addresses the areas of student engagement, instructional strategies, and classroom management (Tschannen-Moran and Woolfolk Hoy, 2001). Tschannen-Moran and Woolfolk Hoy (2001) write, "This scale moves beyond previous measures to capture a wider range of teaching tasks" (p.801).

### Maryland School Assessment

The Maryland School Assessment (MSA) is administered to students in grades three through eight. It is a statewide assessment that measures students' achievement in the areas of reading and math (Maryland Department of Education, 2005). The math data from the MSA will be used in order to categorize students' achievement.

### Data Analysis

To test whether the Teachers' Sense of Efficacy Scale measure mediated the effects of instructional leadership (as measured by the PIMRS) on achievement (as measured by the composite of the three MSA tests); several regressions were conducted (Baron & Kenny, 1986). As suggested by Baron and Kenny (1986), three sets of regression procedures were conducted. First, the mediator was regressed on the independent variables. Next, the dependent variable was regressed on the independent variables. Last, the dependent variable was regressed on the independent and mediating variables (p. 1177). The linear regression findings assessing the relationship between leadership (i.e., instructional and transformational) and teacher efficacy are presented in Table 1. Instructional and transformational leadership did not significantly predict teacher self-efficacy.

Table 1

*Linear Regression Results for Leadership and Teacher Self-Efficacy (N = 177)*

Variable	B	SE	Beta	F	Sig.	Tol.
Instructional leadership	.02	.03	.08	.59	.444	.52
Transformational leadership	-.00	.01	-.02	.03	.854	.52

Note.  $R^2$  for overall model = .01.



The linear regression findings assessing the relationship between leadership and achievement are shown in Table 2. The findings indicated that instructional leadership positively and significantly predicted achievement ( $Beta = .47, p = .000$ ). Although transformational leadership significantly predicted achievement, however, transformational leadership negatively predicted achievement ( $Beta = -.31, p = .002$ ).

Table 2

*Linear Regression Results for Leadership and Achievement (N = 177)*

Variable	B	SE	Beta	F	Sig.	Tol.
Instructional leadership	.01	.00	.47	22.16	.000	.52
Transformational leadership	-.00	.00	-.31	9.72	.002	.52

*Note.*  $R^2$  for overall model = .11.

The linear regression findings assessing the relationship between leadership, teacher self-efficacy, and achievement are displayed in Table 3. Teacher efficacy positively and significantly predicted achievement ( $Beta = .25, p = .000$ ).

Table 3

*Linear Regression Results for Leadership, Teacher Self-Efficacy, and Achievement (N = 177)*

Variable	B	SE	Beta	F	Sig.	Tol.
Instructional leadership	.01	.00	.45	21.65	.000	.52
Transformational leadership	-.00	.00	-.30	10.09	.002	.52
Teacher efficacy	.02	.01	.25	13.53	.000	.99

*Note.*  $R^2$  for overall model = .18.

### Conclusions

The three conditions of mediation were not met with leadership, teacher self-efficacy, and achievement when testing the effects, as Baron and Kenny (1986) referred; as a result it was not necessary to test the fourth condition of mediation for the fifth grade results. Altogether, these findings indicated that teacher self-efficacy did not mediate the effect of instructional and transformational leadership on achievement by answering the research question: To what extent is instructional and transformational leadership mediated by teacher self-efficacy? Teacher self-efficacy did not mediate the instructional nor transformational leadership when applied to student math achievement. The basis of teacher self-efficacy has been categorized into two common areas. Even though there has been constant disagreement with the factors, most researchers do agree on two forms of efficacy strands – personal efficacy and general outcome expectancy. These two areas have been used in developing scales to measuring efficacy for years. The first strand of efficacy, personal teaching expectancy, is the belief that one has the cognitive capabilities to teach children. The second strand of efficacy, general outcome expectancy, is the belief that one can overcome external factors to help children learn. The inconsistency in finding the lack of mediation between teacher self-efficacy and leadership can potentially reside in the general outcome expectancy strand. The basic tenet of the general outcome expectancy is the belief that one can overcome the external factors, such as home situation, poverty level, etc. This belief or lack of belief may not be directly



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related to the level of or type of leadership that is provided within the organization. This is a way of thinking that may not be affected by the kind of leadership that is provided. This could be the underlying rationale as why leadership is not mediated by teacher self-efficacy.

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**DEVELOPING AN EFFECTIVE PRE-SERVICE FIELD EXPERIENCE FOR  
TEACHER EDUCATION STUDENTS ENROLLED IN ONLINE EDUCATION COURSES**

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**ABSTRACT**

Students who are interested in becoming teachers are given the opportunity to participate and work with school age children in the classroom before they are accepted into the Teacher Education Program (TEP). This opportunity is done through what is called field experience. The Washington State Legislature defines field experience as “a sequence of learning experiences which occur in actual school settings or clinical or laboratory settings. Such learning experiences are related to specific program outcomes and are designed to integrate educational theory, knowledge, and skills in actual practice under the direction of a qualified supervisor” (p.1). Student participation in field experience has been included in the curriculum for many years. Even though students are taking courses and completing programs through online and distance education, they are still required to complete field experience. Because education has become more challenging with so much diversity in the classroom, it is important that students receive as much experience as possible.

Universities in my state are challenged to strengthen efforts to enhance the teaching skills of public school faculty and leadership skills of public school administrators. Student demand for online degree programs and offerings have grown in more recent years; the Chancellor for the University has declared that he wants all courses to be available online for students. Students in online courses should be given the same course information, learning experiences, and opportunities to succeed. Field experience in online courses should be as rigorous and comparable to face-to-face courses. So as not to diminish the rigor and high expectations of field experience in my online classes, I developed a Field Experience Activity Packet. This Packet had to be tailored for the needs of the online student. I have welcomed the challenge and opportunity to develop an effective pre-service field experience for teacher education students enrolled in online education courses.

The research questions for this case study were:

1. How does a teacher education program develop, design, and implement an online resource (Field Experience Activity Packet) for pre-service field experience courses?
2. How would students respond to the online resource (Field Experience Activity Packet)?

Case study methodology was chosen to describe the processes utilized for the development, design, and implementation of online resources (Field Experience Activity Packet) for pre-service field experience for teacher education students. Yin (1994) defines a case study as, “An empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident” (p.13).

Case study research is an accepted methodology for describing organizational process.



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The purpose of this case study is to provide a descriptive and informative process for designing, developing and implementing field experience activities for online students.

The expected outcomes are: 1) the Field Experience Activity Packet will be an effective tool for students to use for their pre-service field experience; 2) instructors and students will take note that there are more advantages to using this field experience tool than not using it; and 3) once used, instructors and students will be able to see the value of the Packet as an organizational tool for field experience.

### **Background**

In 2008, the researcher joined the Curriculum and Instruction, Professional Studies Department as an Adjunct Faculty. The two courses taught by the researcher were face-to-face and required 10 hours of field experience. At this time, each instructor had their own requirements and regulations for information covered during field experience. As the researcher taught the courses, she thought that it would be very helpful if students: a) knew what was expected of them in the field experience activity; and b) all students had something printed of the expectations and requirements. The Field Experience Packet was developed for her courses but, students in the other instructors' classes asked them for the Packet. The rationale for using this Field Experience Activity Packet was to provide a resource that would take the guess work out of the field experience for the student as well as the instructor. It was expected that this Packet would be valuable to students as they did their field experience (Schwille, Nagel, & DeBolt, 2000).

The researcher then became one of the instructors to teach the field experience courses on line. So, the Field Experience Packet was adapted for students enrolled in the online courses.

Early exposure to the field of teaching gives students an opportunity to examine whether teaching is the career they want to pursue. The program is such that the students involved in field experiences begin to think of themselves as teachers and have early opportunities to be involved in authentic experiences they can use as a foundation for the theory in teacher education courses. Early field experiences provide opportunities for teacher education students to become better teachers by helping them to express their purpose, use appropriate instructional strategies, and understand K-12<sup>th</sup> grade students' social, emotional, physical, and cognitive background (Liston & Zeichner, 1991).

### **Creation of the Field Experience Packet**

Field experience was already a part of the curriculum for the courses. These courses included opportunities for the pre-service education students to assist in classrooms in local schools as they make their way into the teacher education program (McIntyre, 1983). But, there was no structure for the field experience activities. Students had no idea as to what was expected of them during this experience and how the grade was computed. Because the researcher's courses were online, everything that the student needed had to be provided via Blackboard (The information system used by the University).



### **Data Collection and Analysis**

Data was collected for this case study from multiple sources. Yin (1994) stated that the use of multiple sources is a tactic that increases the validity of a case study. The sources included faculty observations, student attendance records (logging onto Blackboard and actually completing the field experience requirement), student field experience logs, student field experience reflections, faculty interviews, and faculty end-of-semester reflections. The researcher was a participant-observer at different stages of the development and implementation process and provided the observation and reflection data. Analysis of the faculty interviews and reflections indicated a relationship between student attendance (logging onto the online site) and the use of the field experience information. The faculty interviews and reflections showed increase faculty satisfaction in the development and use of the Field Experience Packet. The researcher discussed the data collected at departmental meetings. The discussion in the meetings led to instructors of the pre-service courses that required field experience to adopt the Field Experience Packet and modify it for their particular course(s).

### **Conclusions**

The conclusion related to the first research question concerning how does a teacher education program develop, design, and implement an online resource (Field Experience Activity Packet) for early field experience courses is found in the creation of the field experience activity packet mentioned above. As indicated in the background, there was no structured instrument in place for field experience.

The second research question concerned how would students respond to the online resource (Field Experience Activity Packet), the researcher found that students' responses were positive. They now had something in print and knew the required expectations. The researcher also found that students who logged in regular to Blackboard and who satisfactorily completed their requirements for field experience benefited from the Field Experience Activity Packet. It was also concluded that students who did not log in regular to Blackboard had difficulty completing their field experience and were unlikely to benefit from the Field Experience Activity Packet.

All of the expected outcomes were meet and exceeded the expectations of the researcher.

### **Plans for Improving the Field Experience Activity Packet**

In an attempt for students to gain additional experience and knowledge, the researcher plans to improve the Field Experience Activity Packet by including questions about different theories and theorists and how they relate to the developing child. The Field Experience Activity Packet will be improved based on questions and concerns from the students at the end of each semester.

### **Recommendations for Further Research**

The researcher recommends that the instructors continue to use the Field Experience Activity Packet for field experience. And, modifications are made to the Packet as the need arises.

The researcher plans to continue to study the use of the online resource (Field Experience Activity Packet) and how students respond to its use.



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**HIDDEN PICTURES: THE UNSEEN DANGERS OF STRESS IN SCHOOL LEADERSHIP**

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**ABSTRACT**

Evidence of the effects of the stressors found in school leadership is woefully inadequate. What few studies exist, focus on stress-related burnout and/or early retirement. More importantly, there are no studies documenting or addressing the effects of stress on school leaders who do not burnout but cope with the stressors over an entire career. This manuscript directs attention to this issue through the reflective and experiential lens of the author who traversed a typical career track in K-12 education serving as a high school teacher, high school assistant principal, high school principal, deputy superintendent for instruction, and superintendent before beginning a higher education career as a professor of educational leadership. The manuscript begins with a brief review of the literature (for there is little to review), moves to a chronicling of the author's career including a description of the stressors and successes (past and present) that led to a recent three-week debilitating bout of depression, insomnia, and a visit to what the author labels as a "visit to Zombieland." Having successfully emerged from his visit, he brings, in this essay, personal and fresh perspectives on the effects of stress on school leaders. Finally he challenges educational and medical professions to begin serious and immediate research into this knowledge-poor, but consequences-heavy field of study.

**Keywords:** Stress, Anxiety, Leadership, Depression, Insomnia

**Hidden Pictures: The Unseen Dangers of Stress in School Leadership**

For most of us, experiencing stress is as common as breathing, but remarkably there is no universally-accepted medical definition of it. *The American Institute of Stress* (2011) describes this conundrum this way:

If you were to ask a dozen people to define stress, or explain what causes stress for them, or how stress affects them, you would likely get 12 different answers to each of these requests. The reason for this is that there is no definition of stress that everyone agrees on ...The term "stress", as it is currently used was coined by Hans Selye in 1936, who defined it as "the non-specific response of the body to any demand for change" (np).

While, the National Institute of Mental Health (2007) described it generally in a recent press release:

In humans, stress can play a major role in the development of several mental illnesses, including post-traumatic stress disorder and depression. A key question in mental health research is: Why are some people resilient to stress, while others are not? This research



indicates that resistance is not simply a passive absence of vulnerability mechanisms, as was previously thought; it is a biologically active process that results in specific adaptations in the brain's response to stress (n.p.).

Alternatively, in a Danish study, Wieclaw, Agerbo, Mortensen, and Bonde (2006) concluded about stress disorders in service professions:

The present study indicates a strong and consistent association between employment in human service professions and the increased relative risk of affective and stress related disorders. Social workers and teachers have the highest relative risk of both, whereas health professionals display a relative risk of depression only. Relative risks are highest for men working in these typically female occupations. Additional work is needed in order to ascertain whether risks are attributable to specific psychosocial factors within these occupations (n.p.).

The two studies noted below on school principal early retirement and burnout, are generally consistent with the findings of study of service professions noted above.

In a study of 342 principals in the German state of Bavaria who were forced to retire early due to health issues, Weber, Weltle and Lederer (2005) found that stress related disorders was the reason for early retirement for 45% of principals. By contrast cardiovascular conditions were the cause of retirement in 19% of principals. They concluded: "The morbidity spectrum of school principals prematurely unfit for work is characterised by stress-associated diseases. The health disorders objectified are of considerable relevance for policy and administration. Specific prevention and intervention must, therefore, also include this occupational group" (p. 325).

Principal burnout has been a topic of some substantial interest over the years. Burnout was described by Whitaker (1996). "Burnout has been defined as an extreme form of role-specific alienation high emotional exhaustion and feelings of depersonalization and low feelings of personal accomplishment; and the presence of strain-making stressors that can overwhelm coping capabilities" (p.60). She continued on to describe how the job of the school principal leads to the resulting burnout. (It is worthy of note to consider how little has changed about pressures on principals since 1996):

Research on the principalship points to the fact that the principal's job is comprised of role conflict, role ambiguity, and role overload. Other researchers support the complex nature of the principal's job due to high stress, a wide variety of tasks to perform, and diverse roles. An additional stress currently facing principals is the dilemma of how and to what extent to restructure learning environments with mounting pressure from traditionalists to move "back to basics" and simultaneous pressure from state legislatures and state school boards, to implement higher standards for student performance" (p.61).

I describe the studies of burnout as they are relatively prevalent in the literature. However, this manuscript's purpose is not to explore those who have left the profession due to stress, but those who stayed in spite of the stress on them. Congruently, my purpose here is not to influence readers



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with academic arguments, but by personal account. Thus, what follows is a personal narrative of the effects of years of professionally generated stress on me and how I responded, or, failed to respond.

### **A metaphor to ponder**

Remember the pictures that were popular a few years ago where if you stared at the picture long enough and in a certain way, another hidden picture would emerge? I have never – not a single time – ever seen the hidden picture.

Look for a moment below at a word picture that I “painted” for my students in November 2009 in a blog on my webpage:

*In a few days of writing this I will be turning 63 ... As I calculate it I have been GOING TO school, TEACHING IN school, LEADING schools, and TEACHING HOW TO LEAD schools for 56 of my 63 years. Good grief. That is 89% of my life!*

Today when I look at those numbers, I look at them very differently. Not because they are not true, but because there is another picture hidden there, a picture the effects of ongoing and long-term stress.

### **A brief professional and personal history**

Let me bring a few details to the surface for you. I started teaching and coaching in high school 1969 – at the same high school I had graduated from just four years earlier. In 1970 I was named the varsity basketball coach after just one neophyte-season as the freshman coach. During that first season we lost 10 in a row, and I didn’t sleep much. Then we turned some things around and won seven of the last ten, and I didn’t sleep much. I coached three sports, and taught five classes for six years until my first child was born. Soon after my first child was born, I began work on my masters and replaced coaching with classes at night for the next couple of years. In 1978, I was appointed as an administrative intern at a newly opened 7-12 school of about 1500 students. During that year, I went back to school to acquire my administrator’s certification. In my third year as an Assistant Principal (AP), I started work on my doctorate in a joint program with the University of South Alabama (USA) and Auburn University which required traveling 250 miles from Mobile to Auburn one weekend a semester and living one summer at the university as a full-time student.

In 1984, after five years as an AP under a superb mentor, I was appointed principal of Benjamin Russell High School which was about 40 miles north of Auburn in the small textile-town of Alexander City. There I found a school whose culture was college prep but whose poverty and minority levels approached 50% - populations whose needs were being ignored. I found a faculty full of discord and uncertainty because I was their third principal in three years. We didn’t have a good football team either, and I fired the coach. During that first year, I wrote my dissertation and graduated from Auburn with my Ed.D., but, my sleep problems returned and have not left me since.

For the next 11 years, I served as principal of BRHS and along the way served as the president of the state principals association. In 1991, I went to the Soviet Union with the National Association of



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Secondary Principals Association, and was selected as the Alabama's Principal of the Year. During this time, we organized the school around the Effective School Correlates, turned the culture around, and I taught courses for Auburn and Troy University. During one year, my AP and I taught a speech course one semester because we needed it and did not have the faculty to teach it. Another year, I coached freshman basketball because I could not find a coach who could teach at the level of our now very high expectations. By the way, our football team was now very good, too. During these eleven years, I bought and sold three houses building two of them.

In 1996, I retired from Alabama and we moved to Louisville, Kentucky to teach at the University of Louisville. It was a miserable year, and after building our fourth house and living in it for less than six months, we moved back to Alabama where I took a principal's job in a well-thought-of district in south Alabama. The high school was only seven years old, and most of the teachers had never been evaluated by the principal! The athletic budget was in the red, and our football team was terrible. I fired the coach, started observing teachers, instituted accountability, and in the process made large numbers of people upset!

Nine months into this principalship, I was offered the job of Deputy Superintendent of Instruction for the Owensboro Public Schools back in Kentucky. After the move to Kentucky, during the next five years we aligned the curriculum from K-12, developed from scratch and implemented quarterly benchmark assessments, completely revised the teacher and principal evaluation systems, and organized our schools around the Effective Schools Correlates.

After five years, I accepted the position of superintendent of a small rural school system in southwestern Indiana. Once again, we began the process that had been successful in Owensboro. But my school system viewed itself as successful and many of the stresses I felt came from frequently working to convince all members of the staff and board, that, to paraphrase Jim Collins (2001), the acceptance of "good enough" is an obstacle to the achievement of excellence. After my first year the majority of the board that hired me was voted out of office, the teachers' union balked at every innovation, and progress rapidly went downhill and my stress level went up. During my second year, I developed severe insomnia and was treated for depression and anxiety. In my third year, the board and I agreed to part ways, and I came to UNCC partially in the hopes of reducing the ongoing and persistent level of stress that I had experienced.

At the end of my fifth year at UNCC – my tenure year – the severe insomnia returned as I began to feel the stress of completing a professional portfolio, the possible consequences of not being granted tenure, and the juxtaposition of these pressures with the rapidly approaching retirement decision related to Social Security. For three weeks, I seldom slept, was heavily medicated by my doctors at times, was treated twice (knocked out!) in local ERs so that I could sleep, and have three weeks of my life I do not remember.

### The hidden picture revealed

When I look back at my long career in my chosen profession, successes far outnumber setbacks, and I have been fulfilled in ways I cannot fathom in any other kind of work. So what is the hidden picture? **STRESS. STRESS. STRESS.** Commonalities emerge in my hidden picture. First, stress was



present at all levels from teacher to superintendent. Second, it was present in difficult times like board-superintendent or principal-faculty relations, but equally present in special times like child-rearing, or house-building, moving up in the profession. Third, time constraints were almost always a stressor in one form or another. Procrastination may increase creativity, but good long and short term planning prevents time-induced stressors. Fourth, many of the stresses came in tandem with other stressful events like pre-registration for the next year, proms, testing, and graduation, all coming in a matter of just a few weeks. Fifth, the stress of organizationally related goals was present at every stop along the way from classroom, to school, to school system, to preparing the next generation of school leaders. Sixth, much of the stress was self-chosen. To pursue a terminal degree while working as a practicing administrator and raising a family was self-chosen. Seventh, I did not read the signals well or at all. I did not connect stress related insomnia with depression. I thought the anxiety that I felt almost daily was simply nervousness felt by everyone in situations like mine. Eighth, I worked through these stresses, alone. I never talked to anyone about the health of my psyche. Real men, and certainly real coaches and principals just did not engage in such activities. Ninth, the profession places certain unhealthy and unreasonable stresses on those who achieve and/or move upward. The stresses are too often assumed to be cultural expectations to be endured, rather than as harbingers of stress-induced medical problems only found long after the events are but faded memories. . Finally, I had a feeling in my chest many times a day that I now describe as a *blue light alert* – not the K-Mart Blue Light Special, but the feeling one feels when blue light of the state trooper shows up in your rearview mirror and you are pulled over for speeding. **(See Table 1 Below)**

In the spring of 2010, I unsuccessfully fought a three-week battle with severe insomnia-induced depression, or depression-induced insomnia as it is impossible to tell what causes what and the symptoms are the same. Due to both a lack of sleep and overmedication by my physicians which included my family doctor, a sleep specialist I had been seeing for two years, and a psychiatrist, I spent three incomprehensibly miserable weeks in what I now, not-so-affectionately, call “Zombieland.” I was unable to teach my university classes or to function independently in almost any way. I have suffered from moderate to severe insomnia for most of my professional life, but this was my first extended trip to “Zombieland.” Eventually, by putting my medical faith in my psychiatrist and openly discussing the issues with my university department chair, I carefully emerged from the fog and back to a productive professional life. Today, I occasionally have a restless night, but I have learned to cope successfully with medication, cognitive therapy, and common sense strategies like learning to relax hours before heading to bed, not minutes. Only now, almost at retirement, have I begun to recognize symptoms and situations that will, if not addressed, likely lead to anxiety-induced insomnia. Today, when my *blue light alert* goes off, I stop and immediately address the issue – sometimes with medication and more and more frequently with relaxation techniques (which I am still working on). The point is this: my health is more important to me and to my family, than almost any other thing I could be doing at the time.

Today, I am convinced that my depression/insomnia was a direct and cumulative result of years of unrecognized and untreated stress that I simply did not handle very well, although I thought that I did, and outwardly people told me I did. After many hours of reflection on my springtime visit to “Zombieland,” I have concluded that even if one does successfully deal with stress, stress still affects you, and long-term little stressors add up to a big problem down the road. Do I suffer from



depression? I have never thought so, but my latest and most severe episode has finally convinced me that I do.

Table 1

*A priori conclusions from author's professional experiences*

Stressor	Examples
Stress was present at all professional	<i>As basketball coach, I slept little during the season. As a superintendent, board relationships had the same effect.</i>
Stress was present in difficult times but equally present in special times	<i>Dealing with a teacher charged with sexual abuse was beyond just stressful. Being elected as president of the state principals association – a seminal accomplishment – brought with it more responsibilities and significant time constraints.</i>
Time was almost always a stressor in one form or another.	<i>One of my greatest frustrations as a principal was seldom having more than 15 minutes to spend on any one task before another was thrust on me.</i>
Many of the stresses came in tandem with other stressful events.	<i>Teacher observations are closely followed by reflecting on and reporting on the observations in writing (time consuming) which are followed closely by an often stressful conference.</i>
The stress of organizational goals was present at every stop along the way	<i>Organizations are designed to yield certain products and/or services. Goals, whether from above or self-created, bring stress with them.</i>
Much of the stress was self-chosen.	<i>Choosing to frequently test the limits of the system by setting new improvement goals is self-created stress.</i>
I did not read the signals well or at all.	<i>When I felt stressed or anxious, I assumed it was equivalent to "pregame jitters. Pregame jitters are quickly relieved by physical activity. Professional anxieties often last days, weeks, or even months.</i>
I worked through the stresses, alone, and apparently successfully	<i>Though I often shared the day-to-day ups and downs of my professional life at each level with my wife, I did not share that I was often anxious, worried, and nervous. People often commented on my calmness under fire. They were mistaken.</i>
Profession-created stresses are often translated into cultural expectations	<i>Principals, especially, are often expected to be everywhere, constantly engaged with students, staff and parents. But remain the spoken or unspoken norms of boards and superintendents. I assumed that the stress that these expectations caused simply went with the territory.</i>
"Blue light alerts" must not be ignored	<i>The feeling for me was like someone sitting on my chest. The feeling was not generated so much by the intensity of a spur-of-the-moment event such as scuffle in the halls, as much as by the anticipation of an upcoming event. Again, I assumed these feelings came with the territory as did the chronic insomnia which they generated.</i>



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My leadership path has not been unique, rather it is pretty typical. The events, jobs, setbacks, and successes are typical of leaders who are given or assume organizational turnaround as a leadership imperative. Therefore, a priori, I am confident that principals and assistant principals in large numbers have much the same hidden picture lurking behind their public personas, undiagnosed, not dealt with, and potentially life threatening – maybe not right now, but very clearly just down the road. Why am I so certain? The stresses of school leadership have not been reduced since I left that job in 2005; they have geometrically increased, and my a priori conclusion is that such stress WILL cause physical and/or psychological damage. Our bodies simply don't work any other way. I would like to point to significant research that has been completed on the effects of long-term stresses (small and large in combination) on school principals who do not burnout or retire early, but who persevere, but such studies simply are not present today.

### Reflections, conclusions and recommendations

The final picture that I want to paint is not hidden. It is garishly displayed in blinking neon lights. ***Wherever you are on your leadership path when you read this blog, I implore you to recognize that it is not natural to be anxious all the time, to be constantly worried and agitated, to constantly have to manage conflict, or not to sleep – even if, or perhaps especially if, congratulations and successes are embedded in these warning signs.***

From a review of the lack of educational literature on the topic, clearly there needs to be definitive medical and academic research conducted on the topic of the effects of sustained stress on school leaders. Until that time arrives, my advice to leaders and aspiring leaders is this: If the eight indicators (indicators I have described are familiar to you, they are causing damage – right now. Illuminate the hidden picture that defines school leadership (remember, it is OK to get help to see the images). If you are like me, you may not be able to see it behind the public image, but, trust me, the picture is there.

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**Creating an assessment-literate faculty: Beginner profiles of teachers in the initial phase of adopting data driven decision-making practices**

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**ABSTRACT**

This research explored the role of knowledge, concerns, and efficacy in teacher adoption of data driven decision-making practices. Qualitative evaluation was utilized to identify a common beginner profile for the adoption of data driven decision-making. Information gleaned from this research may be used to guide professional development efforts.

**Keywords:** Data Driven Decision-Making, Efficacy, Concerns, Professional Development

**Introduction**

Many teachers are tentative about engaging in DDDM for a number of reasons. However, research has shown that where DDDM is implemented properly, students' performance improves and achievement gaps decrease (Scheurich & Skrla, 2003). Thus, the question becomes how to facilitate teacher engagement in effective DDDM. Stiggins (2001) defines assessment-literate faculty as possessing two skill-sets: 1) able to access/gather dependable, high-quality student data; 2) able to effectively use data to amplify student achievement. Unfortunately, research indicates teachers do not receive necessary training in assessment and statistics to effectively use data to drive instruction (Wayman, 2005). Moreover, the results of Bettsworth and her colleagues' (2008) exploratory qualitative research indicated that teachers do, in fact, possess a low sense of efficacy with regard to DDDM.

In addition, our experience led us to note that teachers' frequently lack the confidence and affective buy-in to engage in DDDM even after mastering the basic statistical knowledge that supports effective DDDM. The Triadic Change Model (TCM) suggests that as individuals are immersed in the DDDM innovation adoption process, the change process is influenced by knowledge, motivation, and affect. TCM explores the following constructs: knowledge about the innovation, innovation specific efficacy, and concerns regarding the innovation. This paper presents the profile of teachers in the initial phases of adopting DDDM practices.



## Theoretical Framework

The TCM served as the theoretical lens for this study. While this model is intended to apply to the adoption of new innovations in the context of organizational change, it is important to note that our work focused on the application of TCM to in-service teacher adoption of DDDM practices in the context of school change. The TCM assesses an individual's likelihood to adopt a new behavior by examining underlying obstacles to change and known predictors of future behaviors: knowledge about the innovation, innovation specific efficacy, and concerns regarding the innovation. While this model is intended to apply to the adoption of new innovations in the context of organizational change, it is important to note that the current research focused on the application of the TCM to in-service teacher adoption of DDDM practices in the context of school change. The following discussion and research reflects this caveat.

Knowledge is a key component of teacher adoption of DDDM practices and the TCM. Unfortunately, educators are often entrenched in a system where decisions are primarily based on intuition and hindsight (Cromey, van der Ploeg, & Masini, 2000) and also lack the requisite training to understand, analyze, and connect data to classroom practice (Bernhardt, 1998; Creighton, 2007). Thus, it is important to better understand teacher knowledge levels to carefully craft professional development to meet and develop teachers' DDDM-related skills and needs. An additional and related component of the TCM is teacher concerns.

With regard to the current work, concerns were defined as set of feelings, perceptions, preoccupations, thoughts, considerations, motivations, satisfactions, and frustrations related to adopting district desired DDDM practices. Concerns were selected for inclusion in the TCM and the current work because thirty years of research indicates that teacher concerns are predictive of future practice and a powerful tool for facilitating change (George, Hall, & Stiegelbauer, 2006).

For the purposes of this study, the authors also examined teacher efficacy specifically related to DDDM. DDDM reflects teachers' beliefs in their ability to successfully engage in DDDM (Dunn, Airola, Garrison, & Behrend, 2011). Similar to concerns, research indicates that efficacy is both a powerful predictor of future teacher action and a trainable teacher characteristic (Cousins & Walker, 2000).

A proposition of the TCM is that knowledge, concerns, and efficacy are interlocking determinants of one another, abiding in the context of mutual influence. Research supports the relationship of the variables to one another. No research was found that explored the collective influence or the mutual relationship of all three constructs. However, a great deal of research supports the assertion that knowledge is predictive of teacher efficacy (Fives, 2003; Sarikaya, Cakiroglu, & Tekkaya, 2005). Research also indicates that as teachers' efficacy levels increase they are more likely to report higher level concerns, which are indicative of engagement in target behaviors (Dunn, 2008; Dunn & Rakes, *forthcoming*; Ghaith & Shaaban, 1999). Ghaith and Shaaban (1999) assert that this reflects the fact that teachers who believe in their personal ability to affect student learning are less concerned with their professional survival and demands of teaching tasks when compared to their less efficacious counterparts.



TCM is unique in that in lieu of a stage like theory consisting of qualitatively different stages of development, it examines change in terms of gradual, quantitative changes, allowing for the natural ebb and flow of each of the three components with in the proposed self-system while still acknowledging the developmental and progressive nature of the change process. Based on what one learns by examining teacher behavior through the lens of this model, one may predict behavior and appropriately adjust professional development practices.

## Methods

For this research, a thematic evaluation of 60 Pacific Northwest school districts (1855 teachers) responses to the following surveys were explored: Data Driven Decision-Making Efficacy (3D-ME) survey, Stages of Concern Questionnaire (SoCQ), and DDDM knowledge measure. Internal consistency for each of the scales used met or exceeded levels of acceptability. Inter-rater reliability among the three researchers who reviewed the 60 district profiles was calculated.

## Results

The three raters had a 100% agreement rate for the 25 profiles that were selected to fit what was described as the beginner profile. Generally, beginner profiles reflected that teachers were going through the motions of the desired DDDM practices, had moderate levels of efficacy, and low levels of knowledge. An example beginner profile is provided below (See figure 1).

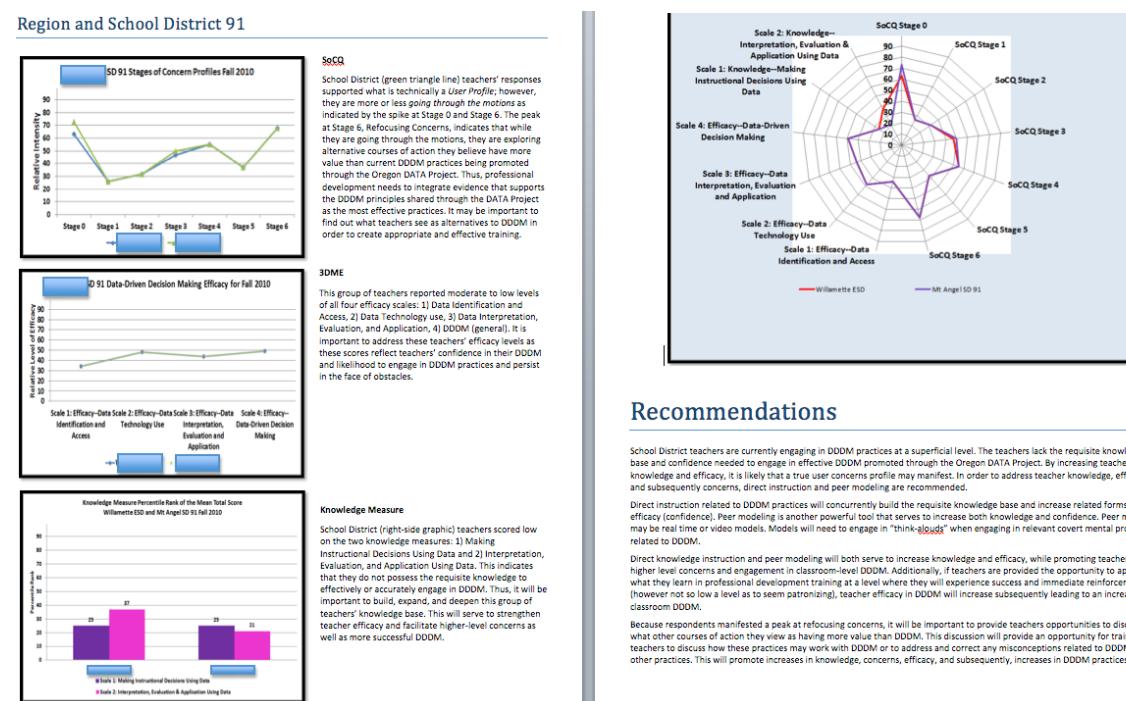


Figure 1

Sample beginner profile

Teachers', who were beginning to adopt DDDM practices, responses to the SoCQ supported what is technically a User Profile; however, they are more or less going through the motions as indicated by



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the spike at Stage 0 and Stage 6. The peak at Stage 6, Refocusing Concerns, indicates that while they are going through the motions, they are exploring alternative courses of action they believe have more value than current DDDM practices being promoted through the State data project. Thus, professional development needs to integrate evidence that supports the DDDM principles shared through the data project as the most effective practices. It may be important to find out what teachers see as alternatives to DDDM in order to create appropriate and effective training.

Beginners reported moderate to low levels of all four 3D-ME scales: 1) Data Identification and Access, 2) Data Technology use, 3) Data Interpretation, Evaluation, and Application, 4) DDDM (general). It is important to address these teachers' efficacy levels as these scores reflect teachers' confidence in their DDDM and likelihood to engage in DDDM practices and persist in the face of obstacles. They also scored low on the two knowledge measures: 1) Making Instructional Decisions Using Data and 2) Interpretation, Evaluation, and Application Using Data. This indicates that they do not possess the requisite knowledge to effectively or accurately engage in DDDM. Thus, it will be important to build, expand, and deepen the knowledge base of those who report a beginner profile. This will serve to strengthen teacher efficacy and facilitate higher-level concerns as well as more successful DDDM. The disparity between efficacy and knowledge is of great importance as well as the technical user concerns profile. Essentially, these teachers are more confident in their abilities and knowledge related to DDDM than their skills and knowledge support.

Teachers who fit in this beginner profile are only engaging in DDDM practices at a superficial level. The teachers lack the requisite knowledge base and confidence needed to engage in effective DDDM promoted by the state and district. By increasing teacher knowledge and efficacy, it is likely that a true user concerns profile may manifest. In order to address teacher knowledge, efficacy, and subsequently concerns, direct instruction and peer modeling are recommended.

Direct instruction related to DDDM practices will concurrently build the requisite knowledge base and increase related forms of efficacy (confidence). Peer modeling is another powerful tool that serves to increase both knowledge and confidence. Peer models may be real time or video models. Models will need to engage in "think-alouds" when engaging in relevant covert mental processes related to DDDM.

Direct knowledge instruction and peer modeling will both serve to increase knowledge and efficacy, while promoting teachers to higher level concerns and engagement in classroom-level DDDM. Additionally, if teachers are provided the opportunity to apply what they learn in professional development training at a level where they will experience success and immediate reinforcement (however not so low a level as to seem patronizing), teacher efficacy in DDDM will increase subsequently leading to an increase in classroom DDDM.

Because respondents manifested a peak at refocusing concerns, it will be important to provide teachers opportunities to discuss what other courses of action they view as having more value than DDDM. This discussion will provide an opportunity for trainers and teachers to discuss how these practices may work with DDDM or to address and correct any misconceptions related to DDDM or other practices. This will promote increases in knowledge, concerns, efficacy, and subsequently, increases in DDDM practices.



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### Discussion

As schools continue to strive to create an assessment literate faculty to support more effective state, district, school, and classroom level decision-making, it is critical that educational researchers investigate how to bridge the gap between professional development and practice. To do so, it is important to understand the change process related to adopting new DDDM practices. Knowledge about the change process and teachers' current stage in the change process will enable those engaged in professional development to create tailored and targeted professional development. Therefore, it is important to further investigate the importance of DDDM efficacy, concerns, and DDDM knowledge in the change process related to the adoption of classroom level DDDM.

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**DLOPI (*DIFFERENT LEVELS OF PARENTAL INVOLVEMENT*)  
A ROAD MAP FOR EDUCATORS: A GUIDE FOR PARENTS**

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**ABSTRACT**

Research on student success indicates that parental involvement plays a decisive role in student learning outcomes and has a positive impact on the school environment. The *No Child Left Behind Act of 2001*, signed into law in 2002, imposed new guidelines for student performance as well as educational accountability on the nation's school systems. During an era of globalization, declining tax revenues and ever present technological change, many school systems face challenges in "measuring up" to the mandate of *No Child Left Behind*. Too often educators and lawmakers are pitted against one another in the battle over student performance in our nation's schools. Parental involvement is mentioned on the periphery of discussions concerning education policy.

Different Levels of Parental Involvement (DLOPI) is designed to shift the paradigm of *No Child Left Behind* to *No Parent Left Behind*. Here you will find research based methods and strategies to engage parents and community leaders in successfully educating our children. The DLOPI program provides meaningful and fun ways to guarantee academic success for children and schools.

*Keywords:* Parent, Involvement, Impact, School, Accountability, Student

**Introduction**

Different Levels of Parent Involvement (DLOPI) program was conceived during a summer of developing plans for the coming school term. It was originally an attempt to organize a parent program to help parents recognize their roles and a way to assist schools to involve parents, but more importantly, to take a serious look at how educators view parents and their involvement. Therefore, DLOPI evolved into a creative strategy for schools to use in a more comprehensive district-wide parent involvement program. Since its inception, extensive research and the inclusion of a data base accountability system creation measures parent participation in relationship to student performance.



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Parent and family involvement has been a priority since the founding of the National PTA. Nevertheless, more than forty years of research on parent involvement has constantly maintained the importance—the need—and the positive effects on student behavior, grades, morale, and student achievement. In 1996, the State of Florida, along with many other states recognized Family and Community Involvement as Goal 8 of the State of Florida Education Plan. Departments of Education in many states charged individual school districts to include this goal in their school improvement plans for student achievement. This was a monumental step forward to acknowledge parents in the success of schools and the students they serve.

The PTA is one of the most organized associations that advocate for students, parents and educators. Recognition is given to the PTA as one of the driving forces of this new legislation for family and community involvement. In addition, it also assisted with supporting statutes to develop and include school advisory councils. To this day, this reform represents the cutting edge of what was the tip of the iceberg for parental choice, vouchers and leaving no child behind. Joyce Epstein (2005) nationally recognized as a pioneer in the area of parent involvement, created the six standards for National PTA while DLOPI was conceived.

### Overview

Different Levels of Parent Involvement (DLOPI, pronounced *de-low-pee*) is a parent program with five modules designed to encourage parents to become and stay involved in their child's education, whether at school or at home. This program provides teachers with a simple computerized formula for determining different levels of parental involvement by assessing the student's classroom performance and behaviors as measured by the parent or guardian's participation and interaction in their child's education. The program further emphasizes literacy skills, leadership skills, mentoring, and volunteering. The character education component stresses the importance of students graduating from school and not becoming a drop out. Faith-based and community organizations are encouraged to "adopt a school, family or a child." In addition, DLOPI program trainers offer incentives, such as DLOPI t-shirts, mugs, caps, and other rewards for parents and teachers to receive during trainings as promotional items. This serves as an awareness tool and a creative venue to generate conversation for future partnerships, increased parent involvement, and more parent participation.

While DLOPI is a program to increase parental awareness and participation, the creation of *an all-inclusive district-wide model for parent involvement is the most effective approach to providing systemic structure and collaboration of all programs*. Therefore, DLOPI offers a more comprehensive training on how to structure a district-wide framework for parent involvement and then, how to incorporate the DLOPI program as training modules.

### District's Commitment

*Providing the vision, leadership and commitment to DLOPI will increase your overall parental participation for the district and ultimately, student success.* School boards, superintendent's and the entire administrative leadership team of a school district play a pivotal role in making parent and family involvement a reality. Staff, teachers and parents will sense the level of priority



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administrators give to involving parents. The climate in schools is created largely by the tone set at the district level and in the office of the head administration of the school. If district administrators, directors of targeted programs and school principals take the stance of making “collaborating with parents” important, other educators will join in.

The first standard of effective leadership is for the superintendent of schools to incorporate parent involvement into the district’s strategic plan. It is based not only on mandated policies, guidelines and procedures by federal and state legislative requirements for parent involvement, but it shows each school’s community the importance of the district’s involvement and partnership with parents and the community. With all of the new and changing requirements, accountability, academic standards of excellence, parental choice, educators and future teachers prerequisite to student success will be to view parent involvement differently.

Therefore, it is logical, and makes common sense to begin with designing a successful District-wide Parent and Community Engagement Program; an inclusive plan on how to interact and positively communicate with stakeholders and the parents of the students we teach.

### **The Instructional Leader—The Principal**

*Administrative support is the key to the success of any parent organization, school advisory council or parent booster program.*

Principals can assist in charting the course of designing a successful plan by immediately creating an environment and philosophy of shifting the paradigm (way of thinking) of how their teachers view parental involvement. Even university professors at the college level are encouraging their students who are potential teachers to have a realistic plan in mind for parents. Parent involvement is becoming more and more integral in the “educational arena.” Therefore, continuous professional development to increase parent involvement and participation will always be necessary, especially at the school level. Principals set the tone and should model the attitude for teachers and other staff members to treat their clients with dignity and respect.

### **Principal’s Commitment**

*A principal’s commitment is the driving force for buy-in from teachers and staff.* Initially, a principal’s commitment to parent involvement must be conveyed to their employees before staff and teachers are asked to join in the development of a school’s parent involvement plan. Even before teachers can become more knowledgeable of the DLOPI program, it is suggested that school principals communicate in a forum or at a faculty meeting their commitment to the DLOPI parent program and why. Principals may want to express that the benefits are even greater when encouraging parents to participate and will increase student achievement. In this way, teachers and parents will know and feel the principal is serious and sincere. Principals may promote and offer teachers incentives for their commitment to implementing the program with in-service points, monetary awards, gift certificates, and flex or compensation time.

*Integrate the DLOPI components for teachers and strategies for parents into the school’s improvement plan.* The Different Levels of Parent Involvement program is a parent program with five



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modules designed with parenting tips and training opportunities to encourage parents to become and stay involved in their child's education at different levels, whether at school or home. For teachers, the DLOPI program provides teachers with professional development training, strategies for schools, and a simple computerized format for determining parents' levels of participation and involvement with data results.

### **Direction, Time and Funding**

The principal can provide (i) information and direction for targeted areas needing improvement and special attention; and (ii) information for contacting parents of minority and low performing (level one students) with relevant data (academic scores, discipline, climate surveys, and school performance areas).

Principals can identify (i) funding sources to support the implementation of the DLOPI program into the parent involvement plan and provide facility accommodations for scheduled parent and community meetings on nights and weekends; (ii) a staff member to coordinate this initiative for parent involvement, allow the coordinator (a parent liaison, teacher or facilitator) compensation time for their efforts and flexible time to execute home visits, business partnerships and community outreach activities when needed; and (iii) encourage teachers to provide the designated parent liaison with supplemental academic information, resources, workshop dates, assessment resources, and benchmarks, practice materials for reading, mathematics, science and writing materials to distribute to parents.

### **A Guide for Schools to Implement a Parent Involvement Program Using the DLOPI Model**

The Principal will (i) select a **parent liaison**—a person on staff as chairperson for the parent involvement program goals for your school improvement plan (*remember this person will coordinate the committee for parent involvement activities and report to the principal*); (ii) provide the parent liaison their specific role, duties and responsibilities; (iii) introduce the parent liaison to the faculty and staff; (iv) establish a **parent care/parent committee** as one of your school's leadership teams (include all program representatives from each grade level and specific programs, such as Title I, Exceptional Student Education, Migrant, English Speakers of Other Languages), Pre-K, School Advisory Council Chairperson, and PTA; (v) encourage faculty members to volunteer to be on the parent involvement leadership commitment and the DLOPI program initiative; (vi) provide opportunities for professional development training for teachers and staff on the DLOPI program's concept and components (train the trainer, data base training, and work shop trainings for parents); (vii) explore needed materials and supplies for parent involvement (computer, cameras, workshop materials, and incentives); and (viii) identify funding sources to support parental accountability areas (Title I-2% involvement; SAC, ESE, ESOL, Migrant, school improvement, special grants for literacy, technology, PTA and businesses.) NOTE: All grants usually have a line item specified for parent activities. Explore 21<sup>st</sup> CCLC and career academies, after school programs that have a line item budgeted specifically for parents.



### The DLOPI Curriculum

*Utilizing the Different Components of the Curriculum.* Each of the five levels of the DLOPI program is exciting and fun filled. It provides parents the opportunity to assess their level of involvement. One component of the program assists educators with the skills needed through professional development and a data tracking system for measuring the correlation between parent involvement and student achievement. For others, the curriculum opens up the opportunity for communities and faith-based organizations to engage in training and critical conversations.

The entire DLOPI curriculum and each workshop session for each level are interactive. It allows for an exchange of ideas and strategies for communicating with teachers, school administrators, universities, parents, faith-based community and peers. The first step and most efficient usages of the curriculum are to identify and decide the main priority or needs toward meeting your parental involvement goals. Remember, a parent's participation level is a measure for comparison to student achievement results.

One component of DLOPI developed for teachers is to track the percentage and/or number of parents involved at some level in their child's education. Principals should ask teachers to rate the levels in which parents are involved throughout the school year using the DLOPI chart of parent activities. This rubric provides teachers with a system for measuring true parent participation by the student's classroom performance and behaviors as determined by their parents' participation.

At the end of each grading period or semester, request teachers to identify their students' parent's levels of involvement under each category by using the DLOPI software system. This will yield calculated parent participation levels for each selected reporting period.

By teachers and staff working together, implementing the DLOPI program, the entire school will accomplish success. Increased parent involvement can then be assessed based on data results. Solutions to address pertinent parental issues will be focused directly on parents' levels of participation. Finally, using the results will reveal concrete data information regarding parent's participation and their impact on increased student achievement. Your school can use this data and plan toward focusing on areas of weaknesses and build on areas of strength for success.

### Literature Review

Hawley and Rosenholtz (1984) indicate that children have an advantage in school when their parents continuously support and encourage their school activities. Williams and Stallworth's (1984) research at the Southwest Educational Development Laboratory, Texas, involving parents, teachers, principals, superintendents, and school board members showed total agreement that parental involvement is vital to a child's success in school and that parents and teachers should communicate and cooperate frequently. He found that parents are eager to play a variety of roles at school, ranging from tutoring children or helping in the classroom, to sitting on committees that decide such matters as disciplinary policies or changes in curriculum. Generally, there is an aggregate effect on the performance of students and teachers when schools collaborate with parents.



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White (1982) says that parent participation in school generally brings about improvement in social development, effective management and teaching and learning outcomes. White believes that school and parent relationship allows government to preserve funds for more development projects, as competent people are involved in planning and decision-making.

Musaazi (1982) holds the view that the school, through the principal, staff and pupils could harmonize parents, school and community interests, resources, agencies, materials, and institutions for the benefit of both the pupil and the community. He further adds that education is an activity, which involves the cooperation of teachers, parents, children and the community as a whole. Parents are naturally interested in the education of their children and would want to know who is doing the teaching, what is being taught and how well it is being taught.

Epstein (1986) surveyed parents of an elementary school located in Baltimore, Maryland where over 85 percent of parents spent a quarter hour each day helping their children with assignments, which resulted in increased parent participation and student improvement.

From kindergarten through High/Secondary School, children's contact with teachers amounts to about 8 percent of their time. Parents have access to their children for much of the 92 percent when children are not in school. It is therefore imperative that this 92 percent of the children's time is judiciously used in helping them succeed at school.

John Hopkins University Center for Research on Elementary and Middle Schools (1989) study on effective schools, found that students whose parents help them with homework do better in school and have a positive attitude towards education than students who do not receive such assistance. According to these studies, the "data are clear that the school's practices to inform and to involve parents are more important than parent education, family size, marital status and even grade levels in determining whether inner-city parents get involved with their children's education in elementary school and stay involved through middle school."

Researcher Clark (1983) states that parent behavior influence the success of children in school when they: (i) establish frequent and initiate contact with the school; (ii) expect to play a major role in their children's schooling; (iii) demonstrate that they value education; (iv) provide regular instructions and coaching; (v) monitor school work on a firm and consistent basis; (vi) give positive reinforcement of school work and other interests; and (vii) have regular routines, mealtime and encourage effective use of time and space. This study also strongly suggests that parent support and involvement is critical at the secondary level. It further states that students whose parents closely monitor their academic progress and general whereabouts perform significantly better in school.

Becher (1984) reviewed literature on parent involvement in education and shared examples of programs in which low-income parents have been trained to work with their children. The outcome for students showed dramatic improvement in language skills, test performance and school behavior. Parents also developed better attitudes toward schools, became more active in community affairs and sought more education for them. Henderson (1987) asserts that parents should not be left on the periphery of the educational enterprise, that their involvement in the educational enterprise is neither a quick fix nor a luxury. It is absolutely fundamental to a healthy



system of public education. Shaeffer (1994) points out that parents and school personnel need to stay in harmony in order to improve organizational and human relations between the school and parents, offer general advice to the school and concern themselves with teachers' welfare in the teaching-learning processes as well as teaching activities. In this way, parents input directly leads to an improved learning environment, more proper or intensive teaching and improved quality. Fuller and Olsen (1998) state when parents, community members and teachers work together, children's lives are improved. Children will see a variety of adults working to help them improve their school performance and respond positively, leading to increased achievement.

Several prominent sources to consider are the National Standards for Parent/Family Involvement Programs endorsed by nearly 100 education organizations and universities and are built around the PTA's six types of parent involvement identified by Joyce L. Epstein, Ph.D., at Johns Hopkins University. Dr. John H. Wherry, President of The Parent Institute, published many researched-based materials, which are relevant to educators' needs and is of the highest priority of interest (Wherry, 1996(a)(b)(c), Wherry, 2003(a)(b)(c), Wherry, 2007).

### **Methodology**

*Parental Involvement = Student Success.* As profound as the studies on parental involvement have shown, years of research continues to indicate, that when parents are involved, students are successful. Now that the research is beyond dispute, and the results reveal this great truth, we must ask ourselves, have we really involved all parents from every lifestyle, race, culture, economic level or intellect, as it relates to student achievement? If we are to benefit from all students being successful, and we know that if their parents are involved, they will be successful. Let us take full advantage of this knowledge to encourage more parental involvement and participation. The question remains. Where do we as educators begin to ensure we give every parent an opportunity to assist and take responsibility for the education of our children? We balance the scales of education when both educators and parents share in the accountability.

*Decades of Research—Beyond Dispute.* During the past several decades, the benefits of parents' and other family members' involvement in the children's education have been well documented. Although it is not the only factor in improving student learning, decades of research has consistently linked family involvement to high student achievement, better attitudes toward school, lower dropout rates, increased attendance and many other positive outcomes for students, families and schools. Educational researchers, practitioners and policy makers consistently rank parent involvement in the education of their children high among the components of effective schools. The following data compiled by major researchers on parent involvement exhibits how important it is for parents to become and stay involved in the child's education.

### **DLOPI: Data Base and Tracking**

Initially, DLOPI was designed for parents to self-reflect on where they were within the stages of the different levels of involvement and where they would like to be. Consequently, after realizing that this tool could be helpful to school staff in understanding and tracking how parents help their children at home and in their schools, technical support was given to create an online DLOPI data



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tracking system. Any district staff can access the online system from the district's website and access student listings for each class within each school.

- The DLOPI for Educators program provides a concept and tool for teachers to address specific areas in which parents are most active and those areas where parents are least likely to become involved. To increase the likelihood that the parent or guardian of each student is evaluated, local school administrators are asked to select a single class period for which all teachers at the school would conduct the DLOPI assessment. A middle school or high school may select one specific class period for consistency throughout the school and/or the district.
- The assessment tool identifies a common set of categories (program outcomes) for which every parent is assessed. Each category has a set of activities (program deliverables) of which parents will be graded and assigned a parent participation level (program output). There are a total of twenty (20) activities among the five categories. Parents are given one deliverable point for each activity achieved. The degree of parent participation is rated from Level 1 to Level 5 and determined by the total number of deliverable points achieved.

The rating scale is described below:

1-4	Points	= Level 1
5-7	Points	= Level 2
8-12	Points	= Level 3
13-16	Points	= Level 4
17-20	Points	= Level 5

The DLOPI database development purpose is to identify the parent's participation levels for each teacher, each school and each school district. The data allows for developing improvement strategies and verifying the impact of parental involvement on student achievement. The data provides for the legitimacy for the DLOPI concept.

*Teachers Assign Points.* Teachers allocate parent participation points based on observations of their students' performance in class, the direct interaction with their students' parents or knowledge of a parent's involvement in other school activities, such as serving as a volunteer, member of the PTA or a member on the school advisory committee.



Categories and Activities				
Responsibilities & Attendance	Communication & Support	Literacy & Tutorial Assistance	Volunteering & Mentoring	Leadership & Partnership
Student attends school regularly and on time	Met parent(s) at least once	Student completes homework assignments	Parent volunteers for classroom or school functions	Parent attends open house, Parent Expo or PTA/PTSO meetings
Student is equipped with necessary school supplies	Communicated with parent via phone, open house, notes, home visit or teacher/parent conference	Student has a public library card and/or access to a computer	Parent provides materials or supplies for class or school function/activities	Parent participates on the school advisory council
Student displays good behavior during class and is respectful of others	Parent visits classroom	Student attends an after-school program	Parent attends parent-teacher conferences and/or PTA parent meetings	Parent is an officer of the PTSO/PTA/SAC or attends district advisory committee meetings as a school's representative
Parent-Teacher-Student Compact is signed	Parent is supportive of class discipline policies	Student has a tutor, mentor or other significant adult involved with their education		
Student attends school appropriately dressed	Parent signs and returns all necessary forms and papers			

#### Conclusion—Paving the Way for Implementation

Administrative support is paramount to the implementation of the DLOPI program. Once the results of the data is compiled and revealed to administrators, the integration of the DLOPI model in the school's improvement plan then becomes a reality. Administrators can then see the benefits of using the results in a variety of ways, such as supporting data for the school accreditation process. Continuous learning is for the teacher as well as for the student. Teachers should be involved in



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DLOPI staff development training, offered individual and/or group technical assistance with the DLOPI training modules, the rubric and tabulation of assessing parent participation levels. Teachers will need to have some basic computer knowledge, although the DLOPI software will tabulate the data entered by the teacher. The DLOPI data base will calculate several reports. Ongoing support and assistance from a trained parent liaison or parent coordinator on DLOPI is vital. Parent coordinators can serve as the conduit between the parent and the teacher. This way a parent liaison can support the teacher in collecting the data and reporting the data to the school's parent committee or school advisory council for integration in the school's improvement plan.

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**ANALYSIS OF THE RETROGRESSIVE EDUCATIONAL EFFECTS UPON BLACK MALES IN FLORIDA PUBLIC SCHOOLS**

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**ABSTRACT**

This study examines the implications and regressive effects of educational practices used with K-12<sup>th</sup> grade Black Male students in Florida public schools. The enquiry also analyzes empirical evidence, which suggests that the achievement gap continues to widen for Black Males, who disproportionately and consistently lag behind white students and black females. While there has been some progress toward closing the achievement divide, an obvious decline of Black Male learning gains continues. Consequently, these students suffer academic failure, in-school disciplinary problems, and exceedingly high dropout rates.

*Keywords:* Black Males, Achievement Gap, Graduation Rates, Student Discipline

**Introduction**

Several investigations of the Black-White public school achievement gap have been conducted within the state of Florida while several others have examined the influence of statewide and district policies upon that gap and upon the experience of African American males. This is understandable. More African Americans are enrolled in Florida's public schools than in any other state (Holzman, 2006, p.24). Despite some modestly encouraging signs in the 2007-2008 school year, Florida's Black-White high school completion gap remains larger than the national average. According to the Schott Foundation, on the basis of Black-White high school completion rates in 2006-2007, Florida ranked 46<sup>th</sup> among all states (Schott, 2008, p.5). Using more stringent indicators, definitions, and computational methods than those employed by the Florida Department of Education, the Foundation's researchers estimated that in 2006-2007 less than a third of Florida's Black male high school students graduated "on schedule" (Schott, 2008, p.2). There are additional aspects of



Florida's case, notably those found in the state's public school performance assessment and accountability regime that are of considerable interest to both policy-makers and scholars. At bottom, Florida's Black male high school crisis exemplifies the nation-wide problem while its relatively poor record highlights the problem's complexity and the constraints of addressing it.

### **Methodology**

This paper examines the descriptive data relevant to the Black-White public school achievement gap in the United States and in Florida, including available information concerning gender differences among African American students. Some of the "facts" presented here have been garnered from official sources, including the National Center for Educational Statistics (NCES) and the Florida Department of Education. But owing to a number of methodological shortcomings, much of the data presented in this paper is derived from the work of the Schott Foundation, an independent research and advocacy organization dedicated to Black males

### **Indicators of High School Completion**

It is important to understand the nature of the indicators that official sources use in reporting high school completion data. The latest NCES figures suggest that 88 percent of all Black students "completed" high school as compared with 93 percent of their White peers. Factoring in data for other major racial/ethnic groups, notably Hispanics and Asians, the high school graduation rate in the United States was reported to be 88 percent. But as Heckman and LaFontaine (2008) have argued, the official statistics inflate total high school graduation rate and concurrently mask the actual divide between Whites and Blacks. "Depending on the data, definitions, and methods used," they wrote, "the U.S. graduation rate has been estimated to be anywhere from 66 to 88 percent in recent years---an astonishingly wide range for such a basic statistic. The range of estimated minority rates is even greater---from 50 to 85 percent" (2008, p.2). According to their independent analysis, the actual U.S. high school graduation rate peaked in the late 1960s at around 80 percent and then declined (p.3). Moreover, between 1972 and the present there was no convergence in majority-minority high school graduation rates and, at present, 65 percent of Blacks and Hispanics leave high school without a regular diploma (Heckman & LaFontaine, 2008, p.3).

The explanation for the enormous disparities reported for the high school graduation rate and its disaggregation into Black-White rates stems from three issues. First and foremost, the official rate of 88 percent is the high school completion status rate. It is a measure of the percentage of 25-to-29 year old Americans within the general population who have received a high school diploma or an equivalent certificate (generically a General Education Diploma or GED). As such, it does not measure continuous promotion and so includes individuals who do not graduate high school in four-years with their age cohorts or "classmates." Secondly, it also counts individuals who have received GEDs rather than "regular diplomas. Lastly, depending on the methods used by various states, it excludes at least some institutionalized 25-to-29 year olds such as youth in reformatories, jails, prisons, rehabilitation centers, and inpatient psychiatric facilities.



### **Gaming the K-12 Educational System**

Owing to the pressures that states and districts experience as a consequence of federal and state school accountability regimes, there is substantial evidence that public school personnel “game” the system. As Darling-Hammond (2007) has complained, “schools’ responses to the incentives created by high-stakes tests can cause gaming that produces higher scores at the expense of vulnerable students’ education. Studies in New York, Texas and Massachusetts have showed how schools have raised their test scores while ‘losing’ large numbers of low-scoring students” (p.253). Gaming occurs through several different methods. They include retaining low-performing students in 3<sup>rd</sup>, 7<sup>th</sup> and/or 11<sup>th</sup> grades thereby excluding them from the next scheduled NAEP assessment, the assignment of low-performing students to special education (thereby removing them from the tested populace), and “encouraging” students to accept a GED in lieu of continuing their high school education (p.253ff).

### **Black versus White Dropout Rates in Florida**

Florida reports a dropout rate based upon the percentage of students who withdraw from school in a given year without transferring to another school, a home education program, or an adult education program, including a GED certificate program. In 2000-2001 the White student dropout rate in Florida was 3.1 percent and it subsequently declined to 2.4 percent in 2006-2007. Among Black students, the dropout rate in 2000-2001 was 4.7 percent, but it remained unchanged through 2006-2007. In 2007-2008, the White dropout rate fell to 1.7 percent, while the Black rate declined by to 3.1 percent (Florida Department of Education, 2008). Without taking the GED factor into account, it appeared that in 2007-2008, Florida was effectively addressing its Black-White dropout rate gap. But further examination of the data for 2006-2007 reveals enormous variations in the dropout rate for individual school districts within Florida.

### **Socioeconomic Status (SES) and Student Achievement**

The evidence that SES exerts a powerful influence on student achievement is robust. In a meta-analysis of 74 studies published between 1990 and 2000 that collectively encompassed over 100,000 students, Sirin (2007) found that parents’ location in the socioeconomic structure has a strong impact on students’ academic achievement (p.438). As reported by Sirin (2007) neighborhood and school SES displays correlations with student academic achievement that are as powerful as family SES and, in the case of Black students even more powerful than family SES.

From their review of the relevant research, Harris and Harrington (2006) concluded that both Black-White and low-SES/high-SES student achievement gaps are due, at least in part, to differences in teacher training and retention. A standard recommendation for reducing the magnitude of these tandem gaps calls for the hiring of more qualified teachers by high-minority and high-poverty schools. But the implementation of this remedy is heavily constrained. In Harris and Harrington’s estimation, “there may be little hope of genuinely improving teacher quality in low-performing schools without greater resources and efforts to combat the harsh working conditions that have been shown to be the primary factors leading teachers to leave these schools” (2006, p.231).



## Student Achievement and Race

As Jonathan Kozol (2005) reported in *The Shame of a Nation*, the “savage inequalities” between poor, racial-ethnic minority and affluent, White school districts that he documented in the early 1990s remain intact. Thus, in 2003, the Chicago public school system spent about \$8,482 per pupil in a student populace that was 87 percent Black and Latino, while an overwhelmingly White school district located just outside of Chicago’s city limits spent \$17,921 per student (Kozol, 2005, p.23). As several researchers have demonstrated, school district resource inequalities display very strong associations with race and have a strong relationship with student learning and related outcomes (Duncombe & Yinger, 2005; Uwah, et al. 2008; Jordan & Cooper, 2003).

Several researchers have investigated the impact of school racial/ethnic composition upon academic outcomes. Borman and her colleagues (Borman, McNulty-Eitle, Michael, Eittle, Lee, Johnson, Cobb-Roberts, Dorn & Shircliffe, 2004) analyzed Florida data to determine whether a school’s degree of racial segregation was associated with the percentage of its students who passed the math and reading components of the FCAT. After controlling for the effects of several important predictors of FCAT performance (average class size, per pupil expenditure, and the like), Borman et al. found that there was a significant relationship between a school racial enrollment and academic achievement in Florida’s high school, but this association was not linear. Instead, the results showed no significant differences in FCAT test scores of White and Black students in schools that had very high levels of White enrollment (85 percent or more) and schools in which only 50 percent of the students were White. By contrast, in high schools with student populations that were more than 50 percent Black, increases in African American enrollment were associated with a decreased percentage of all students passing the FCAT.

Goldsmith’s (2004) study of school racial composition upon student beliefs, attitudes, and achievement yielded results that were not congruent with the general finding that attending a predominantly Black school has a uniformly negative impact on Black students. Analyzing NELS data, Goldsmith educated that Black and Latino students who attend “high minority” schools are more optimistic about their educational prospects and have stronger pro-school attitudes than Black and Latino students who are enrolled in “low minority” schools. In partial contrast to the more commonly reported negative association between high minority enrollment and student academic achievement, Goldsmith “unexpectedly” found that when Black (and Latino) students go to schools in which a high proportion the students belong to minority groups, “minority-majority” achievement gaps tend to narrow (p.139). The positive effects of attending a segregated school upon Black students’ beliefs, attitudes and academic performance were amplified by the composition of the school’s teaching staff. In “high minority” schools, the proportion of the Blacks/Latinos on the teaching staff was directly associated with more positive outlooks, pro-school attitudes and (relatively) better test score performances among minority group students.

The impact of school racial composition upon the academic achievement levels of Black and White students was investigated by Cooley’s (2006) in a study confined to North Carolina middle schools. Cooley found that Black –White achievement gaps were smaller in schools that had greater racial balance. Black students who attended schools in which there was racial balance outperformed Black students who attended predominantly Black and predominately White schools. Moreover, their test



scores were more similar to those of Whites at the same school than were the scores of Black students in “high minority” and “low minority” schools. She concluded that having racially diverse classmates improves the academic performance of Black students but has no significant influence (negative or positive) upon White students. Cooley observed in passing that racially correlated ability grouping significantly reduced the positive spillover of attending a balanced school upon Black students.

### **School Curricula Contributes to the Gap**

Researchers who have studied the racial correlates of ability grouping or “tracking” have faced the problem of controlling for the confounding variable of prior academic achievement.. According to Lleras (2008), the earliest national and regional efforts to measure the impact of race on ability group placement relied upon student self-reports of prior academic achievement. These studies found that, after controlling for prior achievement and SES, Blacks students were *more* likely than White students to be assigned to a college-preparatory programs in high school (Lleras, 2008, p.888).

In a study of racial differences and curriculum tracking, Lleras (2008) found racial segregation is indeed detrimental to the overall learning process. Lleras (2008) pointed out that as school ability track research has become more sophisticated, scholars have found that “high schools vary not only in the number but also in the kind of curriculum tracks they use, including the coursework offered to students within particular tracks and the amount of mobility or course taking allowed in classes across tracks” (p.888). Given this complexity, it is quite possible that African American students who attend “high minority” middle schools are less likely to be enrolled in courses that adequately prepare them for college preparatory work in high school. Lleras used NELS data for 8<sup>th</sup> and 10<sup>th</sup> grade students to estimates racial differences in tracking outcomes for math course sequences. She found that students in high minority middle schools leave the 8th grade after taking less demanding math classes when compared to students in low minority middle schools. By the 10<sup>th</sup> grade, these initial disadvantages have accumulated into larger Black-White learning gaps, particularly among students who had been enrolled in predominantly Black urban middle schools (p.908). As a consequence, both Black and White students from predominately Black middle schools who were initially assigned to high level mathematics courses in high school apparently struggled to keep up and were vulnerable to track demotions after their respective freshman years.

The disproportionate assignment of Black public school students into special education has been amply documented. Black male students in particular are over-represented within the common diagnostic categories of mental retardation and emotional disorder (Blanchett, 2006; Bollmer, et al.,2007; Henderson, 2008). There is some indirect evidence that decision-makers (including diagnostic teams) at predominantly White schools have used special education to re-segregate students along racial lines. Thus, for example, Eitle (2002) found that in school districts under court mandates to desegregate, Black male students were more likely to be identified for special education than in similar school systems that were not under a court de-segregation order. Moreover, according to Blanchett (2006):

The in-school and post-school outcomes of African American students who are placed in special education programs are more likely to be characterized by segregated special education placements, limited access to the general education classroom and to peers without disabilities, high dropout



rates, low academic performance, and substandard or watered-down curricula (than are White special education students (p.25).

For African American students who are placed in special education, the two most common modes of high school exit are drop out and the receipt of a GED. Black special education students are more likely to leave high school prior to graduation than to complete high school and they are more likely to receive a GED than to a “regular” diploma. Black special education students have much poorer outcomes than White special education students while they are in high school and afterwards (Blanchett, 2006, p.25).

### **Black Males and Disciplinary Action in Academic Settings**

In their study of racial segregation and school disorder within Florida high schools, Stretsky and Hogan (2005) investigated the connection between school racial-ethnic composition and school disorder. They used information derived from the Florida Department of Education's *Florida Schools Indicator Report (FSIR)* database (2002) which provided data on the total number of incidents of crime and violence reported by 371 Florida public high schools from the 1996–1997 through the 2000–2001 school years. As hypothesized, Stretsky and Hogan found that school segregation is strongly associated with levels of school disorder. High minority schools had much greater rates of serious crime and violence than either the low minority or the racially balanced schools in their sample. The researchers also determined that the relationship between school racial/ethnic composition and disorder levels was completely mediated by school SES. In fact, poverty was a somewhat stronger predictor of school disorder than was high minority student body composition. Considering these results, Stretsky and Hogan cautioned:

It is important to emphasize that our analysis *should not* be interpreted as suggesting school poverty is more important than school segregation in producing school disorder. In fact, our results emphasize the importance of school segregation in shaping rates of school disorder indirectly through levels of poverty. In short, our findings appear to suggest that poverty is mechanism that links segregation and disorder (p.416).

Kupchik and Ellis (2008) interviewed White, Black, and Latino students attending a high school that had recently erected a strong school security system in the wake of the Columbine massacre. The Black students with whom Kupchik and Ellis spoke perceived less fairness in the new school security-related rules and less consistency in their enforcement than White students who participated in the study. Both African American and Latino students were more likely than Whites to assert that such procedures as student locker searches, the use of metal detectors at doorways, and video surveillance of hallways were not meant to prevent student rampages or any type of in-school violence. They believed that intensified monitoring focused on their activities and that they were much more likely to be scrutinized and punished for minor security violations than their White peers were.

Eitle and Eitle (2004) found that in schools with a higher proportion of Black students, the discipline gap between Whites and Blacks was narrower than it was in predominately White or even racially-balanced schools. They also reported that “the relationship between teacher milieu and black suspension imbalance indicates that schools with more educated and more experienced teachers



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also have a higher black suspension imbalance," and added that "this relationship may reflect racial ethnic differences in the experience and education of the faculty" (p.281). The study's results did not allow the researchers to determine if teacher race itself had an impact upon the Black-White discipline gap. But the direct association between the size of that gap and teacher experience/education suggests that teachers who are more deeply embedded into a professional culture embodying conventional (arguably "White") norms and expectations experience more frequent conflicts with Black students and/or that they are less tolerant of misbehavior.

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### Conclusion

These studies appear to explain at least a portion of the Black-White achievement gap, and do show associations with academic performance among Black students and are fairly powerful predictors of dropout among African American male high school students. Further, Black males were more likely to leave school earlier and for disciplinary reasons than any other race/gender group in the study's sample

Worth noting is that the Black-White achievement gap is apparent from the 4<sup>th</sup> grade onward, appears to widen through the 9<sup>th</sup> grade and then stabilizes partially as a consequence of disproportionately high dropout rates among Black students during the first two years of high school and is additionally manipulated by curriculum tracking, disproportionate disciplinary action and socioeconomic status. The officially reported racial gap in Florida's high schools generally mirrors national data and there is strong evidence that the official data masks the gap's true extent.

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**Exploring the Relationship between Organization Cynicism and Burnout: A Preliminary Analysis**

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**ABSTRACT**

This paper examines the relationship between organizational cynicism and the three dimensions of burnout which are emotional exhaustion, depersonalization, and reduced accomplishment. Several moderator variables are also examined in this paper – these moderator variables include work-family conflict, role conflict, role ambiguity, exchange ideology, task investment, empowerment, and task investment. The theoretical model was tested on a sample of 168 Taiwanese nurses from Taipei – we obtained support for a moderated relationship between organizational cynicism and emotional exhaustion.

**Introduction**

In today's organizations employees with unfavorable work attitudes are a fact of life. For example Towers and Perrin reported in their 2005 study of 85,000 employees in sixteen countries found that a quarter of them were disengaged from their work .There have been numerous research studies over the past several years that have indicated that employees develop negative attitudes because of an unfavorable work environment where employees experience excessive work demands and time pressure (Fox and Spector, 2005). One of these work attitudes is organizational cynicism. It is essentially 1) a negative attitude that one holds about his or her organization 2) a belief that the organization lacks integrity, and 3) behavioral tendencies that are disparaging and critical of the organization (Dean et al., 1998). Kanter and Mirvis (1989) for example found that 43% of American workers were very cynical about the organizations they worked for and Broome et al (2005) have even suggested that organizational cynicism has increased in recent years.

Research studies have indicated that organizational cynicism has been associated with several undesirable outcomes. For example Reichers et al., (1997) in their study found that organizational cynicism had a negative relationship to job satisfaction and organizational commitment. Andersson and Bateman (1997) found organizational cynicism had a negative relationship with organizational



citizenship behaviors. Similar findings were found by Abraham (2000). The cumulative results of these studies therefore indicate that organizational cynicism can have negative consequences for both the individual and the organization (Davis et al., 2004).

One area which seems to be neglected is the relationship between organizational cynicism and burnout and to the authors' knowledge there does not seem to be any studies that have examined this important relationship. Within the last couple of decades interest in the problem of burnout has increased tremendously. Most scholars agree that burnout is a reaction to role stress and occurs when individuals experience prolonged periods of stress at work. More specifically Maslach and Jackson have defined burnout as a syndrome of emotional exhaustion, depersonalization and a reduced sense of personal accomplishment. Emotional exhaustion is the physical, mental tension experienced as a result of experiencing job related stressors. Depersonalization occurs when an individual distances himself or herself from other coworkers, and views them impersonally. Diminished personal accomplishment is the result of a negative self evaluation. They identified four organizational factors that may affect the severity of burnout: feedback, control and clarity, social support, and personal expectations about work.

Although it is beyond the scope of this paper to review extensively the literature on burnout and work environment the bulk of the research evidence to date suggests that environmental factors, particularly characteristics of the work environment, are more strongly related to burnout than are demographic and personality factors (Maslach and Jackson 1984). Research studies have indicated that as the intensity of the job experience and the demands of the employee increase the levels of burnout appear to increase (Maslach and Pines 1977; Pines and Maslach, 1978); Savicki and Cooley, 1987). Workload, role conflict, and role ambiguity also appear to increase the frequency of burnout (Maslach and Jackson, (1986)). Research studies have also collectively found that burnout has a unfavorable impact on organizations in terms of the development of negative attitudes, decreased levels of job involvement and task performance, and increased turnover intentions (Jackson & Maslach, 1982; Leiter & Maslach, 1988; Wright and Cropanzano, 1998). In addition Chiu and Tsai (2006) in their study of restaurant employees found a negative relationship between organizational citizenship behavior and emotional exhaustion and diminished personal accomplishment.

If one accepts the view that the organizational context plays an important role in the development of an individual's level of organizational cynicism, and that it is more situation-specific, and evolves over a period of time based on the types of experiences one has with an organization, one can therefore hypothesize that organizational cynicism will have a negative relationship with burnout.

## Method

### *Site and research participants*

Data was collected on site over a period of three weeks from nurses working at one of the largest hospitals in Taipei. Surveys were completed by 189 nurses for a 99% response rate. The high response rate was due to the fact that employees filled out the survey at the work site before the start of their respective shifts. To ensure strict confidentiality and to gain the most candid survey responses, the third author administered the anonymous surveys directly to the employees.



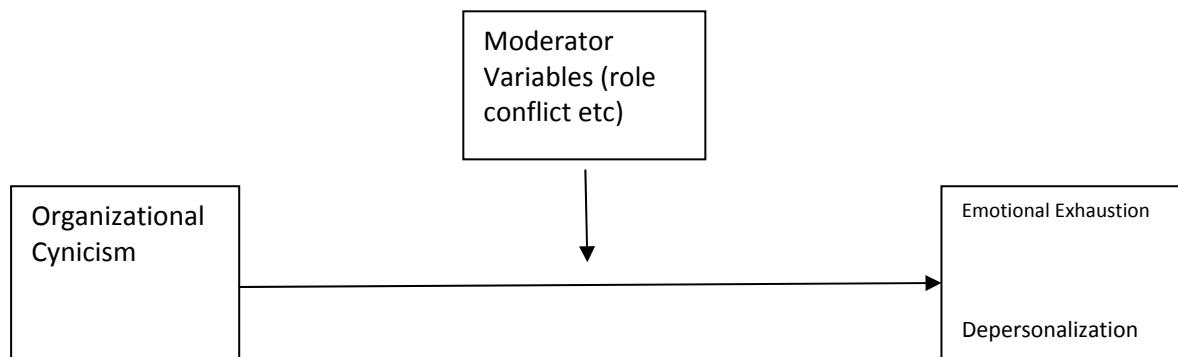
### Measures

*Organizational Cynicism* was measured with a 5 item survey adapted from Kanter and Mirvis (1989). Items were rated on a seven-point scale. Sample items include: "I believe that the hospital says one thing and does another," "The hospital's policies, goals, and practices seems to have little in common."

*Burnout* was measured using the The Maslach Burnout Inventory (Maslach and Jackson 1981). The inventory focuses on three dimensions. Emotional exhaustion measures feelings of depleted energy due to excessive psychological demands. Sample items include "I feel emotionally drained from my work" and "I feel used up at the end of the day." Depersonalization measures a negative and unfeeling attitude towards others. Sample items include "I don't really care about what happens to some coworkers" and "Working directly with people puts too much strain on me." Finally diminished personal accomplishment measures reduced accomplishment. These items were reverse scored. Sample items include "I deal very effectively with the problems of my coworkers" and "I have accomplished many worthwhile things in my job." Items were rated on a seven-point scale.

### Analysis and Results

The data was analyzed keeping in mind, the following model.



Theoretically, it makes sense to see organizational cynicism having an impact on the three dimensions of burnout. We tested for this particular proposition of ours, and also tried to account for possible moderator variables. The different variables that we considered as moderators were: exchange ideology, role conflict, task investment, empowerment, work family conflict, role ambiguity, role conflict, and self esteem. We considered these different variables as possible moderators because past research in these topics suggests that these variables have some interesting interactions with organizational cynicism.

To analyze our data, we utilized SPSS in order to run a multiple regression – we first entered our dependent variables (Emotional Exhaustion, Depersonalization, and Reduced Accomplishment) followed by our control variables (age, shift, marital status, no of children, work status), after which we entered our independent variable and moderators (organizational cynicism, exchange ideology, role conflict, task investment, empowerment, work family conflict, role ambiguity, role conflict, and self esteem), after which we entered our product terms (for e.g. cynicism\*role conflict and others).



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Our results are provided below in Tables 1, 2, and 3 – essentially, we only found support for the first dimension of burnout i.e. emotional exhaustion. Our model was not supported when it came to the other two dimensions of burnout (i.e. depersonalization and reduced accomplishment).

Table 1

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.092 <sup>a</sup>	0.009	-0.022	1.010978	0.009	0.279	5	162	0.924
2	.647 <sup>b</sup>	0.419	0.326	0.821184	0.41	5.641	18	144	0
3	.757 <sup>c</sup>	0.573	0.439	0.749296	0.155	2.703	17	127	0.001

Table 2

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.203 <sup>a</sup>	0.041	0.012	0.994211	0.041	1.39	5	162	0.231
2	.656 <sup>b</sup>	0.431	0.34	0.812535	0.39	5.475	18	144	0
3	.705 <sup>c</sup>	0.497	0.339	0.81324	0.066	0.985	17	127	0.479

Table 3

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.149 <sup>a</sup>	0.022	-0.008	1.003942	0.022	0.738	5	162	0.596
2	.477 <sup>b</sup>	0.228	0.105	0.946294	0.206	2.13	18	144	0.007
3	.554 <sup>c</sup>	0.307	0.088	0.954817	0.079	0.849	17	127	0.634

Among all the different moderator variables, we found support for four of our moderators. We essentially obtained support for the moderating roles of exchange ideology, task investment, empowerment, and role conflict. These interactions were highly significant, and suggest several possibilities for future research. That information is presented in Table 4.



Table 4

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error			
(Constant)	0.761	0.533		1.428	0.156
Age	0.055	0.072	0.064	0.771	0.442
Shift	-0.05	0.043	-0.082	-1.16	0.248
MaritalStatus	-0.142	0.143	-0.15	-0.993	0.323
NoOfChildren	-0.025	0.105	-0.038	-0.242	0.809
WorkStatus	-0.237	0.162	-0.155	-1.464	0.146
ORG CYNICISM	0.039	0.087	0.039	0.446	0.656
EXCHG IDEALOGY	0.003	0.095	0.003	0.035	0.972
TASK INVESTM	-0.072	0.075	-0.072	-0.957	0.341
EMPOWERMENT	0.003	0.087	0.003	0.034	0.973
WRK FMLY CONF	0.112	0.099	0.112	1.136	0.258
ROLE AMBIGUITY	-0.124	0.088	-0.124	-1.404	0.163
ROLE CONFLICT	0.334	0.085	0.334	3.941	0
ORG SELF ESTEEM	-0.053	0.093	-0.053	-0.573	0.568
ORG CYNICISMxEXCHGIDEALOGY	-0.252	0.078	-0.293	-3.218	<b>0.002</b>
ORG CYNICISMxTASKINVESTMENT	-0.169	0.078	-0.19	-2.153	<b>0.033</b>
ORG CYNICISMxEMPOWERMENT	0.179	0.092	0.184	1.96	<b>0.052</b>
ORG CYNICISMxWRKFMLYCONFLICT	0.108	0.106	0.103	1.026	0.307
ORG CYNICISMxROLEAMBIGUITY	-0.081	0.099	-0.086	-0.823	0.412
ORG CYNICISMxROLECONFLICT	-0.172	0.08	-0.172	-2.149	<b>0.034</b>
ORG CYNICISMxORG_SELFESTEEM	-0.063	0.096	-0.066	-0.657	0.512

### Conclusion

While our analysis yielded support for our main theoretical model, we only obtained support for a few of our contentions. We did not obtain any support for a main effect relationship between organizational cynicism and all three components of burnout (emotional exhaustion, depersonalization and reduced accomplishment), nor did we obtain any support for any interactive effects of cynicism and work family conflict, or cynicism and role ambiguity. However, we did obtain some strong support for an interactive effect of cynicism with exchange ideology, task investment, empowerment, and role conflict, on emotional exhaustion. These findings are extremely interesting findings, as they suggest that the link between organizational cynicism and emotional exhaustion is affected by several other variables. Perhaps, further research could be directed at analyzing and discovering how precisely these interactions could be studied and expanded further.



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**WI-FI NETWORKS AND CELLULAR NETWORKS IMPACT ON THE BUSINESS TRAVELER**

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**ABSTRACT**

Wireless networks and hotspots in public traveling places such as airports and train stations have been available for a few years, and although there are some issues with these networks, such as cost and security of data, they are still widely used. Cellular networks are also widely available and used, although they are not as reliable in some places, such as subways and buildings as wireless networks. Wireless networks are much faster and less expensive to use than cellular, but cellular networks are more widely available, although Wi-Fi is making significant headway. For the purpose of this paper, Wi-Fi, Wireless Fidelity and Wireless are used interchangeably. This paper provides a comparative study of the benefits and issues with using both types of networks and explores the benefits of having the ability to use your laptop, iPad, or cell phone on either of these networks. The potential cost savings to companies that provide hand held devices to the mobile worker will be discussed with a focus on business travelers in airports.

*Keywords:* Wireless, Interoperability, Security, Education, Mobile Computing, Airports

**Introduction**

More people are going to be using Smartphone type of devices particularly for airline travel and that having the ability to have their signal seamlessly pick up a wireless network during transmission would be a great benefit; particularly as cloud computing becomes more common. Additionally, because the cost of Internet enabled hand held devices have decreased, many mobile workers are purchasing their own devices and using them for work related purposes. This can create security issues for their companies and additionally, the company may not be aware that potentially sensitive data is being stored and transported on non-company hardware. Interoperability of Wi-Fi hotspots and cellular networks is a great technology for business travelers, especially in airports. It can increase a worker's productivity by providing the ability to use hand held devices for cellular calls, Internet access and text messaging. More hand held devices are capable of using free Wi-Fi hotspots and cellular networks seamlessly and more securely. Most airports have some type of Wi-Fi hotspot and many provide free access, although this access may be limited to specific locations within the airport. In Florida, for example there is free internet access in Daytona Beach, Ft. Lauderdale/Hollywood, Ft. Myers, Melbourne, Orlando, Palm Beach, Pensacola, Sarasota-Bradenton, Tallahassee and Tampa. (wififreespot.com, 2011)

**Interoperability**

Interoperability is the technology that enables a cellular phone to transfer to a wireless network securely without interrupting service. The transfer is transparent to the user with the obvious



benefit that when a cellular phone or hand held device uses a wireless network, cellular minutes are not used. Motorola published a report on Mobile Devices and quoted a Frost & Sullivan, Mobile Office Report, that stated by the year 2010, it is predicted that there will be 72 million workers whose jobs require them to perform work outside the office. According to this report, these users are primarily managers, sales professionals, and service professionals, with executives, directors, and mid-level managers making up 57 percent of enterprise professionals using mobile devices. Email is still the primary application and that is expected to increase to 123 million by 2009. (Motorola, 2007)

The advantage of interoperability as stated by Joseph, Manoj, and Murthy, is "The Wi-Fi Access Points (APs) provide high bandwidth and fast network access to the users in their coverage areas." They continue to add that "The base stations of the cellular network ensure network connectivity in a wide region, although at lower speeds. Wi-Fi APs also extend this coverage to places like subways and interiors of buildings, where the load on cellular networks, supporting a larger number of users, will lead to higher revenues for all the network service providers involved." Advantages to business travelers in airports is their usage can be switched from cellular to a free Wi-Fi seamlessly and securely without their intervention and the higher speeds enables the traveler to save their costly minutes. The disadvantages of interoperability are that many hotspots are not free, although if a traveler has the same service provider as the airport, then it is free for them. Currently, there are several selections of hand-held devices that can take advantage of this technology although many of these devices can be quite expensive, as are the service plans. Despite that, research is showing that more workers are purchasing these devices with personal funds to use in the workplace. (Garcia, 2010)

### **Hand Held Devices**

Dual mode phones are currently available that provide mobile workers with the power and applications that would rival traveling with a laptop. The devices are still expensive, but workers are buying them for personal and work uses. Motorola announced they have released their Motorola ATRIX 4G that has dual-core processing power and a revolutionary web top application that allows the user to surf the Internet with a full Firefox browser, create and edit documents or access multimedia. It also has available a HD multimedia dock, laptop dock and vehicle dock. This phone is available through AT&T. (Motorola.com, 2011) According to Blackberry, "Mobilizing customer relationship management (CRM) applications is one natural next step beyond mobile email, as is outfitting field service representatives with smartphones capable of accessing necessary back-office applications." Salesforce.com is a company that uses cloud computing and Smartphone capabilities in their customer resource systems. Blackberry also states that a company can build a business case by not only pleasing end users, but it makes financial sense. One reason stated: "They can show a rapid return on investment (ROI) in hard dollars with a simple shift in use policy. Savings can prove substantial when IT standardizes on one device type and negotiates a corporate plan with a single carrier rather than allowing employees to buy mobile devices on an individual basis, sign up for their own service plans, and charge back the cost, Signorini says." The article referred to a recent Yankee Group report that showed the savings for a 125 person, U.S. based business that went through such a consolidation at nearly \$100,000, or 50% of previous costs. SalesForce.com is one of the largest cloud computing software companies that allow an entire sales force to store their data on Sales



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Force servers and access the data on any hand held device from any wireless network. Companies pay for a per user fee for services depending on the level of service and storage needed.

### Security Issues

Security risks are generally broken down into two categories, those lost or stolen and those devices currently connected to a network. The security aspect of business-related communications is of major concern and according to the recent study, Motorola Mobile Device Security 2007, 30 percent of mobile devices are lost every year. These losses have an impact not only in the cost of the asset, but also in the lost data as well as potential security breaches. Approximately 250,000 mobile devices are left in US airports every year, and those belonging to companies may contain all kinds of confidential information, including financial, emails, or other sensitive information. Some cell phones have passwords and account information stored on the phone for easy access when traveling. The security risk is potentially great to companies. Employees also leave and/or become disgruntled which could possibly make all of that data available for unauthorized use. (Motorola.com, 2007) Motorola believes that, according to their web site, Protection must be Pervasive: "In order to protect and preserve privacy, identity, and the confidentiality of personal and corporate property, ... mobile security solutions must be more intelligent... cell phones and other mobile gear must be worthy of complete trust. Users must know that those with less than honorable intentions – everyone from hackers to pickpockets to all-too-curious colleagues – don't stand a chance of stealing their applications, disrupting their service, or riffling through their personal data." (Motorola.com, 2007) Having said this, a company can make a strong case for companies to own the hardware and have policies for security and the knowledge to know how their mobile workers are using the device. With VOIP in many companies, the hand held can be used without cost inside the workplace via wireless networks and interoperability without incurring the costs of providing land lines. With the programs that the cellular service offers for homes with wireless networks, the work phone could be used as the worker's personal cell phone with the worker incurring minimal costs.

The other category of security risk is the threat of access by hackers to steal the information or to infect the device. According to Motorola, hackers may be using the hand held device as a path to access the corporation's main computer system, an unspeakable security breach. According to cell phone manufacturers, new hand held devices are coming equipped with higher levels of security. On Friday, March 14, 2008, the Daytona Beach News Journal published an article "Top gadgets preloaded – with viruses". The article described how new devices are being loaded with viruses at the factory, it can provide a good way for hackers to potentially cause major damage of companies computer systems if the device is connected to PC's for their company. The article quoted Zulfikar Ramzan, a computer security researcher at Symantec Corporation as say, "We'll probably see a steady increase over time... The hackers are still in a bit of a testing period – they're trying to figure out if it's really worth it." The experts still maintain that good up-to-date antivirus software is the best way to protect the devices.

Ponemon Institute is dedicated to information and privacy issues in business and periodically conducts surveys and research on information and privacy issues to provide education and information to industries. Ponemon on behalf of Cellcrypt released survey results on March 2, 2010 detailing losses to large and medium businesses from illegal interception of cell phone calls. The



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results were from 75 companies and 107 senior executives in the United States. The executives said that on average \$1.3M is lost each time a corporate secret is revealed to unauthorized parties. "18% of respondents estimate such losses to occur weekly or more frequently, 61% at least monthly and 90% at least yearly". The results further revealed that 80% believe the organization would not discover that corporate secrets were revealed. Companies are aware of the problem as 71% stated they communicate confidential information in conference calls, 80% when travelling to countries known to be high risk for voice interception and 83% when discussing information with legal representatives. Despite this high dollar loss to companies, only 14% reported deploying technological solutions and 83% said they do not provide information to employees to make them aware of the problem. (darkreading.com, 2010)

Now that the 2010 holiday season is over, it can be assumed that there are more business people that have received or purchased new smart devices and they may very well want to use them for business particularly the mobile worker. Companies have had policies and tried to control the use of business devices being used by the worker for personal use, such as personal email and banking. That was not particularly successful for companies to try and police this activity. Companies that are trying to ignore or not allow or support workers using personal devices are making a huge mistake. Raj Samani, Cloud Security Alliance stated: "It would be simple to write corporate policy prohibiting the use of any devices not provided by the company, however not only is this difficult to enforce, it also prevents the company from exploiting the productivity gains such devices can bring." In the words of David Smith, Vice President and Gartner Fellow: "Exploit, manage and benefit from the consumerisation of IT with education and a realistic and pragmatic approach. Don't try to stop it – you will fail." (Samani, 2011)

JUNIPER Networks commissioned a survey on business use of 16,000 smartphone and tablet users across 16 countries. They found among other startling outcomes that 44% of respondents use the phone for personal and business use and only 4% used the phone for only business. 81% admit using their device to access their employer's network without their employer's knowledge or permission and 58% do so every single day. 76% of consumers surveyed use their smartphones or tablets to access sensitive personal or business information including 51% to enter or modify passwords; 43% to access banking or credit card statements; 30% to access utility bills; 20% to share financial information such as credit card numbers; 18% to access employer's proprietary information; 17% to access medical records; and 16% to share social security numbers. Juniper also found that 41% of respondents say that level of security is a "top priority" and 40% say it is a "high priority" when considering the purchase or use of a smartphone/tablet. (Juniper.net, 2011)

Companies that want to take advantage of mobile workers using interoperability are first going to have to support the use of smartphones and provide for security of company information. Tim Holman Vice President for ISSA and CTO at Blackfoot believes that there are 3 steps that companies should take to help secure their systems. First, assess data leakage. Top-secret or classified documents should never make their way to employee-owned equipment. Second, data loss should be assessed. What would be the impact if data gets lost? Is it encrypted? Should the loss be reported to the ICO? Third, employees need to install software on company machines in order to use their mobile devices. For example, an iPhone won't even charge off a USB port unless iTunes is installed and iTunes won't work unless QuickTime is installed. The issue here is that iTunes 9.x has been



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affected by 64 software security vulnerabilities and QuickTime by 143 (Secunia.com, 2010). Therefore, the assessments must be both data-centric and vulnerability-centric. (Holman, 2011)

### Benefits to Travelers

Interoperability technology is being focused more on the mobile worker than on the personal user, with the mobile workers predicted to be 72 million, companies should poise themselves to be able to take advantage of this new technology. Mocana Device Security Report stated that despite this level of awareness, results show that relatively few organizations are prepared for today's device security problems. PCs are no longer the dominant form of computing. By far, most "computers," and most nodes on the Internet are now non-PC smart devices – an "Internet of Things". With the prediction that there will be an increase in the mobile worker sector, companies can increase productivity by using these new technologies, such as Voice over IP with a cell phone that is used as the primary work phone. The phone will have interoperability capability with software for emailing, Internet browsing, and have access to the Office suite for spreadsheets and database types of information. And now that the phones are lower priced, workers are starting to buy them personally and using them for company work. Companies need to recognize the necessity of knowing what devices their mobile workers are using and how they are being used. (Stammberger, 2010)

Specific benefits to mobile workers in airports are the ability to perform email and document reviews, watch video, work with productivity software without having to use a laptop. A mobile worker many times has to sit and wait for boarding or baggage for periods of time that make booting up a laptop to perform the work that one of the new handheld devices can perform, a cumbersome activity. The added benefit is the ability to use the cell phone over wireless networks without incurring the costs of using daytime cellular minutes, and not having the risk of dropped calls or loss of service commonly associated with using cellular networks. Companies can realize an increase in worker convenience and productivity and a decrease in costs with this new technology.

The disadvantage of this technology is currently the provider of the wireless networks in airports can charge for the service if the company does not maintain accounts with that provider. Currently though, most of the large airports in the United States do provide free wireless networks in some areas and airline club lounges may have their own wireless network. According to [wififreespot.com](http://wififreespot.com), "Many Airport authorities are adding Free Wi-Fi high speed internet access as an amenity for travelers. Some offer access in the entire airport while others may limit access to specified terminal or waiting areas." Some large cities are trying city and airport wide wireless networks for a small fee, but if a mobile worker travels between many cities, they would have to subscribe to the networks in each location, and this is probably not practical. ([wififreespot.com](http://wififreespot.com), 2010)

### Future Research

There will be a follow up study to determine what the user would be willing to pay for the convenience of interoperability and if the end user would be willing to pay for this convenience or if they would expect the company to pay for the device and usage. The study will also determine if predicted security concerns are real. Additional research will also include the development of policies for usage of personal hand held devices for business use that would create a culture for the



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generation of the “Internet of Things”. There are also plans to conduct a study of companies willing to try this technology and for what purpose (internal efficiencies/mobile worker/worker enabled) and to track the gains in productivity. Apple recently announced that their iPhone business is expanding to include companies buying large numbers of iPhones for their employees. It would be interesting to see what companies and for what purpose and if interoperability is included. My university just announced that Blackboard Mobile is available for employees and students to download the app to their phone to use Blackboard on their personal devices. How wide spread is this technology as many universities use Blackboard and how many faculty and students actually download the app and use it.

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### THE ESSENTIALS OF A LEADERSHIP CURRICULUM

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#### ABSTRACT

This paper examines the essential components of a master's-level leadership curriculum delivered online. Conclusions are derived from an empirical analysis beginning with over 500 programs identified through an internet search. Approximately 140 of those colleges advertise leadership degrees, but further analysis suggests that only about 30 institutions deliver online programs containing a significant number of courses essential to a leadership curriculum commensurate with the program desired by the subject institution. The analysis includes a review of over 600 courses offered across those 30 institutions. These 600 courses are categorized according to fundamental areas such as communication, change, coaching, culture, ethics, organization behavior, power, principles, strategy, and research. Duplicate or highly specialized courses are omitted resulting in 98 different course titles grouped into 23 emergent categories. Then the courses are further coded according to core leadership curriculum, capstone experience, or elective topics. The end result is evidence to suggest that a 36 credit-hour master's curriculum can accommodate the essentials of a leadership curriculum.

*Keywords:* Leadership, Curriculum, Online, Master's Degree

#### Introduction

The purpose of this investigation was to survey the landscape of leadership degree programs in order to determine the viability of developing an online master's degree in leadership at the author's institution. In particular, we were interested in online master's degree programs focused upon leadership, as well as the particular essentials of such a curriculum. Our institution is a military college for undergraduate students, but serves a graduate student population in the evening. This unique blend provides both opportunities and constraints. Since the undergraduate student population is limited to approximately 2000, growth potential is sought in the graduate program.

Because the institution has a strong military culture stemming from nearly 170 years of history, there is a significant and credible leadership component embodied in the developmental process of the undergraduate students. The brand name is strong and the mission statement includes leader development. The institution has also established itself as a respected regional provider of other master degrees in business and the arts and sciences. Graduate college personnel believe that a master's degree in leadership taught solely online should carry significant advantages for prospective students for numerous reasons.



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First, the institution brand is identified with leadership. Although the MBA program has been very successful, there is anecdotal evidence to suggest that members of the military, medical and health professions, nonprofit organizations, and other uniformed services like fire and police might prefer a leadership degree. Next, a certificate in leadership has been successful in attracting a significant number of students. Further, the addition of some online graduate-level courses has been very well received by students. Finally, the existing classroom capacity constraints and instructor teaching load issues associated with classroom courses can be resolved in an online delivery format. The interdisciplinary nature of a leadership curriculum spreads the workload across different departments and permanent faculty can be augmented with highly qualified adjunct faculty from any location around the globe.

One of the concerns with any new program is student demand. Although student demand is somewhat unknown, the measure of comparable schools offering similar degrees is a commensurate consideration which can be known. Thus, the intent of this examination is to attain the knowable by examining existing programs. This examination extends itself beyond program titles and into the actual courses that make up the program. The author's experience with other leadership programs indicates that some carry a leadership title, but a leadership focus is not pervasive in the coursework.

In order to begin the investigation both the author and a graduate assistant conducted an internet search for programs. This is the logical way to approach this task since the degree we are concerned about is an online degree. The graduate assistant was directed to approach the task as if she were seeking a master's degree in leadership. In doing so, we hoped to simulate a search that might be conducted by a prospective student. In addition to recording data systematically, we asked her to collect anecdotal data regarding her perception of the process and various websites that she visited.

The researcher initiated the process by searching for "master degrees in leadership." The initial result using those search terms yielded 530 accredited graduate degree programs from the website [gradschools.com](http://www.gradschools.com) (see: <http://www.gradschools.com/search-programs/organizational-studies>). These degree programs were discovered to be at the certificate, master, and doctoral levels. They were also found to be located in the field of business, including MBA and organizational studies programs.

The search filter allowed the investigator to refine the search and limit it to master's degree programs in business, and in particular, in leadership. When doing this, 432 degrees with some relationship to leadership appeared among schools in the United States (See: <http://www.gradschools.com/search-programs/leadership/masters/united-states>). Worldwide, 568 degrees were displayed; however, we decided to limit research to schools in the United States in order to be comparable with our school. We made exceptions for some Canadian schools. Please note that the web links listed here might yield a different number of programs or schools at any point in time. We did not pursue the actual reasons for this, but assume it could be the result of varying subscriptions to the listing services. Another factor is a single school that lists multiple programs.



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We then further refined our search criteria to online programs in leadership within the fields of business. The result was 199 accredited online graduate degree programs with some use of leadership in their title or description (See: <http://www.gradschools.com/search-programs/online-programs/leadership/masters/united-states>).

After arriving at 199 programs, the task of reviewing and sorting became manual. It was clear from an initial review that there were some program titles that were non-comparable to our desired program or had little relationship to leadership. The unrelated programs that were removed from the list included titles like *Master of Science in Library and Information Science*, *Master of Science in Information Technology Management - IT Leadership*, and *Master of Arts in Management*. Our objective is to develop a master's degree in leadership pervaded by leadership courses, as opposed to general business or particular management courses.

After removing programs with titles clearly unrelated to leadership, we arrived at 143 schools providing master's degrees with some focus upon leadership. Due to space limitations, Table 1 provides an abbreviated list of 15 schools alphabetized according to the title of the degree. Since this list was still very large and some of the degree titles were non-comparable to our desired program, we removed more schools and programs. In this case, titles such as *agricultural leadership*, *defense leadership*, and *criminal justice* were removed from the list. The results of this additional filter yielded 80 schools (See Table 2 for a sample of 15, due to space limitations) that either seem similar in nature or offer a degree that might be comparable to our school and degree proposal.

Table 1

*Sample of 15 out of 143 Schools Providing Master's Degrees with some Focus upon Leadership*

School	Degree
1 University of Georgia	Agricultural Leadership
2 Amridge University	Behavioral Leadership and Management
4 Defiance College, The	Business and Organizational Leadership
5 Upper Iowa University	Business Leadership
6 Christian Leadership University	Christian Leadership
15 Georgia Southern University	Educational Leadership - M.Ed.
16 Santa Clara University	Engineering Management and Leadership
17 Naropa University	Environmental Leadership
18 Northeastern University	Executive Format M.S. in Leadership
19 Bradley University	Executive MBA in Leadership
22 Regent University	Graduate Program in Leadership
23 Widener University	Human Resource & Organizational Leadership
140 East Tennessee State University	Educational Leadership - Administrative
141 Seattle University	Sport Administration and Leadership
143 University of Dallas	Strategic Leadership

At this point we began to look more closely at each of the 80 schools on our list by examining the curriculum. We discovered other reasons that a school or program was not comparable to our proposal and we eliminated those. For example, some schools on the list did not offer commensurate programs because they were delivered within teacher colleges, engineering colleges, or the like. Additional reasons for elimination included evidence of a curriculum that was not



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pervaded by leadership courses. This reason, in particular, probably eliminated more schools and programs than any other. Finally, we found some programs that were conducted online, but not completely online because they had some residency requirements. We wanted to ensure that our program is fully available online in order to serve constituents such as those in the military who are not co-located with our institution.

Table 2

*Sample of 15 out of 80 Seemingly Comparable Schools or Degrees*

	School	Degree
1	Albertus Magnus College	M.A. in Leadership
2	Amridge University	Behavioral Leadership and Management
5	Azusa Pacific University	MA in Soc Science -Emphasis in Leadership Studies
7	Bellevue University	M.A. in Leadership
10	Biola University	Organizational Leadership
25	Franklin Pierce University	MBA in Leadership – online
39	North Carolina A&T State University	Leadership Studies
41	Northeastern University	Executive Format M.S. in Leadership
44	Norwich University	M.S. in Organizational Leadership
49	Penn State University - Great Valley	Leadership Development
53	Quinnipiac University	M.S. in Organizational Leadership
54	Regent University	Graduate Program in Leadership
68	Tarleton State University	Management and Leadership
79	Webster University - Utah	Management and Leadership (Salt Lake)
80	Western International University	M.A. in Innovative Leadership

Our final cut resulted in a list of 30 schools and programs (See Table 3) comparable to our institution and our proposed degree. This list offered a reasonable number to begin the next step of our task, which was to determine the types of leadership courses being offered in various programs. Although we had some preconceived notion about the types of courses that we would offer, we also wanted to ensure that our curriculum reflected not only the traditional leadership categories, but the best practices of institutions currently offering online leadership degrees.

### Curriculum Particulars

The next step in the process was to record and review the program requirements for each of the 30 schools on our final list. We accessed the website of each school and program to determine course requirements and then put those into a spreadsheet accompanied by the school name for identification and sorting purposes. Our initial list revealed 660 courses offered across 30 schools. Due to space limitations we do not show all 660 courses here, but a sampling of those sorted alphabetically in Figure 1. As indicated in the figure, the courses in a program can range from *Becoming a Transformational Leader* and *Ethical Leadership*, to *Finance and Economics*.



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Table 3

*30 Comparable Schools or Degrees*

	School	Degree
1	Amridge	Behavioral Leadership and Management
2	Bellevue University	M.A. in Leadership
3	Biola University	Organizational Leadership
4	Crown College	Organizational Leadership
5	Franklin Pierce University	MBA in Leadership – online
6	Gonzaga University	M.A. in Organizational Leadership
7	Mercy College	Organizational Leadership
8	Northeastern University	Executive Format M.S. in Leadership
9	Northern Kentucky University	M.S. - Executive Leadership & Org Change
10	Northwestern College	Master of Organizational Leadership
11	Norwich University	M.S. in Organizational Leadership
12	Nova Southeastern University	Master of Organizational Leadership
13	Nyack College	Organizational Leadership
14	Quinnipiac University	M.S. in Organizational Leadership
15	Regent University	Graduate Program in Leadership
16	Regis University	MS in Organization Leadership
17	Roger Williams University	Leadership
18	Saint Mary-of-the-Woods College	Master of Leadership Development
19	Saint Mary's College Of California	Leadership
20	South University	M.S. in Leadership
21	Southern New Hampshire University	M.S. - Organizational Leadership
22	St. Ambrose University	Organizational Leadership
23	St. Catherine University	Organizational Leadership
24	SUNY Plattsburgh	Master of Science in Leadership
25	Tarleton State University	Management and Leadership
26	University of Guelph	MA (Leadership)
27	University of La Verne	Leadership and Management
28	University of San Diego	M.A. in Leadership Studies
29	Webster University - Utah	Management and Leadership (Salt Lake)
30	Western International University	M.A. in Innovative Leadership

We reduced the 660 courses to 168 courses by eliminating those that were exactly the same or had very similar titles. We further reduced the list by removing any courses that were clearly inappropriate for our leadership curriculum, such as corporate finance, economics, and other traditional business function courses. Again, this produced too many courses to show here, but resulted in 168 courses across 30 schools.



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The screenshot shows a Microsoft Excel spreadsheet titled "Merged Curricula". The table has three columns: A, B, and C. Column A lists course titles and descriptions, column B lists credit values, and column C lists the names of the 30 schools where each course is offered. The data spans from row 1 to row 660.

	A	B	C
1	Building Effective Organizations		Amridge
2	Aligning Meaning and Purpose.....	3 credits	Mercy College
3	Applied Leadership Observational Study (3 cr.)		SUNY Plattsburgh
4	Balancing Customer and Organizational Needs 3		St Mary of the Woods
5	Becoming a Transformational Leader.....	3 credits	Mercy College
6	Building Partnerships; Creating Coalitions		U of LaVerne
7	Building Sustainable Organizations.....	3 credits	Mercy College
8	Business Ethics & Legal Environment		Quinnipiac
9	Collaborative Communication.....	3 credits	Mercy College
10	Communicating your Leadership Point-of-View (1.5)		U of San Diego
11	Conflict Management and Organizational Change		U of LaVerne
12	Corporate Finance*		Western International
13	Corporate Governance (1.5)		U of San Diego
14	Critical Analysis of Research 3		St Mary of the Woods
15	Decision Making (1.5)		U of San Diego
16	Designing Organizational Culture: Values & Alignment (1.5)		U of San Diego
17	Developing Collaborative Relationships		Mercy College
18	Developing Learning Systems.....	3 credits	Mercy College
19	eCommerce (3)+		Franklin Pierce
20	Economics for Business		S New Hampshire
21	Economics for Managers (3)		Franklin Pierce
22	Electronic Commerce Implementation		Quinnipiac
23	Employee Development Strategies for Organizational Leaders		Quinnipiac
24	Employment Law for the Non-Lawyer		Quinnipiac
25	Enterprise Architecture		Quinnipiac
26	Ethical Decision-Making 3		St Mary of the Woods
27	Ethical Leadership		Bellevue
28	Ethical Leadership (3) (Online Class)		Nyack
29	Ethical Leadership and Corporate Social Responsibility		Western International
30	Ethics in the Workplace (1.5)		U of San Diego
31	Executing Strategic Initiatives (1.5)		U of San Diego
32	Finance & Accounting for Organizational Leadership (4.5)		U of San Diego

Figure 1. Sample of 660 courses taught across 30 schools.

In an effort to further refine the remaining courses with the purpose of focusing on traditional leadership areas, we examined the list for emerging categories and reasons. We eliminated courses that we thought were extremely new or unique to a particular institution, such as *Leadership in Family Business*. We also made the decision to combine particular topics such as communication, culture, principles, and team leadership into singular representative courses. This effort yielded 98 courses.

### Coding the Courses

After we arrived at 98 courses, we felt that we needed a systematic way to further collapse the courses into categories. Based upon both emerging categories from the list and known theoretical and principle areas from leadership, we chose to code the courses according to the following categories: capstone, case, change, coaching, communication, contemporary, culture, ethics, organizational behavior, power, principles, public, research, servant, situational, skill, social, special, strategy, technology, thesis, transformational, and types of leadership. Due to space limitations, 49 of the 98 courses and the resultant coding are illustrated in Table 4



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Table 4

*Sample of 49 of 98 Courses Coded Across 23 Categories*

	Course Topic	Course Title
1	Capstone	Capstone/Comprehensive Exam
1	Capstone	Culminating Experience
1	Capstone	Develop/present portfolio based on IDP -- document completion of required competencies
2	Case	Integrative Case Studies
3	Change	Change & Consultation 3
3	Change	Leader as Change Agent*
3	Change	Leading Change
4	Coaching	Leadership Through Coaching and Mentoring
4	Coaching	Coaching and Mentoring in Organizations
5	Communication	Communication Skills for Leadership Roles
5	Communication	Leadership Communication and New Media*
6	Contemporary	Twenty-first Century Leadership
6	Contemporary	Contemporary Issues in Organizational Leadership
7	Culture	Cross Cultural Leadership
7	Culture	Organizational Culture and Team Building (3)
8	Ethics	Business Ethics & Legal Environment
8	Ethics	Ethical Leadership and Corporate Social Responsibility
8	Ethics	Ethics & Leadership
8	Ethics	Values, Ethics, and Decision-Making
9	OB	Adult Human Development 3
9	OB	Developing Self-Awareness
9	OB	Human Behavior & Organizations
9	OB	Motivation, Teams, Coaching & Mentoring
9	OB	Organizational Behavior
9	OB	Organizational Change and Human Development
10	Power	Leadership, Power & Politics (1.5)
11	Principles	Foundations of Organizational Leadership (3)
11	Principles	Leadership Theories and Practices
12	Public	Public Administration
12	Public	Public Service/Nonprofit Leadership Track
13	Research	Research Methods
14	Servant	Servant Leadership
15	Situational	Situational Leadership: Theory and Practice
16	Skill	Assessing Leadership Skills
16	Skill	Critical Thinking and Decision Making (3)
16	Skill	Self Appraisal and Analysis (3)
17	Social	Readings in Social Systems
18	Special	Applied Leadership Internship (3 cr.)



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18	Special	Special Topics in Leadership
19	Strategy	Strategic Leadership
19	Strategy	Strategic Thinking, Planning & Organizational Change
19	Strategy	Vision and Strategic Planning 3
20	Technology	Understanding Technology (3)
21	Thesis	Leadership Project
22	Transformational	Transformational Leadership
23	Types	Human Resources Leadership
23	Types	Leading Public Service Organizations
23	Types	Military Leadership Models
23	Types	Political & Civic Leadership

Although the effort to code the courses enabled us to sort them and make the task easier, the challenge of further reducing the courses to a manageable set was yet to be accomplished. In order to accomplish this, we chose to code our 23 categories as core courses, a capstone experience, or an elective. Courses within each of the 23 categories were collapsed according to how well they represented the essential core components of a category. For example, in the case of Organizational Behavior, five courses were thought to best represent the discipline, while in the case of ethics, one course was chosen as a core component. Table 5 illustrates 34 total courses grouped according to capstone, core, and elective-type courses.

Table 5

*34 Courses Grouped by Capstone, Core, and Elective*

Group	Course Topic	Course Title
Capstone	Capstone	Capstone/Comprehensive Exam/Culminating Experience/ Portfolio demonstrating competencies (some video) /Thesis
core	Change	Leading Change, Organization Development, & Coaching
core	Coaching	Leadership Through Coaching and Mentoring
core	Communication	Communication Skills for Leadership (including new media)
core	Contemporary	Contemporary Readings and Issues in Leadership
core	Culture	Globalization, Culture, and Diverse Teams
core	Ethics	Ethics & Principled leadership
core	OB	Human growth and development
core	OB	Developing Self-Awareness, self-assessment
core	OB	Social and cognitive foundations of interpersonal behavior
core	OB	Organizational Behavior - power and politics and conflict
core	OB	Team Building, motivation and Leadership
core	Principles	leadership in organizations
core	Principles	Leadership Theories and Practices
core	Research	Research Methods for the workplace
core	Servant	Servant Leadership
core	Situational	Situational Leadership: Theory and Practice



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core	Skill	Leader creativity, critical thinking, and emotional intelligence (includes decision-making skills)
core	Skill	Leadership self appraisal, assessment, and development - includes IDP and portfolio
core	Strategy	Strategic Leadership and Vision
core	Technology	Understanding Technology (3)
core	Transformational	Transformational Leadership
elective	Ethics	Freedom and democracy, leadership history
elective	Social	Readings in Social Systems
elective	Special	Directed Study in Leadership
elective	Special	Special Topics in Leadership
elective	Types	Public Administration
elective	Types	Public Service/Nonprofit Leadership Track
elective	Types	Human Resources Leadership
elective	Types	Leading Public Service Organizations
elective	Types	Military Leadership Models
elective	Types	Political & Civic Leadership

Finally, we agreed to consolidate the courses into the 12 listed in Table 6 based upon the following: (a) the emergent categories found during our search, (b) the concepts we know are essential and unique to leadership, and (c) the potential to combine concepts into one course based upon our experience and knowledge of the literature. We recognize that our search is not exhaustive and a systematic theory has not yet been applied to reach our conclusion. The potential exists to examine curricula at premier schools that do not teach leadership courses online. The emergent categories must also be contrasted with the concepts found in both the classic and contemporary leadership literature. At this stage we are still refining and negotiating a more defensible approach given the information generated here.

Table 6

### 12-Course, 36 Hour Leadership Curriculum

Group	Course Topic	Course Title
Core	Change	Leading Change, Coaching, Organization Development
Core	Communication	Communication Skills for Leadership (including new media)
Core	Culture	Globalization, Culture, and Diverse Teams
Core	Ethics	Ethics, Values & Principled leadership
Core	OB	Human Growth and Development
Core	OB	Social and Cognitive Foundations of Interpersonal Behavior
Core	OB	Organizational Behavior - motivations, power, politics, conflict
Core	Principles	Leadership Theories and Practices
Core	Skill	Leadership Self Appraisal, Development, Critical Thinking
Core	Strategy	Strategic Leadership, Vision and Contemporary Issues
Core	Transformational	Transformational, Situational, & Servant Leadership
Capstone	Capstone	Capstone/Comprehensive Exam/Culminating Experience/IDP & Portfolio competencies (includes video)



## A STUDY ON THE REQUIREMENTS OF IMPLEMENTING AN ENGAGEMENT CULTURE IN COMPANIES

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### ABSTRACT

In the survival of the organization human resources is one of the main elements of the organizations. So that the organizations try to create some attraction for the employees to gain two purposes: 1-increasing the efficiency of the organizations through increasing the employee's utility. 2- Keeping the key employees.

To do so, one of the methods applied by organizations is engaging the employees which results in creating a willingness feeling in employees leading to performing all their time and energy on their duties in such a way that they don't realize the passing of time. Research has shown that the more engaged the workforce, the more innovative, productive and profitable the company.

To create such feelings within employees, different theories have been presented which Job Demand-Resource is one of them. Based on this model, the organizations make work engagement through decreasing job demands (e.g. work overload, job insecurity, ...) and increasing job resources (e.g. autonomy, professional development, ...). In this research we analyze our hypothesis (the relationship between work engagement and its antecedents and consequences) by studying on statistical sample that involve 200 knowledge worker in a large organization. Finally we conclude that work engagement will be effective in 'quality of work life', 'organizational commitment' and 'turn over intention'.

**Keywords:** Work Engagement, Job Demand, Job Resource, Personal Resource, Quality Of Work Life, Turn Over Intention, Organizational Commitment

### Introduction

Engagement at work has emerged as a potentially important employee performance and organizational management topic. A growing body of evidence supports the relationship between engagement of the employee at work and organizational outcomes, including those which are performance based (Harter et al., 2002; Laschinger and Finegan, 2005; Laschinger and Leiter, 2006; Salanova et al., 2005; Schaufeli and Bakker, 2004).

### Factors that effect on work engagement

#### Job demand-resource model

The antecedents of work engagement can be approached from the viewpoint of occupational stress models. many studies have their theoretical roots in a relatively new occupational stress model—the Job-Demand–Resource (JD–R) model (Demerouti et al., 2001, Salanova et al., 2005 and Schaufeli and Bakker, 2004)—which the basic assumption of them is that while people's work environments differ, the characteristics of those environments (job characteristics) can usually be divided into two categories: job demands and job resources (e.g., Bakker et al., 2003, Demerouti et al., 2001).



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According to the Job Demands–Resources (JD–R) Model (Bakker et al., 2003 and Demerouti et al., 2001), regardless of the occupation two broad categories of work characteristics, can be distinguished: job demands and job resources.

Jones and Fletcher (1996, p. 34) define demands as ‘the degree to which the environment contains stimuli that peremptorily require attention and response. Demands are the “things that have to be done.”’ Clearly, in every job something has to be done. More specifically, job demands are those physical, psychological, social, or organizational aspects of the job that require sustained physical and/or psychological (i.e., cognitive or emotional) effort and are therefore associated with certain physiological and/or psychological costs.

Job resources refer to those physical, psychological, social, or organizational aspects of the job that either/or (1) reduce job demands and the associated physiological and psychological costs; (2) are functional in achieving work goals; (3) stimulate personal growth, learning and development. Hence, resources are not only necessary to deal with job demands and to ‘get things done,’ but they also are important in their own right (Hobfoll, 2002). Job resources can be included at the task level (performance feedback), the interpersonal-level (support from colleagues), and the organizational level (supervisory coaching).

Many researchers identified the factors that related to job demand and job resource. For instance some job demands that have been identified as major causes of psychological strain:

Table 1  
*Job demand factors*

<b>Job demand factor</b>	<b>reference</b>
work overload	Borg and Riding, 1991, Burke and Greenglass, 1995 and Kinnunen and Salo, 1994
work-to-family conflict (work interferes with family life)	Greenhaus and Beutell, 1985 and Kinnunen et al., 2004
job insecurity(a threat of job loss)	Caplan et al., 1980, Mauno et al., 2005
emotional demand	Greenhaus and Beutell, 1985 Sverke et al., 2002

About the factors of job resources, some job resources have been identified either as major motivators that increase, or that—when lacking—act as factors that increase burnout:

Table 2  
*Job resource factors*

<b>Job resource factor</b>	<b>reference</b>
supervisory support	Coladearci, 1992, Leiter and Maslach, 1988 and Rosenholtz and Simpson, 1990
social support	Friedman, 1991 and Bakker et al. (2004),
professional development	Pierce et al., 1989 and Pierce and Gardner, 2004)
autonomy	Mauno and kinnunen and ruokolainen

### Personal Resources in the JD-R Model

Personal resources are aspects of the self that are generally linked to resiliency and refer to individuals' sense of their ability to control and impact upon their environment successfully (Hobfoll, Johnson, Ennis, & Jackson, 2003). Three typical personal resources, namely, self-efficacy (Bandura, 1989), organizational-based self-esteem (Pierce, Gardner, Cummings, & Dunham, 1989), and



optimism (Scheier & Carver, 1994) are recognized by Hobfoll (2002) as fundamental components of individual adaptability.

These resources both independently, as well as combined into a higher order construct, have been recognized as crucial for individuals' psychological well-being in general, and for work-related well-being in particular (Hobfoll, 2002; Luthans, Avolio, Walumbwa, & Li, 2005). Unlike personality traits (e.g., core self-evaluations; Judge, Bono, & Locke, 2000) that are stable and relatively fixed, these personal resources are malleable and open to change and development. Conceptualization of personal resources parallels the concept of psychological capital developed by Luthans, Avey, Avolio, Norman, and Combs (2006). Psychological capital consists of four resources (i.e. optimism, efficacy, resiliency and hope), which are also considered to be susceptible to change (Luthans & Youssef, 2007).

Self-efficacy beliefs (i.e. individuals' perceptions of their ability to meet demands in a broad array of contexts; Chen, Gully, & Eden, 2001) contribute to motivation by influencing the challenges people pursue, the effort they spend, and their perseverance in the face of obstacles (Bandura, 1989). Self-efficacious employees have been found to experience higher levels of flow over time (Salanova, Bakker, & Llorens, 2006), while self-efficacious students reported higher levels of engagement (Llorens, Schaufeli, Bakker, & Salanova, 2007).

Further, Pierce and Gardner (2004) reviewed studies showing that Organizational-Based Self-Esteem (OBSE), namely the degree to which organizational members believe that they can satisfy their needs by participating in roles within the organization, is strongly related to job satisfaction and commitment (Pierce et al., 1989, p. 625). Additionally, in a recent longitudinal study among Finnish healthcare personnel, OBSE turned out to be one of the most important predictors of work engagement measured many years later (Mauno et al., 2007).

Similarly, optimism, which is the tendency to believe that one will generally experience good outcomes in life, is related to higher well-being levels (Scheier, Carver, & Bridges, 2001). Optimists are better able to confront with threatening situations because they adopt active coping strategies (Iwanaga, Yokoyama, & Seiwa, 2004), and as a result they adapt well at work (Luthans & Youssef, 2007). So it can be concluded that personal resource can effect on work engagement, too.

Although the JD-R model introduced as a starting point, and thus, primarily focuses on work characteristics as antecedents of burn out and work engagement, it is also expected that personal resources may be antecedents of work engagement too (Judge et al., 1997). Also it can be argued that job resources and personal resources are reciprocal, since individuals, through learning experiences, can form stronger positive evaluations about themselves and in turn, they comprehend or create more resourceful work environments (Kohn & Schooler, 1982). In other words, not only may personal resources be promoted by a manageable and comprehensive environment, but they may also determine the way people perceive or formulate this environment and how they react to it (Judge, Bono, & Locke, 2000; Judge et al., 1997). If this perspective of reciprocity to the JD-R model applied, it is expected that self-efficacious or optimistic employees will focus more on job resources than on job demands, and as a result they will experience lower levels of exhaustion and higher levels of work engagement.

### **Consequences of work engagement**

The driving force behind the popularity of employee engagement is that it has positive consequences for organizations. As indicated earlier, there is a general belief that there is a connection between employee engagement and business results (Harter et al., 2002).



However, engagement is an individual-level construct and if it does lead to business results, it must first impact individual-level outcomes. Along these lines, there is reason to expect employee engagement to be related to individuals' attitudes, intentions, and behaviors.

Although neither Kahn (1990) nor May et al. (2004) included outcomes in their studies, Kahn (1992) proposed that engagement leads to both individual outcomes (i.e. quality of people's work and their own experiences of doing that work), as well as organizational-level outcomes (i.e. the growth and productivity of organizations).

Furthermore, the Maslach et al. (2001) model treats engagement as a mediating variable for the relationship between the six work conditions and work various outcomes and like burnout, should be related to outcomes such as increased withdrawal, lower performance, job satisfaction, and commitment (Maslach et al., 2001). There are a number of reasons to expect engagement to be related to work outcomes. For starters, the experience of engagement has been described as a fulfilling, positive work-related experience and state of mind (Schaufeli and Bakker, 2004; Sonnentag, 2003) and has been found to be related to good health and positive work affect (Sonnentag, 2003). These positive experiences and emotions are likely to result in positive work outcomes. As noted by Schaufeli and Bakker (2004), engaged employees likely have a greater attachment to their organization and a lower tendency to leave their organization.

According to SET, when both parties abide by the exchange rules, the result will be a more trusting and loyal relationship and mutual commitments (Cropanzano and Mitchell, 2005). Thus, individuals who continue to engage themselves do so because of the continuation of favorable reciprocal exchanges. As a result, individuals who are more engaged are likely to be in more trusting and high-quality relationships with their employer and will, therefore, be more likely to report more positive attitudes and intentions toward the organization.

In addition, there is some empirical research that has reported relationships between engagement and work outcomes. For example, engagement has been found to be positively related to organizational commitment and negatively related to intention to quit, and is believed to also be related to job performance and extra-role behavior (Schaufeli and Bakker, 2004; Sonnentag, 2003). Schaufeli and Bakker (2004) found that engagement was negatively related to turnover intention and mediated the relationship between job resources and turnover intention.

Koyuncu et al. (2006) examined potential antecedents and consequences of work engagement in a sample of women managers and professionals employed by a large Turkish bank. Results showed that work life experiences, particularly control, rewards and recognition and value fit, were significant predictors of all three engagement measures.

### **Conceptual model of work engagement**

By reviewing the previous parts we can say that, Figure 1 can demonstrate all the antecedents and consequences of work engagement schematically. Antecedents and consequences of work engagement are bellow items:

Antecedents:

- job demand
- job resource
- personal resource

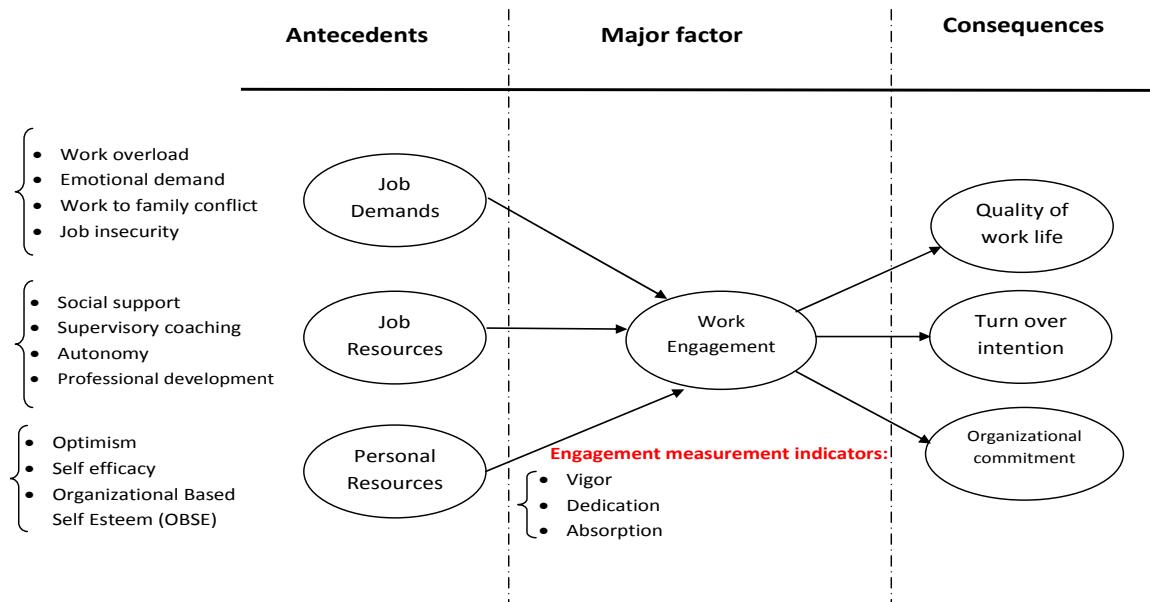
Consequences:



- quality of work life
- turnover intention
- organizational commitment

So the below model can describe the relationships between work engagement and its antecedents and consequences:

Figure 2: *Work engagement model*



### How to measure the work engagement and its antecedents and consequences

To measure the degree of work engagement and its antecedents and consequences some valid questionnaires have been defined. Below tables explain the measurement system of each factor.

#### Work engagement measurement system

##### Factors: vigor, dedication, absorption

Work engagement was measured with the Utrecht Work Engagement Scale (UWES; Schaufeli et al., 2006a). The UWES reflects three underlying dimensions, which are measured with three items each: Vigor (e.g., “At my work, I feel bursting with energy”), Dedication (e.g., “My job inspires me”), and Absorption (e.g., “I get carried away when I am working”). Items were scored on a scale ranging from (0) “never” to (6) “always”.

#### Measuring systems of antecedents of work engagement

##### Job resources

###### Factors:

###### - Social support

Social support was measured with a three-item scale developed by Bakker et al. (2004), were scored on a five-point scale, ranging from (1) “never” to (5) “always”, except the opportunities for professional development items, where the scale ranged from (1) “totally disagree” to (5) “totally agree”.



- **Supervisory coaching**

Supervisory coaching was measured with a five-item Dutch adaptation (Le [Blanc, 1994](#)) of [Graen and Uhl-Bien's \(1991\)](#) scale were scored on a five-point scale, ranging from (1) “never” to (5) “always”, except the opportunities for professional development items, where the scale ranged from (1) “totally disagree” to (5) “totally agree”.

- **Autonomy**

Autonomy was measured with a three-item scale developed by Bakker, Demerouti, and Verbeke (2004), based on Karasek's (1985) job content instrument, were scored on a five-point scale, ranging from (1) “never” to (5) “always”, except the opportunities for professional development items, where the scale ranged from (1) “totally disagree” to (5) “totally agree”.

- **Professional development**

Opportunities for professional development were measured with three items from the scale constructed by Bakker, Demerouti, Taris, Schaufeli, and Schreurs (2003), were scored on a five-point scale, ranging from (1) “never” to (5) “always”, except the opportunities for professional development items, where the scale ranged from (1) “totally disagree” to (5) “totally agree”.

**Job demands**

**Factors:**

- **Work overload**

Workload was based on a Dutch version (Furda, 1995) of Karasek's (1985) job content instrument. The scale includes five items on a five-point scale (1\_never, 5\_always).

- **Emotional demand**

Emotional demands were based on a scale developed by Van Veldhoven and Meijman (1994) and included four items on a five-point scale (1\_never, 5\_always).

- **Work to family conflict**

Work-to-family conflict was measured by using nine items of the SWING scale developed in the Netherlands (Geurts et al., 2005), with a four-point scale(1 = never, 4 = very often/always)

- **job insecurity**

Job insecurity scale originally developed by Caplan et al. (1980). It contained four items, which were rated on a 5-point scale (1 = very certain, 5 = very uncertain).

**Personal resources**

**Factors:**

- **Self efficacy**

Self-efficacy was measured with the 10-item generalized self-efficacy scale (Schwarzer & Jerusalem, 1995; e.g., were scored on a scale ranging from (1) “absolutely wrong” to (4) “absolutely right”.

- **Optimism**

Optimism was measured with the Life Orientation Test – Revised (Scheier, Carver, & Bridges, 1994). This 10-item scale is comprised of six items that measure optimism and four filler items.

- **OBSE**

Organization-based self-esteem (OBSE) was measured via the scale developed by Pierce and colleagues (1989). Were scaled on a 5-point Likert-scale (1 = totally disagree, 5 = totally agree)



### **Measuring systems of consequences of work engagement**

#### **Quality of work life**

Quality of work life was measured via the scale developed by mirsepasi, naser (2005) were scaled on a 4-point scale.

#### **Organizational commitment**

The one developed by Meyer and Allen (1990) is the most widely used and accepted scale of organization commitment. This scale measures organizational commitment in 3 different dimensions as emotional commitment, continuation commitment and normative commitment.

#### **Turn over intention**

Turnover intention was assessed with a three-item scale, based on Van Veldhoven and Meijman (1994); e.g., 'I intend to change jobs during the next year.' Items were scored on a five-point scale, ranging from 1 ('completely disagree') to 5 ('completely agree')

### **Conclusion**

The antecedents of work engagement can be examined using the JD-R model as the theoretical underpinnings. The JD-R model proposes that work characteristics can be divided into two general categories such as job demands and job resources, although every occupation may have its own specific characteristics associated with the work domain (Bakker et al., 2004; Demerouti et al., 2001). Job demands refer to "those physical, psychological, social, or organizational aspects of the job that require sustained physical and/or psychological (cognitive and emotional) effort or skills and are therefore associated with certain physiological and/or psychological costs" (Bakker and Demerouti, 2007, p. 312). Examples of job demands are comprised of emotional demands, workload, work-family conflict, and emotional dissonance (Bakker et al., 2004; Xanthopoulou et al., 2007). Job resources refer to "those physical, psychological, social, or organizational aspects of the job that are either/or: functional in achieving work goals, reduce job demands and the associated physiological and psychological costs, and stimulate personal growth, learning, and development" (Bakker and Demerouti, 2007, p. 312). Examples of such job resources consist of performance feedback, social support, participation in decision-making, and job control (Bakker et al., 2003; Demerouti et al., 2001).

There is a general belief that there is a connection between employee engagement and business results (Harter et al., 2002). As noted by Schaufeli and Bakker (2004), engaged employees likely have a greater attachment to their organization and a lower tendency to leave their organization. As a result, individuals who are more engaged are likely to be in more trusting and high-quality relationships with their employer and will, therefore, be more likely to report more positive attitudes and intentions toward the organization.

Finally we conclude that work engagement will be effective in 'quality of work life', 'organizational commitment' and 'turn over intention'.

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**ENHANCING ACTIVE LEARNING THROUGH THE LUCK OF THE DRAW**

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**ABSTRACT**

This article provides details concerning a method for actively engaging students in the teaching – learning process. A brief review of the literature indicates the various methods utilized by instructors to encourage student participation. The method reported relies upon a deck of cards and the “luck of the draw.” Its purpose is to share a method useful in facilitating enhanced learning in a small group environment and increase the comfort level of students and faculty. The method is original but consistent with the objectives specified by the Accounting Education Change Commission; its ultimate value depends on the expertise developed by the instructor in using it to enhance discussion.

*Keywords:* Active Learning, Group Activities, Enhanced Learning

**Introduction**

The dilemma many instructors face is how to actively engage students in the teaching-learning process. This issue has received attention in the research field of effective teaching and by the Accounting Education Change Commission. The commission has actively supported teaching methods that allow students to be active participants. “Students must be active participants in the learning process, not passive recipients of information.... Working in groups should be encouraged.... Teaching methods that expand and reinforce basic communication, intellectual, and interpersonal skills should be used.” (AECC)

A wide variety of approaches have been recommended to engage students in the learning process. Class discussion is, perhaps, the most frequently used and most often-embraced strategy for creating an active and learning-based approach to instruction. Discussion engages students in their own learning--and as suggested by some improves student performance and satisfaction--(Bonwell & Eisen 1991; Dallimore, Hertenstein & Platt 2009). To encourage discussion instructors have used a variety of techniques including: the use of technology (i.e., networked computers and “clickers”), calling on a student whose hand is not raised (Dallimore et al. 2005), assigning roles in discussions (Smith & Smith 1994), and assigned case discussions (Gilmore and Schall). Some students perceive



that cold-calling (calling on a student whose hand is not raised) on them to be punitive, but instructors often perceive it as punitive and thus do not cold-call on students. Both groups can use this method to minimize the negative effects of cold-calling and make class discussion both fun and more productive.

Research also indicates that students may be uncomfortable and unwilling to engage in class discussion due to the fear of communicating. (Burk 2001, Aitken and Neer 1993; Myers and Rocca 2001) Dallimore, Hertenstein, and Platt research indicates that students who feel more comfortable participating in the class discussions tend to master the material more than students who feel less comfortable. It follows that a professor's efforts to enhance the learning-comfort relationship within the classroom should lead to increase student mastery of course content.

According to Dallimore, Hartenstein and Platt (2010) student comfort with class discussion is positively related to level of preparation for class, frequency of participation in class discussion, and the value of other students' comments. Other research indicates that students report a higher comfort level when "other students" participate because they can easily relate as peers. (Christensen 1991). This method facilitates participation by all students, not just those that feel comfortable with class discussion.

This paper provides a method that effectively achieves class participation within a comfortable environment and leads to student learning. The method occurs when students have a higher level of preparation for class, occurs frequently during the semester and highlights the value of students' comments. By increasing student participation in class discussions, which has a significant relationship to learning, then this method may lead to greater learning.

### **The Method**

The Method requires the use of a deck of cards to select students for discussion. This random method of selection minimizes any perception of "the professor is punishing me." The method is used on the days when the students are prepared for a quiz (typically 10 or so multiple choice questions). And, students' comments are related to the correct responses for the quiz questions.

Students to be divided into groups of 3 or 4 by the use of a deck of cards.

Most students do not look forward to "quizzes" or other means of testing, but most actually enjoy the method described below.

First, while the students are taking the quiz the number of groups and the size of the groups is determined by the instructor. For example, if there are ten students in the class, it is best handled by two groups of three and one group of four. Four groups of three would generally be preferable for a class of twelve students.

Once the group sizes are determined, the instructor selects the appropriate number of cards from a standard deck(s) of playing cards. Using a class size of ten as an example, all of the aces could be



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selected and then three cards each selected from the twos and threes, making sure that the same suit was selected (say spades, hearts, and diamonds). That would result in all suits available for aces, and spades, hearts, and diamonds available for the twos and threes. These cards are shuffled to get a random order and are distributed to the students while the students complete the quizzes. For classes larger than 52 students, a red and blue deck could be used, and/or different brands.

**Example:** A♠ A ♣A♥ A♦ 2♠ 2♥ 2♦ 3♠ 3♥ 3♦

After the quizzes are completed the students reveal the card that has been distributed and record this on their answer form with their name and/or other identification. The answer forms are then collected and the students divided into teams based on the card in their possession. Continuing with the example of ten students: all of the aces form one group, the twos form the second group, and the threes form the final group. The students then turn in their cards and one card is pulled from those cards—the suit chosen designates the "captain" for each group. For example, if a heart is pulled, then whoever has the ace of hearts is the captain for the group of aces, whoever has the two of hearts is captain for the group of twos, etc. If a card is chosen that is not present in all groups (in our example the ace of clubs is the only club) then a second card is drawn for the other groups. The captain is responsible for a) recording all names of the group members on a second, group answer form, b) recording all answers on the group answer form (as well as on a separate sheet of paper), c) turning in the answer form, and d) presenting/defending the answer when called on to do so.

After each group has finished completing the group answer form together by answering the quiz questions a second time as a group (no dissenting opinions allowed), the forms are collected and the instructor pulls one card from the deck. Whichever card is pulled (say one of the threes), that group's captain must read the question and provide the answer chosen by their group. If one of the other groups gave a different answer, then the captain for that group must support their answer. (Since the instructor now has the individual answer forms, it is easy to scan for inconsistencies.) During this exchange between the groups, the instructor should stay neutral, or play a devil's advocate role. Only when the "debate" subsides should the correct answer be given along with the explanation. The spokesperson for the group that was called on for the question then pulls a card to determine which group handles the next question, and so on and so forth. One "wrinkle" is to replace any missing card for wrong answers, but that is a bit more involved than necessary. However, it may be interesting to use this modification if the method is used a second or third time.

The process of pulling cards in and of itself can lead to fun when someone pulls their own card or when two groups seem to be "battling" each other by pulling each other's cards. To add to the humor, the instructor can joke that she/he is really looking for someone to take to Las Vegas, to bet against.

The average of the individual and group scores is then used for the quiz score. Since attendance is not required (for my classes), using these as "bonus points" for the upcoming exam provides additional incentives for class attendance and rewards good performance while leaving the ultimate decision as to preparation and attendance up to the students. Students are not allowed to retain the quizzes, but some of the same questions are used on the upcoming exam (with the order of the



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answers scrambled). Of course, each instructor must decide these issues and use the procedures deemed most suitable for their classes.

Research from the sciences and medical profession has shown small group work increases student communication and learning, as well as a sense of personal satisfaction with their academic achievements. (Micari, et. al., Willett, et. al.) Of course, since this method requires substantially more class time than normal testing procedures it must be used judiciously. But develop your skills in using this methodology and you just might find students actively participating in the learning process.

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**A COMPARISON OF QUALITATIVE FEEDBACK FROM ALUMNI AND EMPLOYERS WITH A NATIONAL  
STUDY FOR ASSESSMENT OF BUSINESS CURRICULA**

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**ABSTRACT**

The purpose of this research was to determine what skills alumni from Richard Stockton College of New Jersey (RSC) and regional employers think are important for the workplace. In this paper we analyze qualitative data to determine the most important skills or competencies that business school graduates need based on feedback from alumni and employers. Based on recommendations from the alumni and employers the most important skills were oral and written communications skills, job specific knowledge of business skills, computer skills, and interpersonal skills. The alumni and employers recommended that the college modify the curriculum by providing students with internships and real world experiences. More cooperative programs should developed between business faculty and career services personnel to provide students with a greater knowledge of career skills, help students become better prepared for jobs, and offer off-campus opportunities with employers for more real-world experiences.

**Introduction**

The Secretary of Education's Commission on the Future of Higher Education in 2005 prompted a renewed interest to hold higher education institutions accountable for the preparation of college students to meet the economic and workforce needs of the country (Bisoux, 2008; U.S. Department of Education, 2005). The commission and external stakeholders that accredit and fund colleges have raised accountability issues related to the preparation of college students for jobs that are aligned with the needs of the 21st century.

Often, the issue of accountability in higher education is raised by accreditation bodies, providing external impetus for educational leaders to begin assessment efforts. As a result, accrediting agencies become both promoters and evaluators of assessment processes (Lubinescu, Ratcliff, & Gaggney, 2001). For example, the Association to Advance Collegiate Schools of Business (AACSB) accreditation standards requires business programs to provide assurances of learning to external stakeholders and the students who are the consumers of academic programs (AACSB, 2011). To comply with the AACSB's assurance of learning standards, business school faculty must develop,



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monitor, evaluate, and revise the substance and delivery of curricula and assess the impact of curricula on learners. This curriculum management process necessitates input from faculty, staff, administrators, students, alumni, and members of the business community

The purpose of this research was to determine what skills alumni from Richard Stockton College of New Jersey (RSC) and regional employers think are important for the workplace. In this paper we analyze qualitative data to answer the following research questions:

1. What are the three most important skills or competencies employers look for when hiring business degree graduates?
2. What three skills of competencies do RSC alumni believe are most important for their job?
3. What recommendations do employers of RSC graduates have regarding how the business faculty at the college could revise the curricula to prepare students better for the workplace?
4. What recommendations do alumni of RSC have regarding how the business faculty at the college could revise the curricula to prepare students better for the workplace?

### **Method**

A survey packet was mailed during April 2008 to 2,383 alumni and 145 employers of The Richard Stockton College of New Jersey that explained the study, provided information on informed consent for participation in the study and presented the questions for the study.

Alumni were asked to provide answers to the following questions:

1. What three skills or competencies do you believe are most important in your job?
2. Please provide any recommendations you have regarding how the business faculty at the college could revise the curricula to prepare students better for the workplace.

Employers were asked to provide answers to the following questions:

1. What are the three most important skills or competencies you look for when hiring business degree graduates?
2. Please provide any recommendations as to how the business faculty at the college can revise the curricula to prepare students better for the workplace.

### **Data and Analysis**

#### **Research Question #1: What are the three most important skills or competencies employers look for when hiring business degree graduates?**

The responses of employers to the open-ended question that asked which three skills or competencies were most important in the workplace are shown Table 1. Table 1 includes skills that were identified as first, second, and third choices by the employers. There were 45 employers surveyed of which 31 employers provided at least one skill in the open ended responses. There were a total of 82 responses from the 31 employers.

The top five skills identified by employers were communication skills, business knowledge, motivation/leadership, interpersonal skills, and computer skills. Communication skills included oral



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or written communication skills. One employer specified written communication skills, two employers specified oral communication skills, and eleven employers specified both written and oral communication skills.

The specific business knowledge that employers identified varied. Three employers specifically said “knowledge” with one employer specifying knowledge of the industry, another stating “knowledge of field”, and another saying “practical knowledge of changing economy”. Other areas of business knowledge that employers identified were sales, school law, understanding a non-profit organization, ability to deal with money, accounting, entrepreneurial skills, formulating budgets, marketing, and “real world understanding of business”.

Motivation and leadership skills were grouped together as some employers identified them together. Other responses that were categorized as motivation and leadership were “motivation and drive”, “ability to take ownership of tasks”, “motivation/dedication”, “passion for job”, and “persistence”. Attitudes that employers wanted to see in business graduates were “self discipline”, “accepting opposing points of view”, “manageability”, “positive attitude”, “pragmatic optimism”, and “confidence and patience”.

Table 1

*Employer Responses to the Open-Ended Survey Question About the Three Most Important Skills or Competencies in the Workplace*

Skill	Number (n=82)	Percent
Communication skills	14	17%
Specific business knowledge or skills	13	16%
Motivation/leadership	11	13%
Interpersonal skills	9	11%
Computer skills	6	7%
Attitude	6	7%
Critical thinking/problem solving/analytical skills	5	6%
Ethics	4	5%
Good Grades	3	4%
Time management/organization	3	4%
Professional appearance/presentation	2	2%
Flexibility	2	2%
Community activities	1	1%
Only hire allied health graduates	1	1%
Employment during school attendance	1	1%
Teacher certification	1	1%
Job longevity	1	1%



**Research Question #2: What three skills or competencies do RSC alumni believe are most important for their job?**

The top four skills that were identified as the most important skill by 156 alumni were communication skills (24%), specific business knowledge (18%), computer skills (10%), and interpersonal skills (10%).

The responses of employers to the open-ended question “What three skills or competencies do you believe are most important in your job?” are shown Table 2. Table 2 includes skills that were identified as first, second, and third choices by the alumni.

Table 2

*Specific Alumni Responses to the Open-Ended Survey Question About the Three Most Important Skills or Competencies in their Job*

Skill	Number (n=465)	Percent
Communication skills	101	22%
Specific Business knowledge	77	17%
Computer skills	50	11%
Time management/Organization	40	9%
Interpersonal/social/listening skills	35	8%
Critical thinking/problem solving/analytical skills	28	6%
Teamwork	20	4%
Leadership/motivation	19	4%
Adapting to change/flexibility	15	3%
Quantitative/mathematics	7	2%
Creativity	6	1%
Ethics/honesty	6	1%
Multitasking	5	1%
Work ethic	5	1%

When considering skills that were identified as the first, second, and third most important skills to the most important skills are communication skills (22%), specific business knowledge (17%), computer skills (11%) are the three most important skills. Communication skills included oral or written communication skills. Oral communication skills were identified by 28% of the respondents and written communication skills were identified by 26% of the respondents that identified communication skills. Both oral and written communication skills were identified by 46% of the respondents.

There were nine specific business knowledge or skills that alumni identified as one of the three most important competencies in their job. The specific business knowledge or skills that alumni identified are listed in Table 3. Accounting (23%), sales/marketing (19%), finance (14%), and managing others (11%) were the most frequently identified areas of business knowledge or skills.



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Table 3 - Specific Business Knowledge or Skills that Alumni Identified as one of the Three Most Important Skills or Competencies in their Job

Skill	Number (n=77)	Percent
Accounting	18	23%
Budgeting	5	6%
Business understanding	1	1%
Client Management/Relations	7	9%
Finance	11	14%
Forecasting	4	5%
Managing others	11	14%
Project Management	5	6%
Sales/marketing	15	19%

**Research Question #3: What recommendations do employers of RSC graduates have regarding how the business faculty at the college could revise the curricula to prepare students better for the workplace?**

There were 16 employers that responded to this question. The majority of employers (i.e., 64%) gave no response to this question, which may indicate that they were satisfied with the business curriculum at the college and did not believe changes were needed. The recommendations made included teaching selling skills, having more writing in the curriculum, providing students with real world experiences, teaching students how to develop budgets and business plans, requiring students to learn MS Word, Excel, and PowerPoint; preparing students for the workplace by educating them about resume writing, dress code, job interviewing, and realistic salary expectations.

**Research Question #4: What recommendations do alumni of RSC have regarding how the business faculty at the college could revise the curricula to prepare students better for the workplace?**

Table 4 summarizes the recommendations of alumni to revise the business curricula. Of the 163 alumni, 36% did not answer this question or indicated that the question was not applicable, implying that the curriculum was effective. Approximately 10% of the alumni stated that they were satisfied with their education and did not have any recommendations. There were a total of 120 recommendations in which most alumni recommended additional “real-world” experiences and internships. The alumni recommended that the college could establish partnerships with local businesses to help students gain this experience.

Table 4 - Summary of Recommendations of Alumni to Revise Business Curricula

Recommendation	Number (n=120)	Percent
Internships	28	23%
Real world projects and cases incorporated into courses	27	23%
Computer skills	17	14%
Management/people/sales skills	14	12%
Accounting	11	9%
Partnerships/involvement with local businesses	10	8%
Improve oral communication skills of students	11	5%
Resume writing/job interviewing workshops	5	3%
Assistance with job placement	15	3%



## Discussion

### ***The Sample***

The sample in this study was taken from alumni of one public liberal arts college and regional employers of the alumni. The findings represent the opinions of alumni from one particular liberal arts college, which are not supposed to be generalized to all colleges and universities. In addition, the sample was a convenience sample because it was composed of the alumni and employers who chose to finish the survey. Such a convenience sample may have some features disproportional with the population. The sample in this study, for example, was disproportionately represented by businesses in New Jersey and alumni employed in the region near the college. The numbers and percentages of alumni by type of business or industry were disproportionately higher for professional services (25%) and finance and insurance (23%), and government (12%). The numbers and percentages of employers by type of business or industry were also disproportionately higher for professional services (31%); finance and insurance (20%), and health care (13%). The recommendations made about the specific business skills needed such as having more emphasis on accounting and finance could be influenced by the industry in which the respondent worked. The researchers were not sure if the respondents who classified themselves as working in professional services were accountants, business consultants, or information technology professionals. Therefore, not all the findings from the study are necessarily representative of the business school alumni and employers.

### ***Future research***

Some other sampling methods than the convenience sampling could be utilized to improve the sample's representativeness. A future survey could include alumni from several colleges and universities and employers throughout the United States to extend its representativeness.

## Concluding Comments

### ***Recommendations***

The researchers believe that business faculty at the college should consider incorporating assignments or case studies that include instruction in leadership, motivation, payroll, budgeting and bookkeeping, situational analysis, and Microsoft's Excel, PowerPoint, and Word software programs when structuring assignments within the business core courses. In addition, based on the suggestions of alumni and employers, more cooperative programs should be developed between business faculty and career services personnel to provide students with a greater knowledge of career skills, help students become better prepared for jobs, and offer off-campus opportunities with employers for more real-world experiences.

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**THE FIVE VALUES OF PEOPLE AND TECHNOLOGY DEVELOPMENT: INTRODUCING THE VALUE CREATION MODEL FOR ORGANIZATIONAL COMPETITIVE ADVANTAGE FRAMEWORK**

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**ABSTRACT**

The introduction of the five values of people and technology development and the five point *Value Creation Model for Organizational Competitive Advantage* provides an opening for more innovative thought in the workplace. The lack of a clear understanding to the value of people and technology in the workplace limits the ability of the organization to remain and enhance its competitiveness. This theoretical concept paper provides a model from that presents opportunity for organizations to develop measures to value people and technology within the workplace that will enhance their competitive advantage. Examining the propositions will provide a research starting point to understand the five values of people and technology development. Leveraging the benefits of incorporating these five values into management practice can help organizations maintain and enhance their competitive advantage.

**Keywords:** Value, People Development, Technology Development, Competitive Advantage

**Introduction**

Since the beginning of recorded time, humans have enriched their lives through the labor of other humans. Their methods have included slavery, feudal systems, indentured servitude, and prison labor. Some of these methods continue today. However, since the industrial revolution, technology has received more recognition for productivity gains than human effort (Drucker, 1999). This is a key source of debate when organizations try to define their competitive advantage in the marketplace. How do we value people and technology in the workplace?

Organizations are continuously looking for ways to win (Carrig & Wright, 2006; Drucker, 1992; Hamel & Prahalad, 1994; Hoskisson, Hitt, Ireland, and Harrison, 2008; Porter, 1980) as they compete for market share regardless of the industry or service area. Leaders face understandable limitations and restraints as they compete, yet there should always be opportunities to leverage current technological and people assets to enhance the competitiveness of the organization. Organizations conduct in depth audits of their financial and technical assets on a routine basis because it is tied to their bottom line. However, the audit of people is often limited to the number of employees or yearly performance evaluations or yearly performance evaluation and seldom goes beyond the surface to truly examine their value or worth to the organization. There are cases where executive employees including board members have placed significant value on themselves based upon their salary, stock options and other perks. How valid are their assessments? This paper focuses on the



other 99 percent of workers who do not fit into the executive or board member ranks within organizations. Where does their value to the organization reside? Is it in their location, use, maintenance, modification, time value or a combination thereof (Hughes, 2010)? As organizations persist in inspiring their people to continue to perform at peak levels, they must begin to address these issues.

Technology has been displacing workers for generations without much fanfare. The author did not use the word replace because technology cannot by itself replace people. Someone has to tell the technology what to do, so there remain many extensive roles for people within the workplace. The position or location value of the person has shifted. With this shift, there is now a need for more the employee to possess more knowledge through training (maintenance value) or education (modification value) (Hughes, 2010).

Training and/or education are often used to introduce new technological innovations to individuals within organizations (Banks, 2002). Training enhances human performance by bridging the gap that exists between job needs and the lack of knowledge or skill required to perform the job (Silberman, 1998). Training and education are different in many respects; however, they are similar with regard to their primary purpose of transferring knowledge to individuals. There are various models that can be used to assist with the development of the proper instruction and the selection and use of appropriate methodologies. Ultimately, education is a transfer of a body of knowledge and practice in a discipline or field of study; whereas training is learning and practicing activities and skills necessary to carry out a specific task or work practice. Individuals often benefit most from a combination of both education and training because training can build on what one has been taught in school environments and education can build upon and broaden an individual's knowledge in a specific skill area (Banks, 2002). Organizations want the best performance from their employees on a daily basis. Without knowledge and skill, employees cannot provide their best performance; however, employers must clearly share their expectations or intentions with their employees. The objectives of this paper are to discuss:

1. The intention of management with regards to people and technology development within organizations.
2. The ways that managers currently value people and technology in the workplace.

### **Literature Review**

Hoskisson, Hitt, Ireland, and Harrison (2008) define value as being "measure by a product's performance characteristics and by its attributes for which customers are willing to pay"(p. 101). Can we say that people performance is based upon their personal characteristics and their attributes that the organization is willing to pay for? Value is often seen as a relative term and is equated with money in organizations, but what truly is money? The monetary value of things has been debated for centuries (Friedman, 1994; Marx, 1906). The exchange value or purchasing power of money is what is measured within our capitalist society. What exactly is value relative to the competitive advantage of an organization? Organizations have perspectives from and within which all activities are viewed and they attempt to quantify the value of these perspectives under the category of goodwill on the balance sheet. They are the cognitive, behavioral, and cultural perspectives or a



combination thereof. People value is harder to define than technology value in the workplace; yet the workplace is inefficient without both values.

#### *People Value*

Researchers and practitioners have been trying to define the value of people to an organization for centuries with no clearly identifiable success (Phillips, 2003). There are compensation and benefits departments within organizations that strive to pay employees what they are deemed worth to the organizations, but many employees feel underpaid and underappreciated within the workplace (Adams, 1963; Leventhal & Whiteside, 1973). It would be reasonable to expect an organization to know upon hiring an employee what their value is to the organization yet very little upfront analysis is done to clearly understand an employee's value. Many organizations truly believe that they do this through their recruiting offices, outsourcing firms and other elements within the organizational environment that are used to encourage employees to come to work for the organization; however, they have not been as successful as they could become. They often look at employees from a one dimensional perspective.

Employees are multidimensional and need to be treated as such within the lifespan of their employment with the organization. Just recognizing this and acknowledging it to the employee would be a great first step for many organizations. Meeting the employees' multidimensional needs could then become a collaborative effort between the employee and the employer. The five point Value Creation Model for Organizational Competitive Advantage strives to help organizations achieve: A collaborative understanding of what it takes for people and technology to coexist within the workplace to the benefit of the employee and the employer. People will acknowledge, often through their body language, their frustration with other employees but may never acknowledge their frustration that the technology they are being asked to use is a major source of their discontent within the workplace. Technology is never referred to as an indirect labor cost even when it stops working because its value has already been accounted for as a depreciated asset on the balance sheet. The employee is still looking for his place on the balance sheet. What type of administrative cost am I? What aspect of the employee is the organization paying for? Stewart (1997) argues that knowledge is bought and sold although it is an intangible entity and Schein (1988) suggests that an employee is worthless unless he adjusts to the norms of the organization. We may not know what the value of an employee is, but we know when an employee holds no value for the organization and can calculate the administrative cost of hiring a replacement. Orr (1996) contended that millions of people go to work each day to do things that almost no one but themselves understands but which large numbers of people believe they know enough about to set policy offer advice, or redesign. Work has become invisible. (p. xi)

This author would agree with Orr but would suggest that work has become invisible because management has lost focus on the people that are doing the work.

#### *Technology Value*

Historically, technology was introduced in organizations to the detriment of human performance. The focus was introduced by Taylor (1911) as scientific management and advocated the elimination of the human element within the workplace. He preferred the dehumanizing reliance on measurement to interaction with employees. Taylor's view was based on the premise that



organizations' best way to create wealth was to have the machines do all the work and make more with less. This concept is still evident today with the focus on reengineering (Champy & Hammer , 1993) which views the organization as a machine rather than a human system. The emphasis was that technology is more valuable to the organization than its people.

Technology in this paper refers to any useful method of performing a work task that is completed without human intervention or through human initiation. Based on this definition technology could be a robot or robotic machines such as self-propelled forklifts or tow motors, computers, and equipment control panels or controllers among many others. We can all think of technology innovations and automatically attribute perceived value to that technology. Drucker (1999) noted that "the most valuable asset in the 20th-century company was its production equipment" (p.79). Thus, the value of technology is intuitively assumed.

*The People vs. Technology Value Quandary*

When we think of people do we truly consider them to be of value to the organization? If the answer is yes, how do we measure that value? How do we harness their abilities in ways that benefit them and the organization? Why is it that employees feel exploited and undervalued in the workplace? Orr (1996) states that

In the past, those who ran organizations were familiar with production processes. They often designed the process and had even done the work themselves. Today, organizations are so complex that it is difficult for those in charge to have experienced the organization's work firsthand. Moreover managers are often hired from the outside, and their experience frequently lies in completely different industries. (p. xi)

There is a complexity within work that can often only be understood by those who spend time in the trenches (the heart of the organization where the true work is done). This is what is being communicated and is occurring in the currently popular television series "Undercover Boss". Without firsthand knowledge and/or experience of what is happening in the organization one does not truly understand the process or system that needs to be controlled. The problem with "Undercover Boss" is that the bosses can be undercover in their own organization. Why is it that so many employees are incapable of identifying their boss?

If one has supervised people, one hopes that they will remain loyal to the organization and not leak valuable information or take our trade secrets with them when they leave which is why some of them sign employment and/or non-compete contracts. We use our legal system to keep employees under control. We will sue an employee if they make a mistake; yet, we do not sue technology. We may sue the maker of the technology which still takes us back to people. Society often considers this as a necessary cost of doing business in a capitalist society with global competition. On the other side, we have government regulations, unions, and corporate policies to try and create amenable relationships between the organization and the employee. Someone has to protect the employee from being exploited by the organization. We have employment at-will laws so that the employee and the organization can part ways as they deem appropriate. There seems to be a never ending system of give, take, and protect between employees and organizations.



To adapt to some of these constraints organizations have chosen to relocate their businesses to areas with less stringent laws and regulations whether it is within the US or outside the US. They have chosen to reduce the number of employees and increase the amount of technology which leads to the contention that is least discussed within the business press (that was until the great recession): The choice to invest in technology as opposed to people. With so many unemployed people, and still businesses earned 1.66 Trillion in profit in 2010, the most in 60 years of government records, productivity evidently has not suffered too much without the millions of former employees. Organizations are pondering whether they should even rehire more workers or rely on technology.

### **Introduction to the Value Creation Model for Organizational Competitive Advantage**

People and technology are the foundation of organizations (Becker, 1993; Betz, 1993; Carrig & Wright, 2006; Martelli, 1998; Pfeffer, 1994), but the degree to which one has more value than the other is undecided. The five point *Value Creation Model for Organizational Competitive Advantage* (See figure 1) a framework that is an extension of Hughes' (2010) *People as Technology* (PT) conceptual model which depicts opportunities for examining the similarities between technology development and human resource development and how these similarities can be used for value creation within organizations. The model provides a research starting point to determine the extent to which location, use, maintenance, modification, and time value creation may be obtained from integrating technology development and human resource development from the cognitive, behavioral and cultural perspectives (Hughes, 2010). It also offers provides a theoretical framework for further research and practical applications of management practices, training practices, HRD philosophy, and HRD strategies within organizations (Aguinis and Kraiger, 2009). Its purpose is to inspire transformation and examination of ways to develop measures for the values.

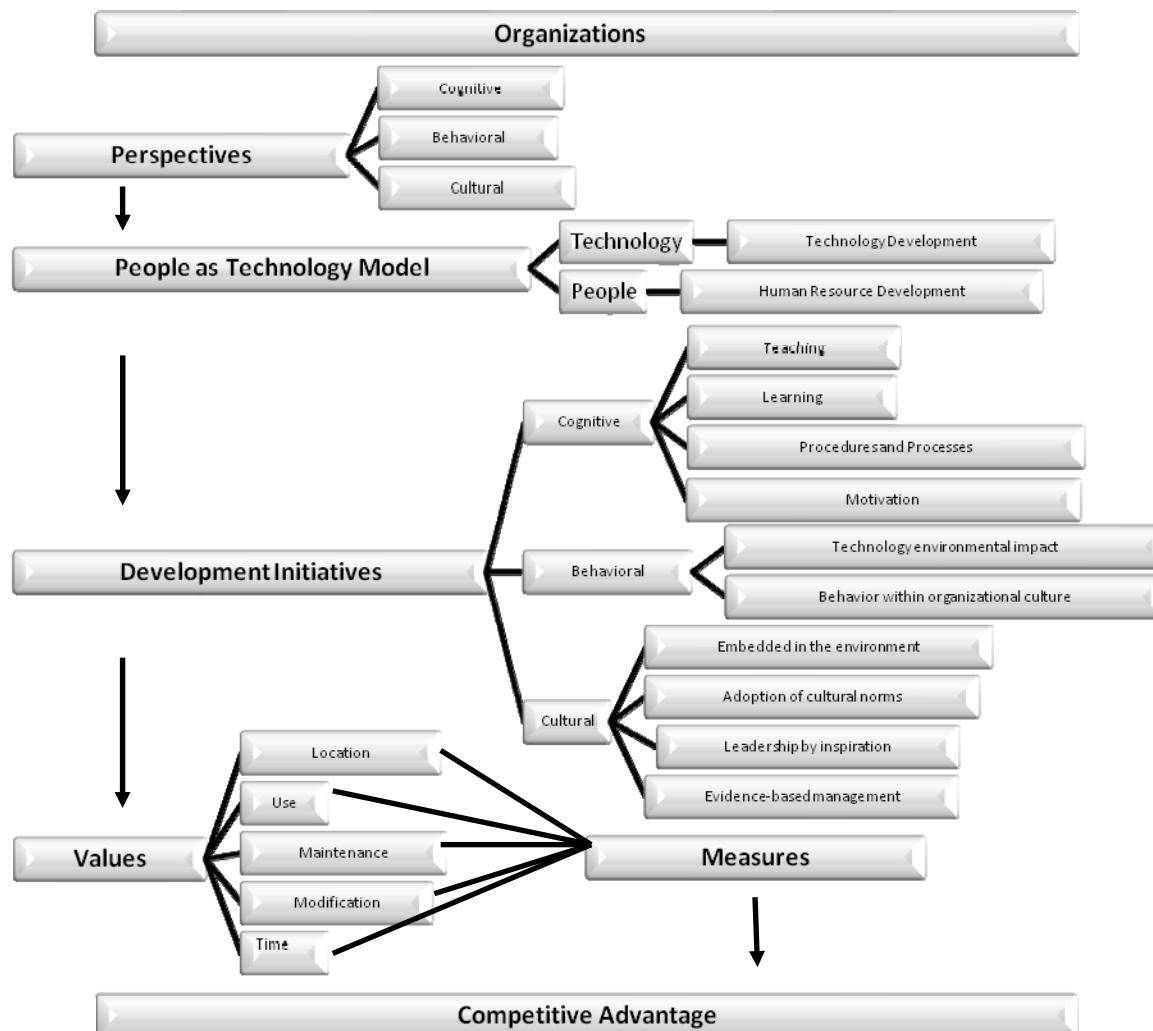
#### *The Five Points*

The first point of the model shows the three perspectives within which organizations typically operate. The perspectives are cognitive, behavioral, and cultural. Organizations often operate from one dominant perspective that supports their main strategy for performance, but can include a combination of the perspectives.

The second point of the model is the PT conceptual model (Hughes, 2010). The PT model introduces the five values that relate people to technology and provides opportunities for equivalence, interaction, and understanding of how people and technology relate to each other within the workplace. The PT model suggests that just as technology has location, use, maintenance, modification, and time value to the organization, so does people. It suggests that if managers would think of people similar to how they positively view technology within the workplace; they will be able to encourage them to be more effective in their job performance.



Figure 1: Hughes Value Creation Model for Organizational Competitive Advantage



Point three of the model addresses the many initiatives that organizations introduce to develop technology and people within the workplace. This model suggests that all initiatives must be understood from the perspective within which it is introduced. The new perspective may actually be at odds with the overall perspective of the organization and this should be understood by management prior to it being introduced to employees. Once the perspective is understood, employees could be made better aware of the type of change that is about to occur (Orr, 1996).

Point four of the model involves the five values that relate people to technology within the workplace. These values were introduced in the PT (Hughes, 2010) conceptual model but are defined here to suggest ways to measure their value to the organization. If these values can be quantified to the extent that organizations can see their people as clearly as they see their technology value, they will have attained a clear path to a competitive advantage in the workplace and subsequently the marketplace.

Point five introduces the ways that the measurable people values can be integrated into the organization so that the organization can leverage its competitive advantage to win in the



marketplace and within the global economy. The organization should be stronger as its people understand their value and perform at levels that enhance their productivity to the organization.

## Discussion

Drucker (1999) stated

The most important, and indeed the truly unique, contribution of management in the 20<sup>th</sup> century was the fifty-fold increase in the productivity of the *manual worker* in manufacturing. The most important contribution management needs to make in the 21<sup>st</sup> century is similarly to increase the productivity of *knowledge work* and *knowledge workers*. The most valuable assets of the 20<sup>th</sup>-century company was its production equipment [technology]. The most valuable asset of a 21<sup>st</sup>-century institution (whether business or non-business) will be its *knowledge workers* [people] and their *productivity* [value]. (p. 79)

The challenge outlined by Drucker clearly aligns with the author's perception that there must be a way to align people and technology within the workplace to add value that will lead to a competitive advantage for the organization. The five values of people and technology development provide alignment alternatives and opportunities for organizational success.

Some propositions to be considered for examination for competitive advantage include:

Table 1 - *Values and Propositions*

Values	Propositions
Location	<i>Proposition 1a:</i> Employee performance increases as their comfort with their assigned environment increases. <i>Proposition 1b:</i> As organizational investment in employee cohesiveness to environment and adaptability to organizational culture increases, employee performance and retention increase. <i>Proposition 1c:</i> Organizations' career development strategies' success or failure may depend upon the proper placement of employees internally and externally to the organization.
Use	<i>Proposition 2:</i> As person-job fit becomes more specific through enhanced job analysis and selection strategy, employee use value increases.
Maintenance	<i>Proposition 3a:</i> When companies invest in training, development, and motivation of their employees, the employee maintenance value to the organization increases through improved performance. <i>Proposition 3b:</i> Targeted training will be more effective as employee maintenance value is better understood. <i>Proposition 3c:</i> The ROI (Phillips, 2003) from training and cost benefit analysis of the training can be better aligned to employee development as well as to organizational development.
Modification	<i>Proposition 4a:</i> As organizations adjust to growth, change, and job enrichment needs of employees, employee modification value increases. <i>Proposition 4b:</i> As organizational, employee, and leader expectations are better understood within organizations, better decisions that may lead to the success of the organization can occur.
Time	<i>Proposition 5:</i> As organizational leaders better manage and understand how to enhance the time value of employees, employee length of service increases.



Developing measures for the five values and concentrating on the propositions related to each value provides a method of organizing the best elements of initiatives that have been developed to better meet the needs of the organization.

### Future Research Trends

Emerging research trends within organizations include targeted training. What exactly are organizations targeting their training towards? Through the use of this framework, training can be targeted to the needs of the employees with respect to the technological innovations that the organization would like to employ. Research with regards to targeted assessment of current needs in the workplace may serve the organization better than targeted training. They may already have the talent in-house that needs no additional training. Being willing to think differently may produce results that may cost the organization the amount of time it takes to align people to their strengths which match organizational needs. Determining that the People as Technology model (Hughes, 2010) can become an integrative factor to be operationalized within the workplace and determining measures for the values provides opportunities for extensive research.

### Conclusion

The existing challenges in the management of people and technology within the global workplace require innovative thoughts as well as innovative technology. The introduction of the five values of people and technology development and the five point *Value Creation Model for Organizational Competitive Advantage* provides an opening for more innovative thought in the workplace with regards to people and technology development. The model provides opportunity for organizations to develop measures to value people and technology within the workplace that will enhance their competitive advantage. Using the framework can assist organizations as they determine the extent to which value creation can be derived from integrating technology development and human resource development from the cognitive, behavioral and cultural perspectives in the workplace. Without a concerted, strategic focus organizations will be looking at people in isolation of technology and struggling to win the battle for competitive advantage. Some of the benefits include:

1. An end to debate regarding the value of people versus technology in the workplace;
2. An ability to leverage the combined strength of the blend of people and technology in the workplace;
3. Better team alignment based on the values that people possess;
4. Improved morale as people better understand their value to the organization;
5. Clearer organizational design strategies to organizational values;
6. Management intent better aligned with people capacity;
7. Stronger people asset management tied to the balance sheet; and
8. Training that is truly tied to the needs of the organization's people resources.

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## UNDERSTANDING KNOWING AND ITS RELATION TO UNDERSTANDING

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### ABSTRACT

Since the cognitive revolution of the 1960s, knowing and understanding have been viewed, almost interchangeably, through the lens of information processing theory which holds that knowing is internalization of external knowledge and understanding is a more elaborate form of knowing. Alternatively, understanding may be defined as an ever-evolving biofunctional process of multiple-source integration and reorganization of the learner's own intuition—that is, intuitive understanding—and knowing is best characterized as the intuitive self-awareness of biofunctional activity in the nervous system. Thus, the biofunctional process of understanding is the stable source and knowledge is the changing outcome of this process. From an educational standpoint, the radically different implication is that schooling must focus on helping children to develop their own knowledge-production capability by taking advantage of the biofunctional process of multiple-source integration and reorganization which enables knowledge production in children in the form of learner insights.

**Keywords:** Knowing, understanding, biofunctional activity, symbolic computation, intuitive self-awareness

### Introduction

In describing the relationship between knowing and understanding, cognitive psychologists have assumed that the process of knowledge acquisition is an input-elaboration-output sequence. Understanding occurs when learners use constructive elaboration to transform symbolic input to understanding (1987, p. 254). Thus, from the perspective of information processing theory, the main distinction between knowing and understanding is that understanding is a more elaborate or differentiated form of knowing or being symbolically informed (Bloom, Englehart, Furst, Hill, & Krathwohl, 1956; Bransford & Johnson, 1972). While previous experience undoubtedly plays a role in acquiring new knowledge (McNamara, Kintsch, Songer, & Kintsch, 1996), it may not be accurate to say that knowing, defined as transforming symbolic input in the context of prior knowledge, is the prerequisite process for genuine human understanding (Maier & Watkins, 1998).

Alternatively, biofunctional theory describes understanding as the biological basis for knowing (Iran-Nejad, 1978, 2000). From this perspective, understanding takes embodied activity in multiple bodily (e.g., the immune, muscular, respiratory, and cardiovascular) and nervous (e.g., visual, auditory, proprioceptive, and affective) systems (Iran-Nejad & Ortony, 1984). Thus, the process of understanding is the integration of biofunctional activity in these internal sources to make up the learner's intuitive knowledge base, which transcends domain-specific knowledge. Knowing, is the



learner's domain-specific awareness of the biofunctional activity in these systems that manifests in the form conceptual knowledge or propositional language (Iran-Nejad & Gregg, 2001). In this sense, genuine learning takes reorganization of the learner's intuitive understanding via the process of multiple-source integration (Iran-Nejad, 2000; Iran-Nejad & Gregg, 2001; Iran-Nejad & Stewart, 2007).

### **Two perspectives on knowing**

The basic theoretical issue from a dynamic biofunctional perspective is how knowing, learning, and remembering can be simultaneously stable and enduring over time (e.g., we remember where we live) and fleeting (e.g., we might not tell a joke the same way twice). Information processing constructivism accounts for the stability of knowing by suggesting that knowledge is statically stored and actively passing. Static knowledge consists of symbolically-framed structures that people store in their long-term memory in the form of declarative or procedural knowledge (Cosmides & Tooby, 1994; Neisser, 1967; Newell & Simon, 1972; Pylyshyn, 1986). Passing knowledge refers to the accessed contents of the short-term memory. From this perspective, the basic process of knowledge construction is symbolic computation which takes the form of either algorithmic or heuristic problem solving. An algorithm is a rule-governed (or logical) sequence of steps for performing a task or solving a problem. A heuristic is a more adaptive rule of thumb.

However, information processing constructivism gives rise to an, as yet, unresolved question: What is the nonsymbolic ground for the two-fold process of symbolic knowing (Harnad, 1990; Iran-Nejad, 2000)? Two points can be made in response to this question. First, information processing constructivism assumes that the metaphor of knowledge as an object is literally true (Lakoff & Johnson, 1980). However, if the static object metaphor of knowing is not a literal reality, assuming that people store knowledge in long term memory is not as good a solution to the problem of the stability of knowing as it first appears. Second, literal or metaphoric, the static object perspective is not the only way to view the stability of knowledge over time. It seems reasonable, for example, to assume that the physical system of the brain is the stable nonsymbolic ground for the ever-changing sense of knowing defined as intuitive self-awareness. Thus, one would look to brain functioning to explain how knowing can be stable over time. The perceived form that knowledge structures take over time would be analogous to the inherently unstable form a fountain takes over time as a function of the stable physical system that keeps reproducing it (Iran-Nejad, Clore, & Vondruska, 1984).

The latter possibility is certainly consistent with the definitions of "know" found in the dictionary: "perceive, recognize, distinguish ... be acquainted or familiar with; be aware of or conversant with, apprehend as fact or truth" (Hoad, 1986, p. 254). This dictionary definition suggests that knowing something is basically synonymous with being aware of it as well as being aware that one knows it without knowing the underlying processes that give rise to either senses of knowing (Iran-Nejad et al., 1984). Biofunctional constructivism extends this idea by arguing that knowing as organized self-awareness has its roots in the activity of the biological person's nervous and bodily systems. Consider the question raised above: What is the nonsymbolic ground for symbolic knowing (Harnad, 1990; Iran-Nejad, 2000)? It seems at least as natural to assume that knowing is grounded in the biofunctional activity of the bodily and nervous systems as it is to assume that knowing is symbolic



computation grounded in static, object-like, knowledge structures stored in long-term memory and accessed for active construction in short-term memory (Cosmides & Tooby, 1994; Neisser, 1967; Newell & Simon, 1972; Pylyshyn, 1986). Examples of such systems are the sensory systems for visual, auditory, and proprioceptive awareness and nonsensory systems such as affect. The following two sections explore these issues.

### **Knowing as symbol construction**

Since the 1960s, the information processing model has been the mainstream theory of the nature of knowledge and its acquisition (Atkinson & Shiffrin, 1968; Floden, 1981; Iran-Nejad, Marsh, & Clements, 1992; Neisser, 1967, 1976). At a basic level this theory is a memory model consisting of sensory memory, which “holds” raw unprocessed (or pre-attentive) input, short term memory, which holds information a person is consciously paying attention to, rehearsing, and chunking, and long-term memory, which stores the symbolically-coded information into concepts, propositions, and schemas for future use. This model assumes that people store past knowledge statically in long-term memory. Once accessed, prior knowledge becomes the object of active rehearsal and serves as a facilitative context for screening out unimportant aspects of the new information people encounter (Pichert & Anderson, 1977), for going beyond presented information via constructive elaboration (Atkinson & Shiffrin, 1968), and for storing the results of active attention in long-term memory. This theory does a good job of accounting for how people use symbolic knowledge to construct new symbolic knowledge (DeChenne, 1993). Moreover, it provides the basis for information processing constructivism (Anderson et al., 2001; Bloom et al., 1956; Shulman, 1986, 2002).

Johnson, Hashtroudi, and Lindsay (1993) distinguished between two kinds of source-monitoring decisions in information processing: deliberate and nondeliberate. All information initially requires deliberate and explicit decision making but may in the process change into nondeliberate or implicit knowledge (Carlson & Dulany, 1985; Dulany, 1997; Dulany, Carlson, & Dewey, 1985). Once symbolic knowing becomes automatic, deliberate decision-making becomes nondeliberate decision-making (Schneider & Shiffrin, 1977; Shiffrin & Schneider, 1977). These decisions were once made mindfully, submitted to slow, consistent, and deliberate rehearsal practice for automaticity (Schneider & Shiffrin, 1977; Shiffrin & Schneider, 1977), and are ready to use mindlessly prior to recall, which is why “we identify the sources of our memories in the course of remembering them, without any awareness of decision-making processes” (Johnson et al., 1993, p. 4). In other words, recall takes nondeliberate decision-making already built into prior static knowledge. Deliberate decisions occur on the mindful stage of symbolic knowing following access to short-term memory. They are made constructively in the form of elaborative rehearsal slowly and strategically. They “involve retrieval of supporting memories, noting or discovering relations, and initiation of reasoning” (p. 4).

Johnson and colleagues’ (1993) work raises an interesting question: What role(s) do deliberate/nondeliberate processes play in learning? Bransford and Schwartz’s (1999) discussion of the varieties of knowledge is helpful in maneuvering a shift from information-processing to biofunctional constructivism. Broadly consistent with Bransford and Schwartz distinction between knowing and preparation for future learning (PFL), biofunctional theory assumes that PFL may be viewed as biologically-determined (or nondeliberate) understanding and is qualitatively different



from knowing that is deliberately reflected on by the person. By the same token, through the lens of biofunctional constructivism, the inherent learning value for reflection on intuitive self-awareness is different from the content-specific appeal of the symbolic (or propositional) knowing that and knowing how. Moreover, it may have been the content-specific appeal of symbolic knowledge, and not its inherent learning value that has been responsible, in part, for the prevalence of knowledge-acquisition objectives in education, the historical popularity of memory research, and the objectively-oriented culture of academic scholarship (e.g., Neumann, 2006; Rosch, 2000; Schön, 1987).

Regarding its content-specific appeal, symbolic knowing has been classified propositionally as knowing how or procedural knowledge and knowing that or declarative knowledge (Broudy, 1977). These symbolic types of knowledge are known for producing a number of problems such as inert learning (Renkl, Mandl, & Gruber, 1996) and limited transfer to contexts outside of situations in which information is initially learned (Beach, 1999, 2003; Bransford & Schwartz, 1999; Dyson, 1999; Tuomi-Gröhn & Engeström, 2003). Drawing on the work of Broudy (1977), Bransford and Schwartz (1999) questioned the intrinsic learning potential of knowing how and knowing that, which is why, they defined intrinsic learning potential as the capacity for preparing learners for future learning. They suggested that these two types of symbolic knowledge do not measure up as well as a third type of knowing known, in symbolic terms, as knowing with. In their concluding summary, Bransford and Schwartz stated:

We note that the PFL [preparation for future learning] perspective fits well with Broudy's emphasis on "knowing with." Typical assessments of learning and transfer involve what Broudy calls the "replicative" and the "applicative" (knowing that and knowing how, respectively). 'Knowing with' is different from either of these: it provides a context or "field" that guides noticing and interpretation. (p. 92)

The authors suggested that the sources that contributed to preparation for future learning included the context, lived experience, and understanding. The "context or 'field' that guides noticing and interpretation," for example, is the intuitive knowledge base. The content-specific appeal—derived from "knowing that" and "knowing how"—amounts to inert knowledge and does not by itself contribute to future learning (Bransford & Schwartz, 1999), or understanding.

Clearly, when it comes to inherent learning value, knowing, as symbolic knowledge (e.g., knowing how to carry out the steps in a formula to solve a problem), has different implications from knowing as being aware or self-aware (Iran-Nejad et al., 1984). The symbolic-knowledge learning potential is often taken to mean that one might actually know something (e.g., how to apply a computational formula) without being aware of one's knowing it. By contrast, if knowing is viewed as being the same as human awareness—if, in other words, the awareness is the essential substance of knowing, one cannot possibly know anything directly without being aware of it. To our knowledge, the implications of this hypothesis, namely, the role of awareness in reflective source monitoring, have not been explored.

Where does the knowing of which we are aware come from? Information-processing researchers have traditionally assumed it comes from the storehouse of long-term memory (Atkinson & Shiffrin,



1968) analogous to saved computer programs (Neisser, 1967). This makes storage and retrieval of knowledge the mode of interaction between on-the-stage-of-knowing working memory and behind-the-stage-of-knowing long-term memory (or prior knowledge). If knowing is defined as symbolic computation (Neisser, 1967), deliberate attention would have to carry the burdens of retrieving static structures by searching behind the stage, locating the relevant object or event in the dark storehouse of long-term memory, finding the right knowledge structure, retrieving it, and make it active for use on the stage of working memory. Thus, all learning must go (or have gone at one time or another) through the single-channel bottleneck of deliberate attention (Carlson & Dulany, 1985; Dulany, 1997; Dulany, Carlson, & Dewey, 1984; Dulany et al., 1985). With time and attention-intense practice, objects of learning become attention-free (Schneider & Shiffrin, 1977; Shiffrin & Schneider, 1977). They become capable of traveling back and forth between the working and long-term memory stores by means of a process still shrouded in mystery. The only thing that is clearly stated is that, once something is learned to the point of automaticity, knowledge of it becomes attention-free. While agreeing that learning can occur with awareness as a result of deliberate attention, biofunctional constructivism implies that the bulk of learning occurs dynamically outside the deliberate awareness of the learner (Iran-Nejad & Chissom, 1992) via spontaneous reorganizations of the learner's own intuitive knowledge base (Iran-Nejad, 1994).

### **Knowing as awareness**

How does the biofunctional perspective view knowing and its relationship to understanding? The division of labor between the physical body as the invisible site of understanding and the mind as the visible arena of knowing suggests some answers to this question (Iran-Nejad, 1978). First, the nervous system is the specialized organ for understanding just as the respiratory system is the specialized organ of breathing. Second, the multitude of the bodily subsystems such as the respiratory system, the immune system, the endocrine system, and so forth are among the inherent sources that contribute to the ground for knowing as awareness, each in its own natural way and as needed. For example, a person might feel the discomfort of the immune system's activity to fight off an infectious disease; or a person might feel refreshed upon breathing the fresh morning air on a camping trip. Third, the fact that the human body relates to the external world by means of multiple modalities is evidence that the human nervous system is a multiple-source system for nonsymbolic understanding (Iran-Nejad, McKeachie, & Berliner, 1990). These hypotheses seem at least as plausible and as relevant for theory, research, and practice in education as the over-explored role of symbolic knowledge and memory.

But plausibility was never the only motivation behind the biofunctional perspective. For example, since the original theory was conceived, much hindsight has opened the gates to a never-ending flood of evidence. Consider, for instance, the following statement from Maier and Watkins (1998):

Activation of peripheral immune cells by microbes therefore signals the brain, resulting in physiological, behavioral, affective, and cognitive changes. We have further argued that a variety of psychological phenomena can be understood as being products of this functional system. Many of these phenomena are related to what is often termed stress, and we have suggested that many stressors may access this bidirectional immune-brain circuitry via neural connections. We suggested that this may have evolved because defense against distal



threat such as a predator requires many of the same functions and because this would allow a recuperative system that has an inherent time delay of several hours to anticipate the possibility of infection and injury (p. 102).

One does not need detailed evidence to learn how much, for instance, the first bodily experience of chills and fever and later recovery from it can contribute to understanding oneself and lead to a reorganization of one's intuitive self-awareness. As a consequence of this reorganization, changes occur in one's understanding not only of oneself but also of others and the surrounding world, whether it is in the direction of superstition or medical science (Iran-Nejad, Hidi, & Wittrock, 1992). The Maier and Watkins (1998) article was not directly about knowing and its relationship to understanding; but it shares some of the themes of this article, for example, the observation that "processing information about external events is only one function of the central nervous system and may not have been of the greatest importance for much of evolution" (p. 102).

The proposal that human bodily systems jointly perform the function of understanding implies, on the knowing side, that the person experiences the awareness of understanding as it occurs but, on the understanding side, the person does not know how it happens. Thus, the phrase "such and such idea occurred to us" becomes literally synonymous with the idea emerging out of our behind-the-stage ground of understanding. Understanding becomes the biofunctional side and knowing becomes the awareness side of the coin of human intelligence. Understanding is the nonsymbolic activity of the physical nervous system and knowing becomes the arena of the mind by means of self-regulatory awareness-monitoring (Iran-Nejad & Chissom, 1992). To sum up, in the words of Prawat (2000), "we do not know how we understand but we do know when we understand" (p. 90), just as we may not know how we have come down with a fever but we understand it in our bones and flesh.

Thus, one immediate implication of the biofunctional perspective is that it enables us to explore some of the subtle differences that exist between knowing and understanding. Another is that it enables us to explore how people can use the compass of their intuitive self-awareness to (a) navigate, by means of strategic intuitive-self-awareness-monitoring, the unpredictable ground of understanding, (b) to try to figure out by inference how understanding occurs, and (c) to try to sort out by means of content-source-monitoring what bodily and nervous systems are involved in understanding.

### **Experimenting with knowing and understanding**

There are, therefore, two theoretical launching pads from which investigations of knowing and its relationship to understanding can take off: (a) information processing constructivism aimed at the establishment of elaborative associations between input propositions and static domain-specific structures retrieved from long-term memory or (b) biofunctional constructivism aimed at making sense of how the bodily and nervous systems of the biological person engage in multiple-source understanding and how this understanding, which is comprehensive of all domains, supports knowing in the form domain-specific intuitive self-awareness. These two perspectives portray dramatically different lenses on the nature of knowing and its relationship to understanding. Information-processing constructivism--exemplified by the knowledge-acquisition framework



described by Rumelhart (1975, 1976) and others (Dooling & Lachman, 1971; Pompi & Lachman, 1967)—has been particularly effective in investigating the extent to which symbolic knowing can be a necessary and sufficient context for understanding. By contrast, from the biofunctional perspective, research has explored the role of multiple source understanding as the prerequisite ground for the growth of knowledge (Iran-Nejad, 2000; Iran-Nejad & Chissom, 1992; Iran-Nejad & Gregg, 2001; Iran-Nejad et al., 1990; Iran-Nejad & Ortney, 1984).

### **Prior Knowing as the Prerequisite Context for Understanding**

A unique feature of information-processing constructivism is the emphasis on the recall of input information. This is usually operationalized in terms of memory instructions at both the input and output junctures and by using recall as the main dependent measure (e.g., Bransford & Johnson, 1972). The output of long-term memory is often scored in terms of a degree-of-elaboration continuum. At one end of the continuum, there is verbatim recall of the input. At the other extreme, there is semantically-meaningful information. Any output beyond the elaboration continuum is scored as intrusions.

To illustrate, in a widely known study, Bransford and Johnson (1972) examined the role of prior knowledge structures as the prerequisite context for understanding and recall of symbolic knowledge. Their subjects heard difficult-to-interpret passages like the following:

If the balloons popped, the sound wouldn't be able to carry since everything would be too far away from the correct floor. A closed window would also prevent the sound from carrying, since most buildings tend to be well insulated. Since the whole operation depends on a steady flow of electricity, a break in the middle of the wire would also cause problems. Of course, the fellow could shout, but the human voice is not loud enough to carry that far. An additional problem is that a string could break on the instrument. Then there could be no accompaniment to the message. It is clear that the best situation would involve less distance. Then there would be fewer potential problems. With face to face contact, the least number of things could go wrong (p. 719).

The words in this paragraph are semantically meaningful and the sentences are syntactically well-formed. However, the paragraph as a whole is difficult to comprehend in isolation. What is remarkably unique about the Bransford and Johnson (1972) study is that it removes the ubiquitously-present “understanding cues” from an otherwise well-formed passage in an attempt to show what it takes for understanding to return. By carefully excising from the paragraph its effective understanding cues, an optimal gap is created between the words and propositions in the text and people’s ongoing course of understanding. This practice separates the text from its naturally embodied context to which it can readily return. This feature is a double-edge sword. On the one hand, it shows clearly how prior knowledge of a specific domain (here, serenading a woman) can readily, though somewhat artificially, breathe semantic content into the words and sentences of an otherwise difficult passage. On the other hand, it plays down the role of other embodied sources that contribute to a person’s natural course of understanding.

Table 1 shows the results Bransford and Johnson (1972) obtained in five different conditions. In the no-context condition (1), participants heard, rated for comprehension, and recalled the passage. In



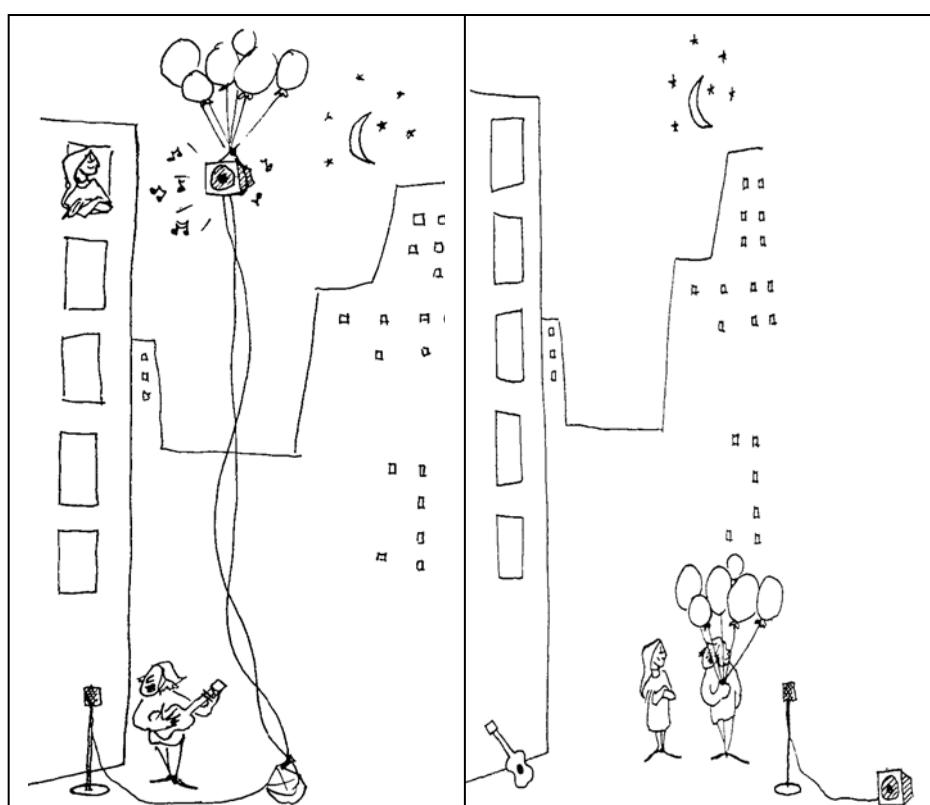
the no-context condition (2), participants heard the passage twice before rating and recalling it. In the context-after condition (3), participants heard the passage first and then inspected for 30 seconds an interpretation-appropriate picture (left panel in Figure 1). In the partial-context condition (4), participants examined a comparable interpretation-inappropriate picture (right panel of Figure 1). And finally, in the context before condition (5), participants inspected the interpretation-appropriate picture and then heard the passage. The results were in line with the predictions of information-processing constructivism.

Table 1  
*Mean Comprehension Ratings and Mean Number of Ideas Recalled*

	No context (1)	No context (2)	Context after	Partial context	Context before	Maximum score
Comprehension	2.30 (.30) <sup>a</sup>	3.60 (.27)	3.30 (.45)	3.70 (.56)	6.10 (.38)	7
Recall	3.60 (.64)	3.80 (.79)	3.60 (.75)	4.00 (.60)	8.00 (.65)	14

<sup>a</sup>Standard error in parentheses.

From “Contextual prerequisites for understanding: Some investigations of comprehension and recall” by J. D. Bransford and M. K. Johnson (1972), *Journal of Verbal Learning and Verbal Behavior*, 11, 717-726. Copyright © 1972 by Academic Press, Inc. Printed by Permission.



**Figure 1.** Context before and Partial context picture. From “Contextual prerequisites for understanding: Some investigations of comprehension and recall” by J. D. Bransford and M. K. Johnson (1972), *Journal of Verbal Learning and Verbal Behavior*, 11, 717-726. Copyright © 1972 by Academic Press, Inc. Printed by permission.



As predicted, the prerequisite context made the hard-to-interpret text easier to recall and understand for participants in the context-before condition, compared to the no-context (1) control. This finding demonstrates rather unambiguously that by itself (i.e., as the one and only source), syntactically and semantically well-formed words and sentences make minimal contribution to knowledge acquisition and understanding. Subjects in the Bransford and Johnson (1972) study had little opportunity to engage in learning defined as reorganizations of the learner's intuitive awareness. Therefore, the context-before finding sheds apparent light on understanding as being synonymous with symbolic knowing at the expense of the embodied sources that contribute to the normal course of understanding. The absence of multiple-source understanding can also explain why participants in the context-after condition could not go back, following the natural course of understanding, in their minds and understand the passage without revisiting the text.

In a more recent PET study, Maguire, Frith, and Morris (1999) replicated and extended the Bransford and Johnson (1972) study and were able to demonstrate activity in brain areas they identified as being associated with the influence of prior knowledge on comprehension. This and the original study supported the predictions with which they started and with the level of rigor achievable only in well-controlled laboratory research. However, the journey from the manipulation in the lab to the world outside the lab is seldom direct, immediate, or smooth (Neisser, 1976; Schön, 1987), mainly because of the multiple sources operative in nature, embodied sources that operate nonsymbolically.

### **Embodied understanding as the ground for knowing**

As far as empirical research is concerned, a study reported by Iran-Nejad (1989) comes closer than any other in the literature to testing the predictions of the biofunctional theory. Participants were presented with a somewhat longer version of the following story:

Marilyn left the hospital where she worked after a late night shift. She got in her car in the hospital parking lot, waved goodbye to the attendant, and got on the freeway. Then, in the dim dashboard light, she saw the gas gauge indicating empty. Fearing to run out of gas on the highway in the middle of the night, she took the exit for the gas station to which she had been before during the day. The attendant, Gabriel cleaned the windows and filled the tank. Then, as he returned the change, he asked her to come inside the station office to see the birthday gift given to him by his sister. As he insisted, Marilyn reluctantly agreed. Once inside, Gabriel quickly turned around, locked the door behind them, and grabbed a gun from a drawer. Marilyn's heart trembled and she began experiencing the symptoms of shock. She yielded to the pressure of Gabriel's hand pushing her down toward the floor.

Gabriel's lips were moving and, as she listened, the words began to make sense: "Sorry I had to scare you like that," he said. "I was scared myself when I saw that dude hiding on the floor in the back of your car. Good thing you stopped for gas tonight. I'll call the cops now (Iran-Nejad, 1989; Thurmond, 1978).

As knowing plays its deliberate and determinate role led by the presence of the words in the story in the natural course of the reader's ongoing understanding, the embodied sources of understanding



also play their critical roles nondeliberately. Interestingly, these roles are set in motion biofunctionally by and in the *absence of knowing and in the presence of the multiple-source uncertainties surrounding the same words from the story* (cf., Bransford & Johnson, 1972). Thus, to use Schön's (1987) terminology, as the person's knowing capacities actively navigate the certainties of the determinate zone of exposure to the words in the story being read, the person's nonsymbolic understanding capacities navigate dynamically "the uncertainties of the indeterminate zone of practice, and, consequently, benefit from the biofunctional sources of affect and motivation that it sets in motion in the nervous and bodily systems" (Iran-Nejad, Watts, Venugopalan, & Xu, 2006, p. 42). How did the subjects go back to make sense of the beginning of the story used by Iran-Nejad (1989)? Why did this story work differently from Bransford and Johnson's (1972) serenade passage quoted earlier? One obvious difference is that the serenade passage was heard in the absence of the embodied sources of natural understanding which had been carefully eliminated from the text. Because there was no open ground of multiple-source understanding, the context-after condition in the Bransford and Johnson (1972) study allowed no way for the subjects to spontaneously reorganize their embodied understanding following their linear left-to-right course of events in light of the context-after knowledge. By contrast, the story used by Iran-Nejad (1989) takes full advantage of the embodied sources of natural understanding capacities of the human nervous and bodily systems requisite to the development of the *a posteriori* knowing that comes with the exposure to words and sentences being read. As a result, the ongoing availability of the nonlinear and multiple-source ground of understanding at any point in time allows any part of this open ground to be set in motion by the sequence of the events in the story. The nonlinear ground of multiple-source understanding in the Iran-Nejad (1989) story is subject to the spontaneous reorganization determined by the simultaneous meeting of the requisite set of multiple sources.

Accordingly, upon exposure to the words and sentences early in the Iran-Nejad (1989) story, the nervous and bodily systems' multiple sources of understanding are put in motion by default to each make its natural contribution to understanding first and, thereby, to the knowledge that follows understanding in the form of fulfilled curiosity, satisfied interests, and dynamic insights. Perhaps the first among these biofunctional systems is the affective system (Cacioppo, Priester, & Bernston, 1993; Chartrand, van Baaren, & Bargh, 2006; Iran-Nejad et al., 1984). As explained by Iran-Nejad and colleagues (1984), there are two inevitable sides to the coin of the affective system of the biological person: positive and negative. The positive is the default affect of the inherent self and the negative is the imposed affect on the inherent self. Because the affective system knows no middle-ground neutrality, any reorganization in the entire system is experienced in terms of either a positive or a negative mood and the intimately-related approach or avoidance readiness. A reorganization from the positive default has nowhere else to go but to the imposed negative side. It is not surprising, therefore, that early in the reading of the story, a risk-avoidance disposition tends to dominate the ongoing understanding of the readers to protect the default positive side of the biological person's inherent self (Iran-Nejad et al., 1984). The imposed, as opposed to default, multiple effects on knowing are thinking: (a) that the male protagonist in the story is a wolf-in-sheep's clothing, (b) that the female character in the story would be wise to avoid his traps at all costs, and (c) that she might fall in his traps only if she acted in a naïve or cowardly manner. So far, it is reasonable to say that this dispositional reorganization, on the part of subjects' ongoing understanding, is imposed by the path of the participants' exposure to the physical text of the story threatening the default positive side of the coin of the affective system. Intriguingly, the reorganization is all encompassing and neither

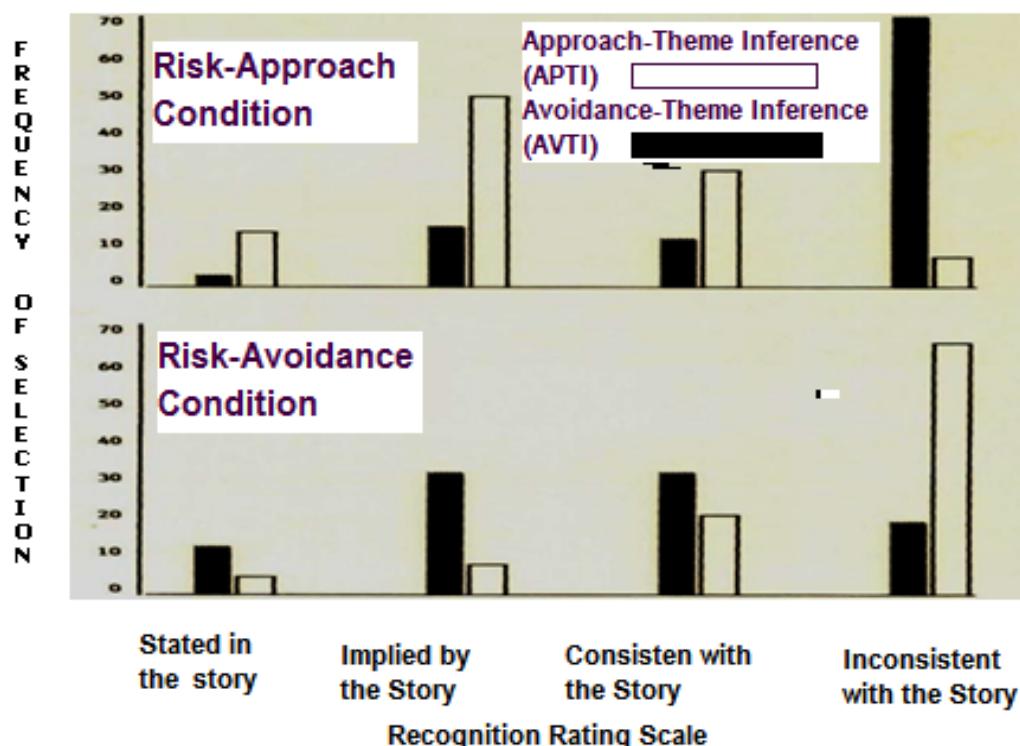


limited to the affective system nor confined to the single-path of left-to-right expectations for what might be coming up later in the story.

In Iran-Nejad's (1989) study, participants in one of the two conditions (20 participants each), representing each one of the two positive/negative affects of the inherent self, read this story (1012 words) along with a risk-avoidance-consistent ending (100 words) in which the female character woke up later on a hospital bed. Participants in the second condition read the same story along with a risk-approach-consistent ending (101 words) in which: (a) the male protagonist in the story turns out to be a Good Samaritan, (b) the female character in the story knew what she was doing when she trusted the guy, and (c) she saved her own life because she was wise and brave. After reading their respective story versions, subjects completed a special recognition test consisting of 18 items, and rated each statement on a 4-point scale anchored as explicitly stated in the story (1), strongly implied by the story (2), consistent with the story (3), and inconsistent with the story (4). All of the inference statements were derived from the beginning portion of the story and none was explicitly stated. Half of the items were avoidance-theme inferences. An example was "*Gabriel threatened Marilyn with a gun*" (Iran-Nejad, 1989, p. 139). The other nine items were approach-theme inferences. An example was "*Gabriel protected Marilyn with a gun*" (Iran-Nejad, 1989, p. 139).

As predicted by the biofunctional perspective, subjects in the risk-avoidance condition rated the avoidance-theme inferences as consistent with the story (2.62) and the approach-theme inferences as inconsistent with the story (3.50). The ratings for the subjects in the risk-approach condition revealed exactly the opposite pattern, providing evidence for a major cross-cutting, reorganization in behind-the-stage understanding and a corresponding outpouring of nondeliberately-organized thoughts and ideas on the stage of knowing. Accordingly, a 2 x 2 mixed ANOVA showed no significant main effects across the two groups or for type of inference within each group. The condition x inference interaction effect was overwhelmingly significant,  $F(1, 38) = 157.38, p < .00$ . As Figure 2 shows, subjects in the two conditions produced diametrically opposite results, revealing a dramatic post-exposure effect, demonstrating the openness of the ground of understanding to change and its open-ground independence from the closed path of semantic interpretation at the original point of exposure to the text.

Interestingly, none of the 18 inferences were explicitly stated in the story. However, subjects in the risk-avoidance interpretation condition rated more than 10% of the avoidance theme inferences as being explicitly stated in the story; subjects in the risk-approach condition rated more than 10% of the approach-theme inferences as being explicitly stated in the story. This suggests that the change in perspective involved not just the open ground of the subjects' understanding but also penetrated all the way to the level of the symbolic knowledge of the text read earlier.



**Figure 2.** Adopted from “A nonconnectionist schema theory of understanding surprise-ending stories” by A. Iran-Nejad (1989), *Discourse Processes*, 12, 127-148. Printed by permission.

### Conclusion

As has been described in this paper, there are at least two main perspectives on the nature of knowing and the knowing-understanding relationship. Information-Processing constructivism assumes that (a) knowing is symbolic knowledge which (b) provides the context for symbolic understanding. The biofunctional perspective suggests that (a) understanding is derived, nonsymbolically, from multiple internal and external sources, (b) understanding provides the embodied ground for knowing, and (c) knowing is better viewed as awareness. Whatever one's perspective on the nature of knowing and its relationship to understanding, it can be agreed that the two perspectives described in this paper have dramatically different implications for theory, research, and educational practice. The research described above is a beginning but future research must continue to separate the relevant grain from the irrelevant chaff in the relationship between human knowing and understanding. Then educational improvements can be created to promote understanding in students.

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**DEVELOPING NURSES FOR NON-CLINICAL ROLES: A STUDY OF LEADERSHIP STYLES**

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**ABSTRACT**

This paper describes results of data gathered between 2001 and 2010 from over 3,000 nurse managers and supervisors who attended communication skills sessions given by professional organizations, universities, hospitals, and medical centers throughout the U.S. Participants completed a personal style preference inventory for four dimensions: Dominance (motivated by control over the tasks and work environment, directing others, and achieving specific, stretch goals), Influence (motivated by interacting with others, giving/receiving immediate feedback, and acknowledging emotions as well as facts), Steadiness (motivated by job security, predictability, and clearly defined expectations), and Conscientiousness (motivated by needing to be correct, working alone, and preferring to work on tasks rather than dealing with people). Based on their scores, participants were initially identified as belonging to one of the four dimensions, and then further identified as one of 15 subcategories of the four dimensions called Classical Patterns. Results of this study show that approximately 73% of the participants scored highest in preferences for Dominance and Conscientiousness. The remaining 27% scored highest in preferences for Influence and Steadiness. When subdivided into the 15 Classical Patterns, 37% of the participants scored highest in only two of the fifteen patterns. This is the first large study of its kind to identify the predominant style preferences of nurse managers, including where their most natural strengths are and where effort is needed to “flex” to meet the various requirements of their management tasks.

*Keywords:* Nurse, Manager, Leadership, DiSC, Style

**Introduction**

The Bureau of Labor Statistics (BLS) reports that Registered Nurses (RNs) in 2003 were the largest healthcare occupation, with employment of over 2.4 million jobs. Women comprised 92.1 percent of RNs. BLS projects that the number of new jobs created for RNs will increase by 27.3 percent between 2002 and 2012 from 2,284,000 to 2,908,000. BLS also projects that total job openings due to growth and net replacements will result in 1.1 million job openings for RNs alone by 2012. As this number grows, the number of nurses who have assumed non-clinical leadership roles in healthcare organizations and hospitals has also grown. In 2009, for example, members in The American Organization of Nurse Executives, the professional organization for nurses in management, numbered 6,500. By 2011, that number had grown to 7,500. In addition, there are 57 master's degree granting nursing programs in the U.S. with concentrations in administration. The American



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College of Healthcare Executives, a 30,000 member organization, has a special interest group for nurse executives listing course offerings in management topics.

In virtually all of these nurse management training vehicles, a session on improving communication skills is included. This paper describes the results of data gathered between 2001 and 2010 from over 3,000 nurses who attended communication skills sessions given by professional organizations, universities, hospitals, and medical centers throughout the U.S. During these communication skills sessions, participants completed the DiSC personal style preference instrument and reported their scores (note: DiSC trademark contains lower case "i"). The DiSC instrument is a self-scoring personal style survey which describes behavior along four dimensions: Dominance (D), relating to control, power and assertiveness; Influence (i), relating to social situations and communication; Steadiness (S), relating to patience, persistence, and thoughtfulness; and Conscientiousness (C), relating to structure and organization.

Based on their scores, participants were initially identified as belonging to one of the four DiSC dimensions, and then further identified as one of 15 subcategories of the four dimensions called Classical Patterns. Results of this study show that approximately 73% of the participants scored highest in preferences for Dominance and Conscientiousness. The behavioral characteristics associated with the Dominance style include being motivated by control over the tasks and work environment, directing others, and achieving specific, stretch goals. In general, those nurse managers with high scores in Dominance tend to be results-focused, fast paced, and value autonomy. The behavioral characteristics associated with the Consciousness style include being motivated by needing to be correct, working alone, and preferring to work on tasks rather than dealing with people. In general, those nurse managers with high scores in Conscientiousness tend to be quality focused, detail oriented, and value logic. The remaining 27% scored highest in preferences for Influence and Steadiness. The behavioral characteristics associated with the Influence style include being motivated by interacting with others, giving/receiving immediate feedback, and acknowledging emotions as well as facts. In general, those nurse managers with high scores in Influence tend to be recognition seeking, fast paced, and search for creativity and variety. The behavioral characteristics associated with the Steadiness style include being motivated by job security, predictability, and clearly defined expectations. In general, those nurse managers with high scores in Steadiness tend to be security focused, patient, and value consistency (Straw, 2002).

When subdivided into the 15 Classical Patterns, 37% of the participants scored highest in only two of the fifteen patterns, Creative and Perfectionist. "Creative" is used to describe those who prefer to take action to get things done while at the same time being careful to do things correctly. This style is often subject to the competing needs of accomplishing tasks quickly and accomplishing them with precision. Speed and perfection vie for equal energy. The term "Creative" suggests that unlike the fourteen other patterns that have a primary style preference and then a secondary, or backup style, the "Creative" style has two equally strong preferences for both DiSC dimensions of Dominance and Conscientiousness. These competing needs often set up a dynamic tension that is difficult to sustain and, therefore, causes some internal stress. Although the "Perfectionist" pattern includes much of the "Creative's" need for precision and exactitude, the "Perfectionist" lacks the need for quick action. On the contrary, individuals in the "Perfectionist" category take their time and are quite



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deliberate. They have a strong need to avoid errors in speech and action and may appear to others as slow and ponderous when it comes to getting things done (Keogh and Martin, 2005).

This is the first large study of its kind to identify the predominant style preferences of nurse managers, including where their most natural strengths are and where effort is needed to “flex” to meet the various requirements of their management tasks (O’Connor, Shewchuck & Raab, 1992). This “style flexing” may represent a challenge for nurses since training in nursing schools and in their post-RN clinical training programs may not discuss the differences between clinical practice and healthcare management.

### **Method**

The data were gathered from continuing medical education courses in communications and leadership which presented information on developing a working relationship with the diverse style preferences found among workers in health care organizations. Participants were nurses in management and leadership roles or planning to be in such roles in the delivery of health services. Management for these nurses is or will be a major element of their professional careers.

Participant counts in the sessions averaged 46, and there were a total of 73 sessions. Each participant received a DiSC instrument to complete during the session. The DiSC is a 28 item, forced choice instrument that requires the respondent to select words that are “most like me” or “least like me” from 28 sets of four words each. Developed by Carlson Learning, the DiSC instrument is based on William Marston’s model of human behavior described in the 1920s (Carlson Learning, 1994).

The DiSC is a reliable and valid instrument and significantly correlates with other well-known instruments in leadership and management such as the Myers-Briggs Type Indicator. Significant correlations were also obtained by comparing DISC scores with the Adult Personality Inventory, Weschler Adult Intelligence Scale, Catell 16 Personality Factor Questionnaire, Minnesota Multiphasic Personality Inventory, and Strong Campbell Interest Inventory (Inscape Publishing, 2005).

A participant’s highest scoring dimension in the DiSC instrument is termed the ‘primary’ style preference and the next highest is the “secondary” or “backup” style preference. Individuals tend to use their primary style as a first choice and “flex” to a backup under changing conditions. In this study, we were interested in finding out what communication styles nurse managers preferred most, and what changes to their preferred styles would be most effective in managing others in a healthcare organization.

### **Results**

Figure 1 shows the distribution of nurses over the four DiSC dimensions. Thirty-eight percent of the nurses were identified in the Dominant dimension, and 35% were identified in the Consciousness dimension.



**Figure 1. Nurse Profiles by Major Type**

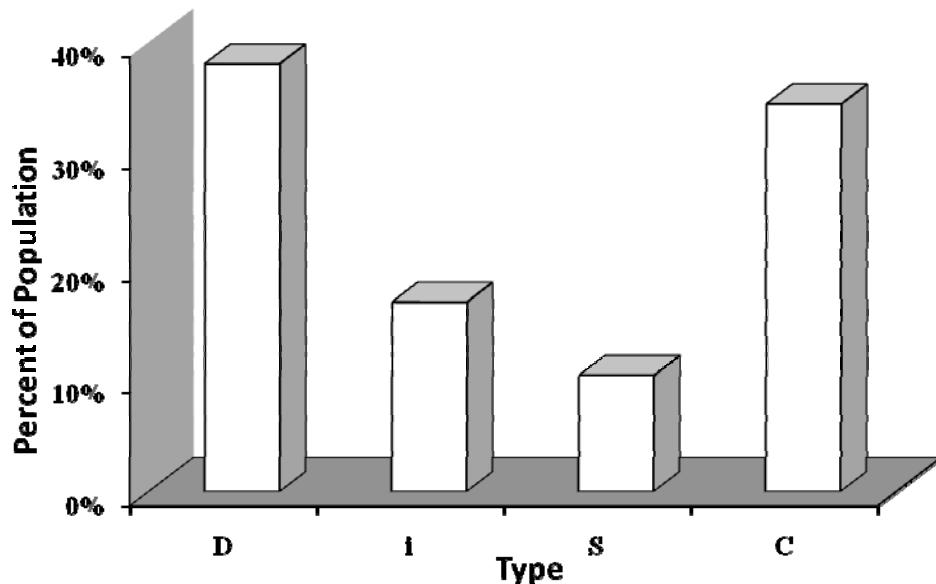
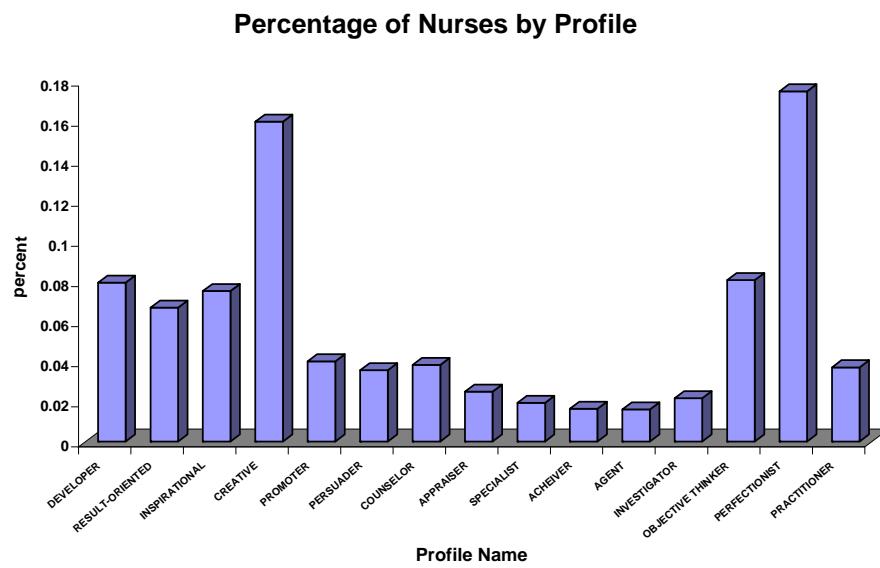


Figure 2 shows the distribution of nurses over the fifteen Classical Patterns of the DiSC instrument. About one third were classified as either Creative or Perfectionist.

**Figure 2**

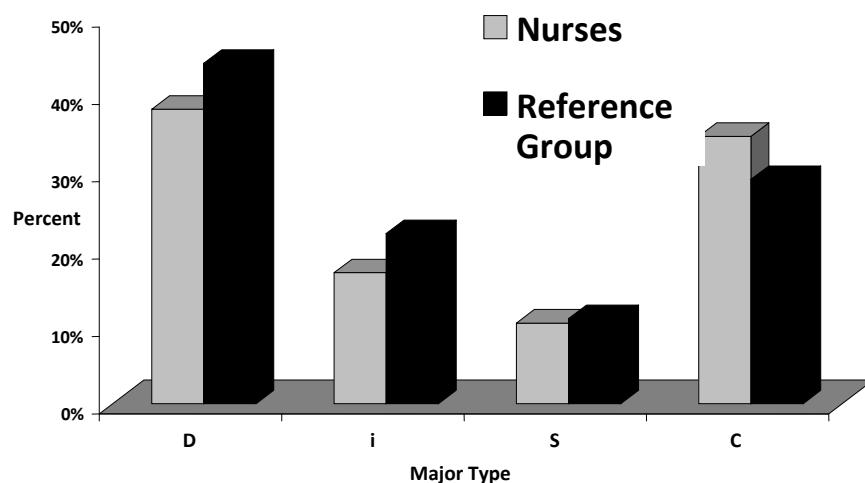


Initially we thought the heavy loadings in D and C dimensions might be an important and distinguishing feature of the particular population from which we were sampling. If, for example, approximately 25% of all individuals should fall into each of the four DiSC dimensions and/or if approximately 1/15<sup>th</sup> should fall into each Classical Pattern, then by any measure our population is very different from the general population.

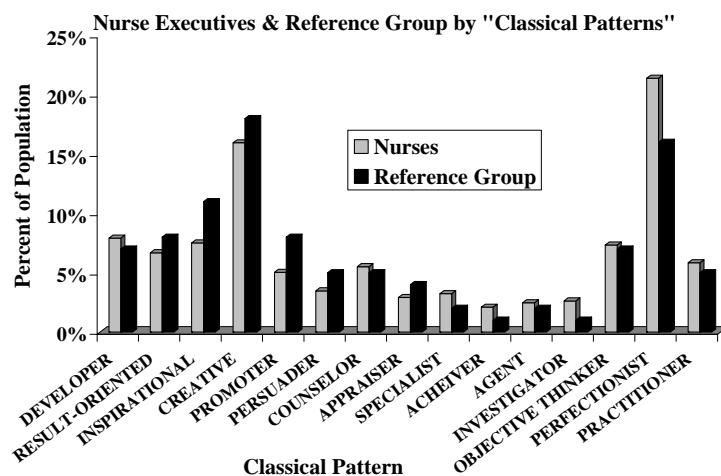


To test the hypothesis that our nurse manager group is in fact atypical, we needed to compare the group with a standardization sample. A 2004 study by Inscape Publishing, the distributor of the DiSC instrument, showed data from a reference group of over 20,000 subjects (Inscape Publishing, 2004). The subjects were fairly representative of the entire population taking the survey. Figure 3 shows the comparison between the reference group and our nurse manager group with percentages for each of the four DiSC dimensions. Figure 4 shows the comparison between the reference group and our nurse manager group with percentages for each of the fifteen Classical Patterns.

**Figure 3: Nurses & Reference Group Profiles by Major Types**



**Figure 4**



With this information on the reference population for the DiSC Profile, we conducted tests for differences between the nurse managers and the reference group. First we calculated the expected number of observations by multiplying the percentage of respondents in each Classical Pattern by 3396, the number of responses from our nurse manager population. Then we calculated the chi-



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square contribution of each Classical Pattern,  $(O_{ij} - E_{ij})^2/E_{ij}$ , summed them to get the observed chi-square. Then we tested the four dimensions (DiSC); each dimension's contribution is  $(O_i - E_i)^2/E_i$ . We used a straight-forward chi-square test and got the following results shown in Table 4: for the cell counts  $\chi^2$  observed 348.56,  $\chi^2$  critical =  $\chi^2(14, .0001) = 45.6$ . For the row calculations, the observed  $\chi^2$  was 229.89 and the critical value was  $\chi^2(3, .0001) = 21.10$ . Thus, for both the cell counts and row counts, there is virtually no chance that the nurses are typical relative to the reference group. Table 1 shows the results for these tests.

<b>Table 1. Aggregate data for the 3396 nurses responses in the sessions</b>					<b>TOTAL</b>	<b>PERCENT</b>
D	DEVELOPER 269	RESULT-ORIENTED 227	INSPIRATIONAL 255	CREATIVE 542	1293	38%
i	PROMOTER 171	PERSUADER 118	COUNSELOR 187	APPRAISER 99	575	17%
S	SPECIALIST 110	ACHEIVER 71	AGENT 84	INVESTIGATOR 89	354	10%
C	OBJECTIVE THINKER 249	PERFECTIONIST 727	PRACTITIONER 198		1174	35%
					3396	100%

<b>Expected cell counts of 3396 nurses responses based on the reference group</b>					<b>TOTAL</b>	<b>PERCENT</b>
D	DEVELOPER 237.72	RESULT-ORIENTED 271.68	INSPIRATIONAL 373.56	CREATIVE 611.28	1494.24	44%
i	PROMOTER 271.68	PERSUADER 169.80	COUNSELOR 169.80	APPRAISER 135.84	747.12	22%
S	SPECIALIST 67.92	ACHEIVER 33.96	AGENT 67.92	INVESTIGATOR 33.96	203.76	6%
C	OBJECTIVE THINKER 237.72	PERFECTIONIST 543.36	PRACTITIONER 169.80		950.88	28%
				<b>TOTAL</b>	3396	100%

<b>Chi-squared calculations for the 3396 nurses</b>					<b>Chi-sq Calculations</b>	
	D	I	S	C	By cells	By rows
	DEVELOPER 4.12	RESULT-ORIENTED 7.35	INSPIRATIONAL 37.63	CREATIVE 7.85	56.94	27.10
i	PROMOTER 37.31	PERSUADER 15.80	COUNSELOR 1.74	APPRAISER 9.99	64.85	39.65
S	SPECIALIST 26.07	ACHEIVER 40.40	AGENT 3.81	INVESTIGATOR 89.20	159.48	110.78
C	OBJECTIVE THINKER 0.54	PERFECTIONIST 62.07	PRACTITIONER 4.68		67.28	52.35
				<b>Chi-square observed</b>	<b>348.56</b>	<b>229.89</b>
				<b>Chi-square critical (alpha = .0001)</b>	<b>42.58</b>	<b>21.11</b>

These results are not at all surprising, since, with such a large sub-group of the population, even a small difference in populations will almost always show up. This is the law of large numbers at work. For example, if a coin toss produces 40% heads, we would probably not perceive the difference from a fair coin if it is tossed just ten times. But as the number of tosses increases, it becomes increasingly apparent that the coin is biased. The physicians are not the same as the rest of those that have taken the DiSC survey and, therefore, the percentage of that group displaying any



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particular personality style will almost certainly differ from the entire population of individuals taking the survey.

What is more interesting than whether or not we can conclude that the two populations differ in some aspect, is whether or not a small, representative group drawn randomly from each population will differ substantially in their compositions. To test for this, we “drew” random samples of 100 responses from the two populations by assuming that each group matched perfectly with its own reference group. We then repeated the chi-square test for differences between these two groups. One issue that would normally arise is what to do about the Classical Patterns with very low, less than five, expected observations. In fact, because we are not really “drawing” our samples randomly from their respective populations but using the population percentages, we can ignore this problem. In addition, we found that those Classical Patterns that were expected to have low counts actually did have counts close to the expected counts and so did not contribute much to the observed chi-square. Table 2 shows the results for this test. We are unable to reject the null hypothesis that the two groups do not differ at either the .01 or .05 significance levels.



**Table 2. Aggregate data for 100 nurses based on nurse population**

					TOTAL	PERCENT
D	DEVELOPER 7.92	RESULT-ORIENTED 6.68	INSPIRATIONAL 7.51	CREATIVE 15.96	38.074205	38%
i	PROMOTER 5.04	PERSUADER 3.47	COUNSELOR 5.51	APPRAISER 2.92	16.931684	17%
S	SPECIALIST 3.24	ACHEIVER 2.09	AGENT 2.47	INVESTIGATOR 2.62	10.424028	10%
C	OBJECTIVE THINKER 7.33	PERFECTIONIST 21.41	PRACTITIONER 5.83		34.570082	35%
					100.0	100%

**Expected cell counts of group of 100 nurses based on the reference group**

					TOTAL	PERCENT
D	DEVELOPER 7.00	RESULT-ORIENTED 8.00	INSPIRATIONAL 11.00	CREATIVE 18.00	44	44%
i	PROMOTER 8.00	PERSUADER 5.00	COUNSELOR 5.00	APPRAISER 4.00	22	22%
S	SPECIALIST 2.00	ACHEIVER 1.00	AGENT 2.00	INVESTIGATOR 1.00	6	6%
C	OBJECTIVE THINKER 7.00	PERFECTIONIST 16.00	PRACTITIONER 5.00		28	28%
					TOTAL	100
						100%

**Chi-squared calculations for group of 100 nurses**

					Chi-sq Calculations	
D	DEVELOPER 0.12	RESULT-ORIENTED 0.22	INSPIRATIONAL 1.11	CREATIVE 0.23	By cells	By rows
i	PROMOTER 1.10	PERSUADER 0.47	COUNSELOR 0.05	APPRAISER 0.29	1.68	0.80
S	SPECIALIST 0.77	ACHEIVER 1.19	AGENT 0.11	INVESTIGATOR 2.63	1.91	1.17
C	OBJECTIVE THINKER 0.02	PERFECTIONIST 1.83	PRACTITIONER 0.14		4.70	3.26
					1.98	1.54
				Chi-square observed	10.26	6.77
				Chi-square critical(.05)	23.68	7.81
				Chi-square critical(.01)	29.14	11.34
				No. of nurses needed		
				alpha = .05	231	115
				alpha = .01	284	168

This led us to ask the question, “just how large a sample would we need to find a significant difference between two groups drawn from their respective populations, if the groups were perfectly representative of those populations?” As it turns out, in this case this is actually very easy to answer, as each Classical Pattern contribution to the observed chi-square is proportional to the sample size. To see this, look at what happens if we double the number in the samples:  $(O_{ij} - E_{ij})^2/E_{ij}$  becomes  $(2O_{ij} - 2E_{ij})^2/2E_{ij} = 4(O_{ij} - E_{ij})^2/2E_{ij} = 2(O_{ij} - E_{ij})^2/E_{ij}$ ; that is, the contribution of the each Classical Pattern just doubles.

The critical chi-square for  $\alpha = .05$  is the same regardless of the sample size; for the Classical Pattern counts, the degrees of freedom is the number of Classical Patterns – 1 = 14 and  $\chi^2(14, .05) = 23.685$ . Since the chi-square observed for  $n = 100$  is 10.26, the required sample size for rejecting the null hypothesis of no difference on average is  $23.685/10.26*100 = 231$  physicians. For the row (DiSC dimension) counts test, the degrees of freedom is the number of rows – 1 = 3 and at the 5% level of significance,  $\chi^2(3, .05) = 6.77$ . You would need  $7.81/6.77*100 = 115$  nurses. Similarly, at the 1%



significance level, the group sizes would need to be 284 nurses for the Classical Pattern counts and 168 nurses for the row (DiSC dimension) counts. We compared these results with the number of nurses that typically attend these sessions. On average, 45 nurses attended and the median number of attendees was only 43. The maximum number at any session was 123 nurses. Almost all of the sessions were attended by fewer participants than required to reject the null hypothesis of no difference between the nurse groups and the reference group for the row or the cell counts. In other words, to the “naked eye” the nurse groups would appear to be from the general population. Chart 1 presents a descriptive summary of the numbers of nurse executives attending the sessions.

<b>Chart 1: Condescriptive of the Nurses' Sessions</b>	
<b>Mean</b>	<b>45.9</b>
<b>Standard Error</b>	<b>2.5</b>
<b>Median</b>	<b>43</b>
<b>Mode</b>	<b>47</b>
<b>Standard Deviation</b>	<b>21.8</b>
<b>Sample Variance</b>	<b>475.2</b>
<b>Kurtosis</b>	<b>2.2</b>
<b>Skewness</b>	<b>1.2</b>
<b>Range</b>	<b>114</b>
<b>Minimum</b>	<b>9</b>
<b>Maximum</b>	<b>123</b>
<b>Sum</b>	<b>3396</b>
<b>Count</b>	<b>74</b>

### Discussion and Conclusions

Individuals tend to have a preference for a “primary” style, their preferred behavioral pattern, followed by a “backup” style, which they may use when their surroundings dictate a change. Most people have a strong preference for the “primary” style and may tend to use that style exclusively when interacting with others. The strength of the Dominance dimension is the ability to make quick decisions, while the strength of the Conscientiousness dimension is attention to detail and accuracy. Given that such a large proportion of nurse managers in this study received their highest scores in two of the four dimensions, Dominance and Conscientiousness, two conclusions can be drawn:

Nurse managers tend to prefer short-term tasks over which they have a great deal of control.

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Nurse managers tend to have a lower preference for interacting with others socially or using social situations to motivate others, and may show impatience in gaining the cooperation of others to accomplish organizational goals.

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The role of the nurse manager, however, often requires patience as well as tolerance for ambiguity. These are the weakest attributes of the Dominance and Conscientiousness dimensions. The nurse manager's role often requires aligning the efforts of others to get tasks completed. In order to accomplish management tasks, nurse managers may at first need a relatively significant amount of energy to flex from the Dominance or Conscientiousness domains to the Influence or Steadiness domains.

The amount of energy necessary for "attribute flexing" will depend on how strong the individual's preferences are for a single dimension. The need for that energy, however, decreases with practice. In time, "attribute flexing" becomes second nature. It is a clear sign that the person has achieved command not only of their natural strengths, but of the supplemental strengths that are required for organizational success. This is not to say that nurses will have difficulty being effective executives. They can be more effective, however, if they make an effort to "flex" to include those attributes outside their core strengths. The Influence dimension, as measured by the DiSC, is the ability to make a favorable first impression and interact with others in an easy, cordial manner. The Steadiness dimension is the ability to weigh multiple factors of a situation and look at the long term consequences. The combination of understanding one's "primary" dimension and being aware of the need to flex to a backup dimension can create a powerful set of internal resources for physician leadership skills (Martin & Keogh, 2004).

It is important to remember that no single style is good or bad. All styles are valuable. For nurse managers, however, it is important to become aware of their own style preferences so they can "flex" to the styles of others when necessary. "Attribute flexing," as described above, enhances the ability of nurse managers to interact with others. It suggests a practical method for more effective leadership in healthcare. The results of this study suggest that nurse managers can improve their effectiveness by learning to "flex" out of their core strengths.

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**THE IMPACT OF INCORPORATING THE WTP/WTA DIFFERENCE ON THE COST-EFFECTIVENESS OF  
HEALTHCARE TREATMENTS**

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**ABSTRACT**

**Purpose:** The purpose of this paper is to explore the impact of incorporating the observed difference between the value of the willingness to pay (WTP) for a gain and the value of the willingness to accept (WTA) for a loss into cost-effectiveness analyses of healthcare treatments. Past work has shown a substantial WTP/WTA difference. Virtually all published cost-effectiveness analyses implicitly assume a  $WTP = WTA$  standard. Specifically, this paper considers the implications for the cost-effectiveness of treatments and for the expected values of cost and effectiveness of healthcare treatments. **Approach:** This paper first presents a brief summary of recent work on the theoretical relevance of the WTP/WTA difference in the health economics literature. This paper then presents a numerical example to examine the impact of a  $WTP \neq WTA$  standard on cost-effectiveness. This paper considers this impact in both the incremental cost effectiveness ratio (ICER) and the incremental net benefit (INB) formulations of cost-effectiveness analysis. Finally, this paper formally develops the impact of a  $WTP \neq WTA$  standard on expected cost and effect of healthcare treatments. **Findings:** This paper finds that a  $WTP \neq WTA$  standard can have an impact on the cost-effectiveness of treatments. This paper derives the appropriate correction factor for the net benefit of proposed treatments that are less effective than the initial standard of treatment. This paper finds that a  $WTP \neq WTA$  standard will increase both expected cost and effect. **Value:** This paper contributes to the debate in the literature on appropriateness of incorporating the observed WTP/WTA difference into cost-effectiveness analysis. This is the first paper to examine formally the impact of incorporating this difference on future expected costs and effectiveness. It is also one of the few papers to discuss the incremental cost-effectiveness ratio in cost-effectiveness space.

**Keywords:** Cost-Effectiveness Analysis, Willingness-To-Accept

**Introduction**

The generally accepted convention in cost-effectiveness analysis (CEA) is to adopt a  $WTP = WTA$  standard, i.e., that the value of willingness to pay (WTP) for a one-unit increase in effect is equal to the value of willingness to accept (WTA) for a one-unit decrease in effect. Some have suggested adopting a  $WTP \neq WTA$  standard allowing for a difference in these values in the evaluation of new treatments.

One of the primary tools of cost-effectiveness analysis is the incremental cost-effectiveness ratio (ICER):



$$ICER = \frac{C_1 - C_0}{E_1 - E_0} \quad (1)$$

The ICER is the ratio of the difference in cost between the initial standard treatment ( $C_0$ ) and the proposed treatment ( $C_1$ ) to the difference in effect between the initial standard treatment ( $E_0$ ) and the proposed treatment ( $E_1$ ). Often the results are presented in the incremental cost-incremental effectiveness plane, with the difference in effect measured on the horizontal axis and the difference in cost measured on the vertical axis.

Recent work has focused on the incremental net benefit approach. Net benefit is calculated for both initial standard treatment and the proposed treatment as follows.

$$NB_t = \lambda * E_t - C_{t\#} \quad (2)$$

Where  $\lambda$  is an exogenously determined value of a unit of effect. The proposed treatment is said to be cost-effective if the difference between the net benefit of the initial standard treatment and the new treatment is positive.

A proposed treatment with a difference in cost and difference in effect located in the northeast quadrant (quadrant I) of the incremental cost-incremental effectiveness plane has higher effect and higher cost than the control. The treatment is said to be cost-effective if the ICER is below a given value of willingness to pay (WTP) additional resources for an additional unit of effect.

A proposed treatment with a difference in cost and difference in effect located in the southwest quadrant (quadrant III) has lower effect and lower cost than the control. The treatment is said to be “cost-effective” if the ICER is above a given value of willingness to accept (WTA) resources gains for a lower unit of effect.

Graphically, a treatment is considered cost-effective if it is located below the “price line” of the effect, either the “buying price” in quadrant I, or the “selling price” in quadrant III (O’Brien, et al., 2002).

Basic microeconomic theory suggests Hicksian measures of WTP and WTA should be roughly equal with the exception of small income effects. In practice, there is often observed a substantial WTP/WTA disparity. O’Brien et al. summarize recent estimates of the WTA to WTP ratio, finding ratios ranging 3.2 to 89.4 for environmental studies, 1.9 to 6.4 for healthcare studies, 1.1 to 3.6 for safety studies, and 1.3 to 2.6 for experimental studies (2002).

### Literature review

Recent work has questioned if (and how) this WTP/WTA disparity should be incorporated into a CEA. Gandjour is one of the very few authors to suggest that loss aversion should be handled with changes to either the numerator (in the cost difference) or the denominator (in the effect difference) of the ICER (2008). In his illustrative example, he adjusts the QALYs of effect using the



probability of physician-assisted suicide to avoid a less effective treatment and compares this new, adjusted cost-utility ratio to a constant threshold. Most other authors argue for or against incorporating a WTP/WTA disparity in the context of changing threshold values used to interpret the ICER.

O'Brien et al. suggest that it is appropriate to consider a different threshold value in the southwest quadrant than in the northeast quadrant based on the observed WTP/WTA disparity (2002). If collective preference is some aggregation of individual preferences and individual preferences display a WTP/WTA disparity, then from a welfarist perspective, collective preference should display a WTP/WTA disparity.

Dowie strongly disagrees with the assertion that individual preferences exhibiting a WTP/WTA disparity necessitate a kinked threshold for collective preferences, that there is a difference between the opportunity cost and opportunity benefit of increased or decreased healthcare spending internal to an individual and in a public system including other individuals (2005). Appealing to a Rawlsian-type justification, self-interested individuals through time living behind a “veil of ignorance” would prefer identical threshold values for gains and loss.

Severens et al. lay out the method to incorporate a WTP/WTA disparity into a cost-effectiveness acceptability curve (CEAC) (2005). Different threshold values are used in the southwest quadrant to count the proportion of bootstrap replicates that are cost-effective for different values of incremental cost-effective ceiling ratios ([2](#)). They suggest presenting the CEACs associated with different levels of disparity ratio (including 1 and infinity) on a single graph as a way to present this information to relevant stakeholders.

Willan et al. lay out the method to incorporate a WTP/WTA disparity into a CEA using a Bayesian framework of the incremental net benefit method (2001). Simply, the posterior probability distribution for the incremental net benefit is estimated by splitting the integration of the joint density (of change in cost and change in effect) into positive effect differences and negative effect differences, allowing for a difference in willingness to pay and willingness to accept.

### **Impact of standard on rank ordering**

The following hypothetical cost and effect data for three different treatments will show the impact of different standards on the rank order of treatments. First a  $WTP = WTA$  standard is considered, under which, choice of initial standard treatment has no impact. Then, a  $WTP \neq WTA$  standard is considered, under which choice of initial standard treatment does have an impact on the rank ordering of treatments.



Table 1

*Cost and Effect Information for Three Treatments*

Treatment	Cost	Effect (in QALY gained)
Treatment X	\$20,000	2.50
Treatment Y	\$40,000	5.00
Treatment Z	\$25,000	3.75

**Example 1: WTP = WTA standard**

Consider first treatment X as the initial standard treatment. Note that both, treatment Y and treatment Z are more costly and more effective than the initial standard. Both treatments are located in quadrant I of the incremental cost-incremental effectiveness plane (using treatment X as the initial standard treatment) (figure 1).

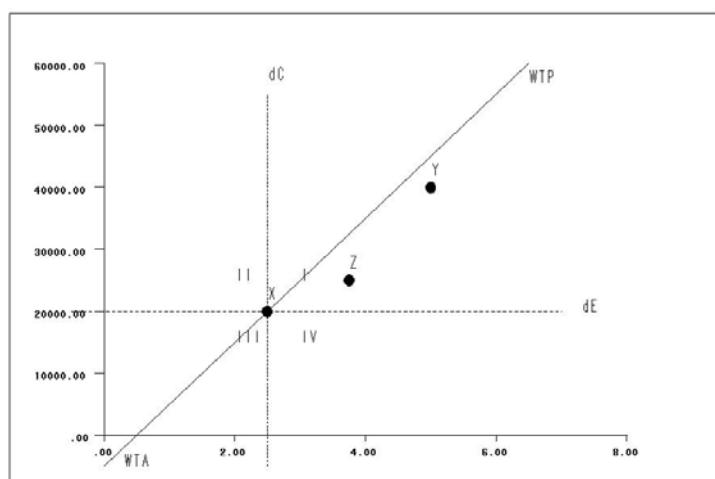


Figure 1. *Treatment X as Initial Standard, WTP = WTA*

Consider the following calculation of the ICER using treatment X as the initial standard treatment and the calculation of net benefit using the \$10,000/QALY value as the willingness to pay (table 1). Assume that the given threshold for adopting a treatment is \$10,000/QALY. Both treatment Y and treatment Z represent cost-effective gains over the initial standard that are reasonable given the value of QALY. Both treatment Y and treatment Z are considered cost-effective ( $\text{ICER} < \lambda_{WTP}$ , INB  $> 0$ ).

Table 2

*ICER and Net Benefit with Treatment X as Standard Treatment, WTP = WTA*

Treatment	ICER (dC/dE)	Quadrant	NB ( $\lambda * E - C$ )	INB (dNB)
Treatment X	-	-	\$5,000.00	-
Treatment Y	\$8000/QALY	I	\$10,000.00	\$5,000.00
Treatment Z	\$4000/QALY	I	\$12,500.00	\$7,500.00

Now consider treatment Y as the initial standard treatment. Both treatments X and Z are less expensive, but also less effective than treatment Y (table 3). These treatments would be located in



quadrant III of the incremental cost-incremental effectiveness plane (using treatment Y as the initial standard treatment) (figure 2).

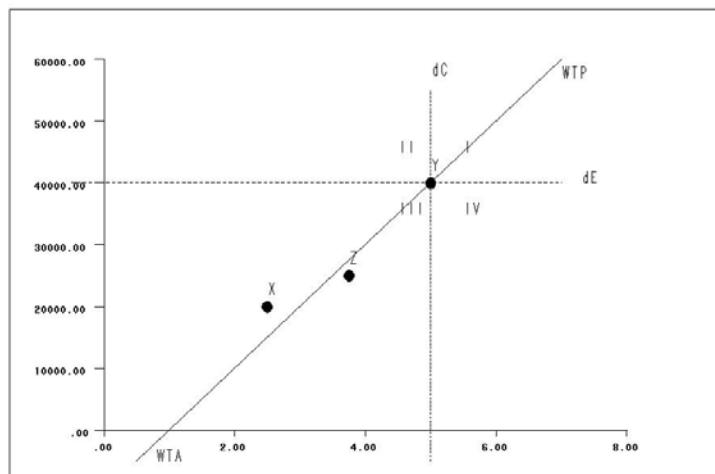


Figure 2. Treatment Y as Initial Standard, WTP = WTA

Again, using a value of \$10,000/QALY for a value of willingness to pay for an additional unit of effect (and assuming this is equal to the value of willingness to accept a lower unit of effect), treatment Z is considered cost-effective ( $ICER > \lambda_{WTA}$ ,  $INB > 0$ ), but treatment X is not considered cost-effective ( $ICER < \lambda_{WTA}$ ,  $INB < 0$ ). Only treatment Z is below the QALY price line.

Table 3

*ICER and Net Benefit with Treatment Y as Standard Treatment, WTP = WTA*

Treatment	ICER (dC/dE)	Quadrant	NB ( $\lambda^*E - C$ )	INB (dNB)
Treatment X	\$8000/QALY	III	\$5,000.00	-\$5,000.00
Treatment Y	-	-	\$10,000.00	-
Treatment Z	\$12000/QALY	III	\$12,500.00	\$2,500.00

Finally, consider treatment Z as the initial standard treatment. Treatment X is less effective, but also less costly (quadrant III using treatment Z as the initial standard treatment) (figure 3). Treatment Y is more effective, but also more expensive (quadrant I using treatment Z as the initial standard treatment).

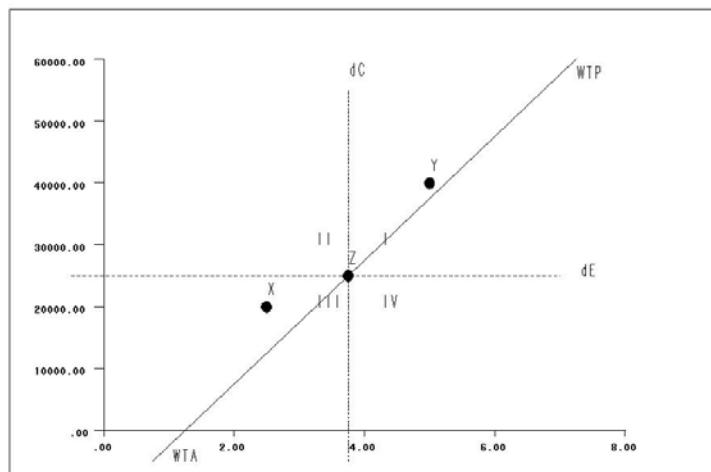


Figure 3. *Treatment Z as Initial Standard, WTP = WTA*

Using a value of \$10,000/QALY for a value of willingness to pay for an additional unit of effect (and assuming this is equal to the value of willingness to accept an lower unit of effect), neither treatment X nor treatment Y are considered cost-effective ( $\text{ICER} < \lambda_{WTA}$ ,  $\text{INB} < 0$  and  $\text{ICER} > \lambda_{WTP}$ ,  $\text{INB} < 0$ ). Neither treatment X nor treatment Y are below the price line.

Table 4

*ICER and Net Benefit with Treatment Z as Standard Treatment, WTP = WTA*

Treatment	ICER (dC/dE)	Quadrant	NB ( $\lambda^*E - C$ )	INB (dNB)
Treatment X	\$4000/QALY	III	\$5,000.00	-\$7,500.00
Treatment Y	\$12000/QALY	I	\$10,000.00	-\$2,500.00
Treatment Z	-	-	\$12,500.00	-

When the value of willingness to pay for a one-unit increase in effect is equal to the value of willingness to accept for a one-unit decrease in effect, the choice of initial treatment has no impact on the rank ordering for a CEA. Treatment Y is preferred to Treatment X. Treatment Z is preferred to treatment Y. Treatment Z is preferred to Treatment X. To directly address the concern of Claxton et al., the historical accident of which alternative is treated as initial standard treatment is irrelevant to determination of cost-effectiveness under a  $\text{WTP} = \text{WTA}$  standard. In terms of a chronological story of the evolution of treatment, the order of discovery does not matter.

#### Example 2: $\text{WTP} \neq \text{WTA}$ standard

Consider now the impact of incorporating the  $\text{WTP}/\text{WTA}$  disparity into the interpretation of the ICER. Assume that WTA is a scaled value of WTP ( $\delta > 1$ ).

$$\lambda_{WTA} = \delta * \lambda_{WTP} \quad (3)$$

Allowing for this disparity will have the effect of rotating the willingness to accept line toward the incremental cost axis that is below the treatment used as the initial standard in the incremental cost-incremental effectiveness plane.



Again, a new treatment with a greater level of effect as well as a higher level of cost (located in quadrant I of the incremental cost-incremental effectiveness plane) is considered cost-effective if the ICER is less than the willingness to pay for a per-unit increase in effect. A new treatment with a lower level of effect as well as lower level of cost (located in quadrant III of the incremental cost-incremental effectiveness plane) is considered cost-effective if the ICER is greater than the willingness to accept for a per-unit decrease in effect.

Additionally, the WTP/WTA disparity can be incorporated into the net benefit framework. Net benefit is calculated differently for treatments that are more effective than the initial standard treatment ( $E \geq E_0$ ) than for treatments that are less effective than the initial standard treatment ( $E < E_0$ ).

$$NB = \begin{cases} \lambda_{WTP} * E - C & \text{If } E \geq E_0 \\ \lambda_{WTA} * E - C - \sigma & \text{If } E < E_0 \end{cases} \quad (4)$$

Where

$$\lambda_{WTA} = \delta * \lambda_{WTP}$$
$$\sigma = \lambda_{WTP} * E_0 (\delta - 1)$$

For simplicity, this example assumes that  $\delta = 2$ , or that WTA = 2\*WTP. WTA = 2\*\$10,000/QALY. Here the willingness to pay is \$10,000/QALY for a one-unit increase in QALY, but the willingness to accept is \$20,000/QALY for a one-unit decrease in QALY.

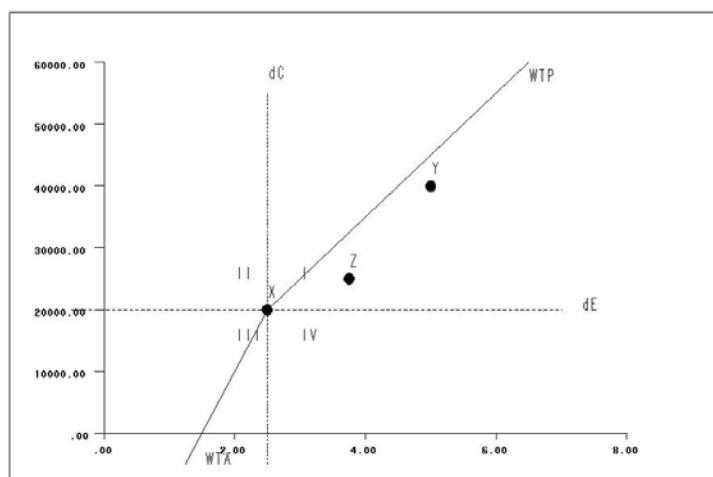


Figure 4. Treatment X as Initial Standard,  $WTP \neq WTA$

Consider again treatment X as the initial standard treatment. Given that both treatment Y and treatment Z have a larger effect than the initial standard treatment ( $E > E_0$ ), both are determined cost-effective, given the willingness to pay for an additional unit of effect exactly as before. Both treatment Y and treatment Z are below the kinked QALY price line. The determination of a treatment as cost-effective is independent of  $\delta$  when the effect is greater than the effect of the initial standard treatment.



Table 5

*ICER and Net Benefit with Treatment X as Standard Treatment, WTP ≠ WTA*

Treatment	ICER (dC/dE)	Quadrant	NB	INB (dNB)
Treatment X	-	-	\$5,000.00	-
Treatment Y	\$8000/QALY	I	\$10,000.00	\$5,000.00
Treatment Z	\$4000/QALY	I	\$12,500.00	\$7,500.00

Next consider treatment Y as the initial standard treatment. Again, both treatment X and treatment Z are less effective and less costly than treatment Y (located in quadrant III). Neither treatment is cost-effective when the willingness to accept for a one-unit decrease in effect is \$20,000/QALY (ICER <  $\Delta_{WTA}$ , INB < 0). Neither treatment is below the kinked QALY price line. In contrast to the earlier, treatment Z is no longer considered cost-effective.

Table 6

*ICER and Net Benefit with Treatment Y as Standard Treatment, WTP ≠ WTA*

Treatment	ICER (dC/dE)	Quadrant	NB	INB (dNB)
Treatment X	\$8000/QALY	III	-\$20,000.00	-\$30,000.00
Treatment Y	-	-	\$10,000.00	-
Treatment Z	\$12000/QALY	III	\$0.00	-\$10,000.00

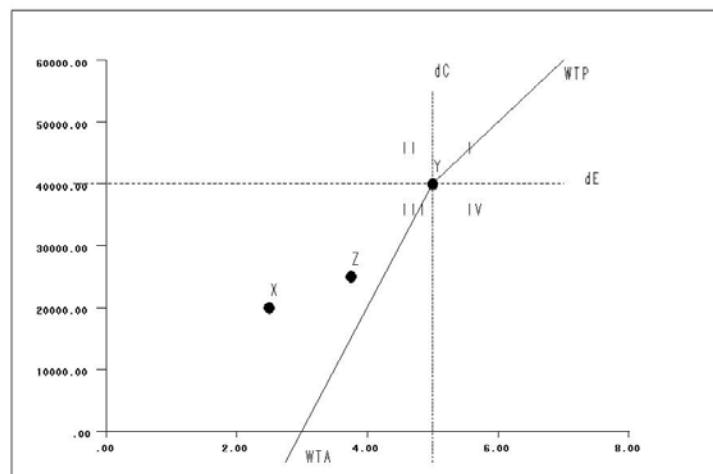


Figure 5. *Treatment Y as Initial Standard, WTP ≠ WTA*

Finally, consider treatment Z as the initial standard treatment. Treatment Y is more effective and more costly (quadrant I) and thus, the determination of treatment Y as cost-effective is exactly the same under a  $WTP = WTA$  standard. It is not cost-effective given the willingness to pay for a one-unit increase in effect (ICER >  $\Delta_{WTP}$ , INB < 0).

Treatment X is less effective and less expensive (quadrant III), but was not cost-effective under a  $WTP = WTA$ . Incorporating the  $WTP \neq WTA$  disparity essentially increases the standard for cost-effectiveness in quadrant III. Any treatment located in quadrant III that was not cost-effective under the  $WTP = WTA$  standard will also not be cost-effective under the  $WTP \neq WTA$  standard.



Table 7

*ICER and Net Benefit with Treatment Z as Standard Treatment, WTP ≠ WTA*

Treatment	ICER (dC/dE)	Quadrant	NB	INB (dNB)
Treatment X	\$4000/QALY	III	-\$7,500.00	-\$20,000.00
Treatment Y	\$12000/QALY	I	\$10,000.00	-\$2,500.00
Treatment Z	-	-	\$12,500.00	-

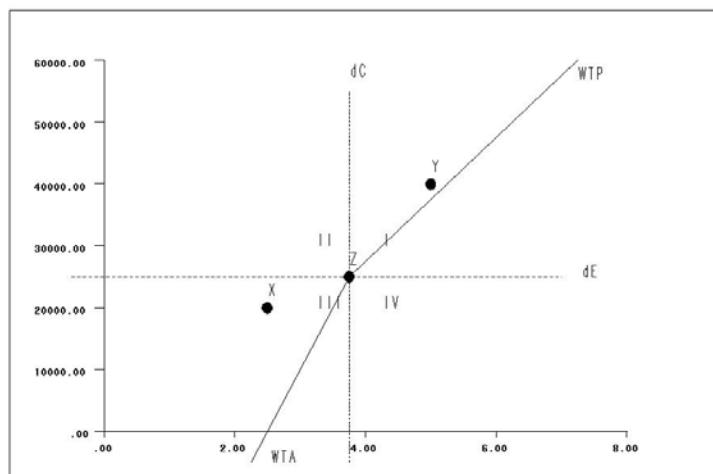


Figure 6. *Treatment Z as Initial Standard, WTP ≠ WTA*

When the value of willingness to pay for a one-unit increase in effect is different than the value of willingness to accept a one-unit decrease in effect, the choice of initial treatment does have an impact on the rank ordering for a CEA (table 8). Under the WTP = WTA standard, treatment Z is cost-effective compared to treatment Y independent of the choice of initial standard treatment. However, under the WTP ≠ WTA standard, treatment Z is cost-effective compare to treatment Y if treatment X or treatment Z is the initial standard treatment. Treatment Y is cost-effective compared to treatment Z if treatment Y is the initial standard treatment.

Under a WTP ≠ WTA standard, the historical accident of which alternative is treated as the initial standard treatment *does* influence the determination of cost-effectiveness. In terms of a chronological story of the evolution of treatment, the order of discovery matters.

Table 8

*Summary of Cost-Effective Determination Under Different Initial Standards*

Initial Standard Treatment	WTP = WTA			WTP ≠ WTA		
	X,Y	X,Z	Y,Z	X,Y	X,Z	Y,Z
X	X < Y	X < Z	Y < Z	X < Y	X < Z	Y < Z
Y	X < Y	X < Z	Y < Z	X < Y	X < Z	Y > Z
Z	X < Y	X < Z	Y < Z	X < Y	X < Z	Y < Z

This paper shows that the choice of standard will have an impact on the rank ordering of treatments, an important consideration in a healthcare resource constrained environment.



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**CULTUROMICS:  
A NEW WAY TO SEE TEMPORAL CHANGES IN THE PREVALENCE OF WORDS AND PHRASES**

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## **ABSTRACT**

This paper will describe and report on the new field of Culturomics which is capable of quickly quantifying cultural trends based upon a massively large database. Specifically, a browser allows the user to see the frequency of words and phrases over time between 1800 and 2000. Users can search different collections of books, called “corpora”, or books in such languages as English, Chinese, and French. Currently there exists time series for the two billion words and phrases, based on 5.2 million books written in seven languages. The near future will see newly developed instructions on how this time series analysis can be used. These datasets were generated in July 2009 and continual updates to these datasets will occur as book scanning continues. These updated versions will have distinct and persistent version identifiers (20090715 for the current set).

## **Introduction**

### **The Google Labs n-gram viewer**

The n-gram viewer enables the user to look through about 5.2 million books; about 4% of all books published. Single words represent a 1-gram while phrases are described as n-gram where n = the number of words in the phrase. Entry of a single word or non-word or a multi-word phrase results in a time-series graph showing the prevalence of that term or phrase for each year between 1800 and 2000. Examples of a few searches are seen below.

### **The Corpora**

Different collections of books represent the corpora; Corpora are available in English, Chinese, French, German, Hebrew, Russian, and Spanish. Users are able to examine words and phrases from each corpus so as to compare the time-series usage of words and phrases between languages.

### **What is this all about?**

Michelle, Jean-Baptiste, et al (2010) have nicely summarized what Culturomics provides: “We constructed a corpus of digitized texts containing about 4% of all books ever printed. Analysis of this corpus enables us to investigate cultural trends quantitatively. We survey the vast terrain of “culturomics”, focusing on linguistic and cultural phenomena that were reflected in the English language between 1800 and 2000. We show how this approach can provide insights about fields as diverse as lexicography, the evolution of grammar, collective memory, the adoption of technology, the pursuit of fame, censorship, and historical



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epidemiology. "Culturomics" extends the boundaries of rigorous quantitative inquiry to a wide array of new phenomena spanning the social sciences and the humanities."

### Manuscript

#### The Dataset

The file format of the datasets consists of zipped tab-separated data and the format for each line is:  
ngram TAB year TAB match\_count TAB page\_count TAB volume\_count NEWLINE

Here is the illustration of what the data looks like:

Here are the 30,000,000th and 30,000,001st lines from file 0 of the English 1-grams (googlebooks-eng-all-1gram-20090715-0.csv.zip):

circumvallate 1978 313 215 85

circumvallate 1979 183 147 77

The first line tells us that in 1978, the word "circumvallate" (which means "surround with a rampart or other fortification") occurred 313 times overall, on 215 distinct pages and in 85 distinct books from our sample.

Here's the 9,000,000th line from file 0 of the English 5-grams (googlebooks-eng-all-5gram-20090715-0.csv.zip):

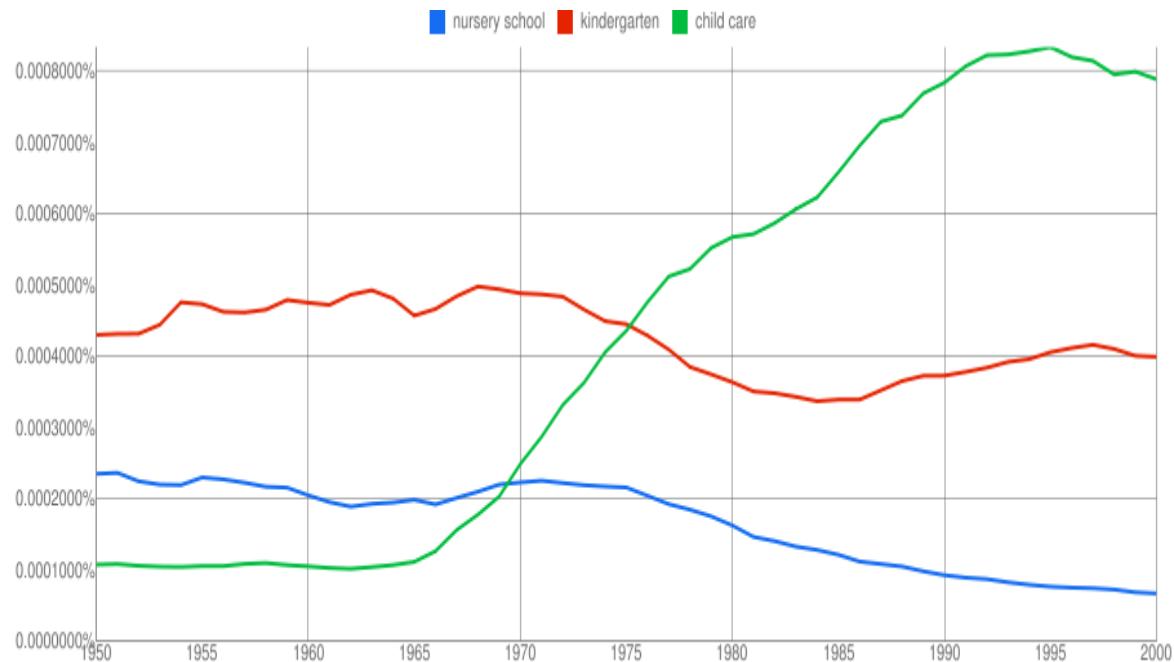
analysis is often described as 1991 1 1 1

In 1991, the phrase "analysis is often described as" occurred one time, and on one page, and in one book .

Inside each file the ngrams are sorted alphabetically and then chronologically. Note that **the files themselves aren't ordered with respect to one another**. A French two word phrase starting with 'm' will be in the middle of one of the French 2gram files, but there's no way to know which without checking them all.

When you enter phrases into the Google Books Ngram Viewer, it displays a graph showing how those phrases have occurred in a corpus of books (e.g., "British English", "English Fiction", "French") over the selected years. Let's look at a sample graph:

For example when you enter the following terms, nursery school, kindergarten, child care, the resulting graph results:



The y-axis shows that of all the bigrams contained in our sample of books written in English and published in the United States, the percentage of them that are "nursery school" or "child care"? Of all the unigrams, the percentage of them that are "kindergarten"? One can see that use of the phrase "child care" started to rise in the late 1960s, overtaking "nursery school" around 1970 and then "kindergarten" around 1973. It peaked shortly after 1990 and has been falling steadily since." Michels, et al (2010)

#### The Corpora

Below are descriptions of the corpora that can be searched with the Google Books Ngram Viewer. All of these corpora were generated in July 2009; and will be updated as the book scanning continues. Each of the updated versions will have distinct persistent identifiers.

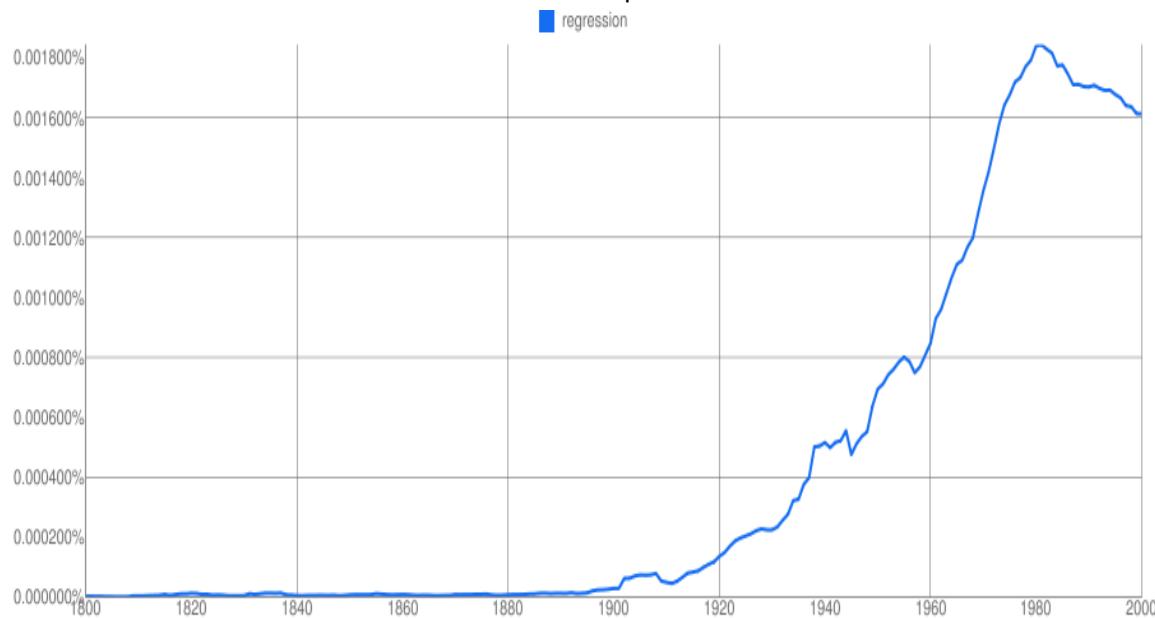
Informal corpus name	Persistent identifier	Description
American English	googlebooks-eng-us-all-20090715	Same filtering as the English corpus but further restricted to books published in the United States.
British English	googlebooks-eng-gb-all-20090715	Same filtering as the English corpus but further restricted to books published in Great Britain.
Chinese (simplified)	googlebooks-chi-sim-all-20090715	Books predominantly in simplified Chinese script.
English	googlebooks-eng-all-	Similar to Google Million, but not filtered by



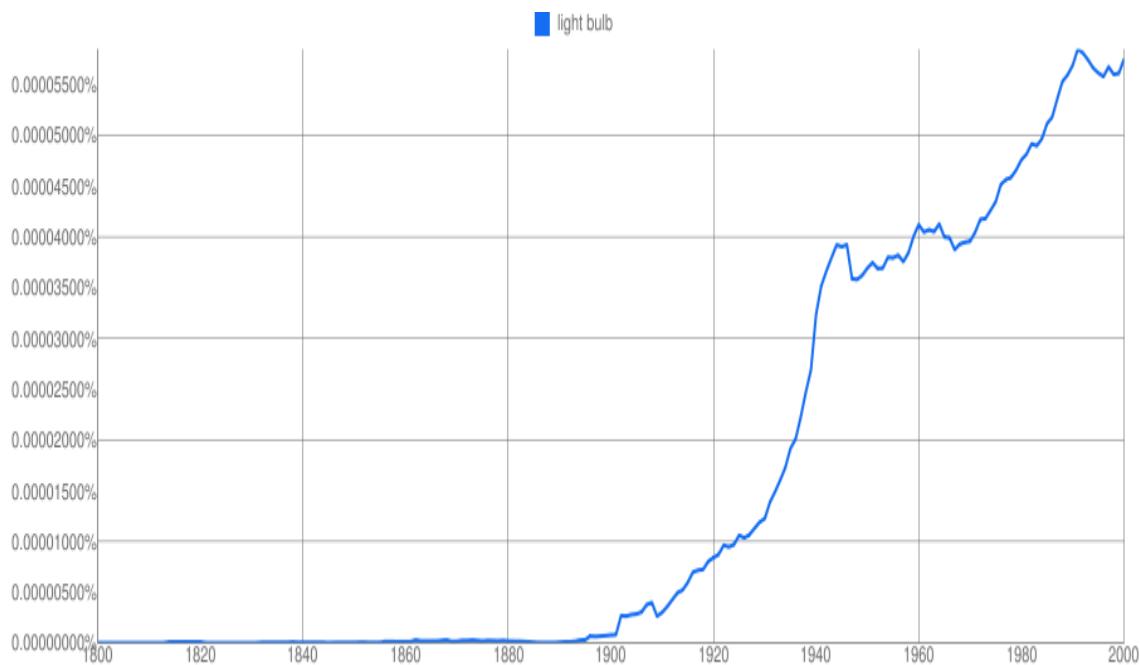
Informal corpus name	Persistent identifier	Description
	20090715	subject and with no per-year caps.
English Fiction	googlebooks-eng-fiction-all-20090715	Same filtering as the English corpus but further restricted to fiction books.
English One Million	googlebooks-eng-1M-20090715	The "Google Million". All are in English with dates ranging from 1500 to 2008. No more than about 6000 books were chosen from any one year, which means that all of the scanned books from early years are present, and books from later years are randomly sampled. The random samplings reflect the subject distributions for the year (so there are more computer books in 2000 than 1980). Books with low OCR quality were removed, and serials were removed.
French	googlebooks-fre-all-20090715	Books predominantly in the French language.
German	googlebooks-ger-all-20090715	Books predominantly in the German language.
Hebrew	googlebooks-heb-all-20090715	Books predominantly in the Hebrew language.
Spanish	googlebooks-spa-all-20090715	Books predominantly in the Spanish language.
Russian	googlebooks-rus-all-20090715	Books predominantly in the Russian language.



Some Other Examples Of Searches



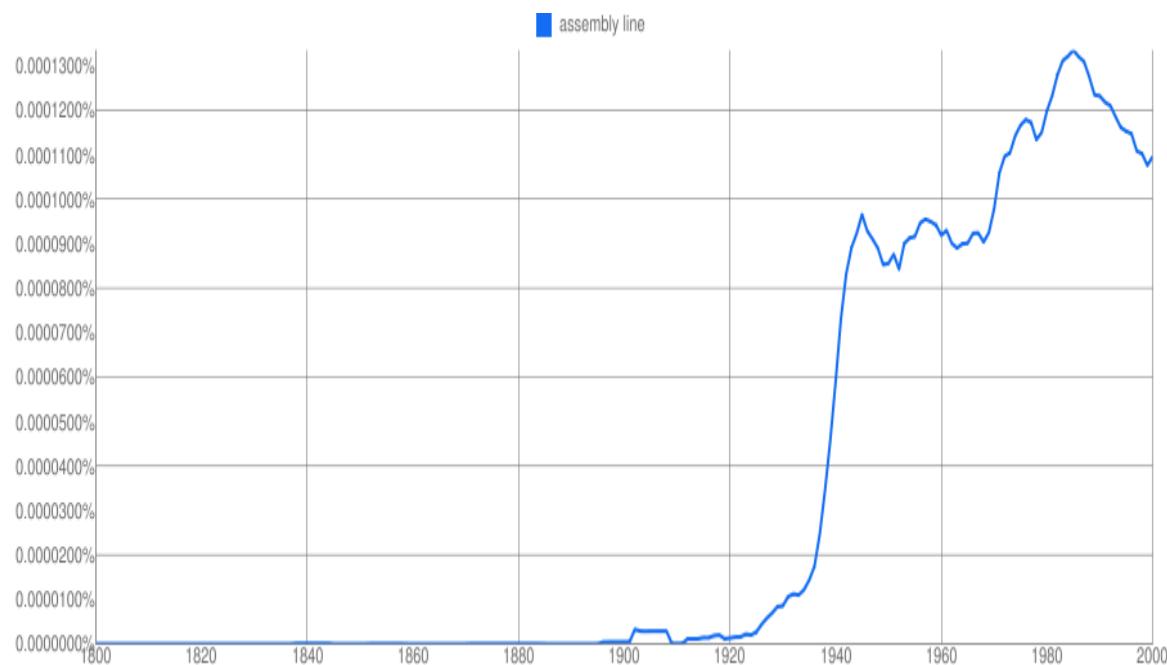
Sir Francis Galton published his “Regression toward mediocrity...” in 1886.



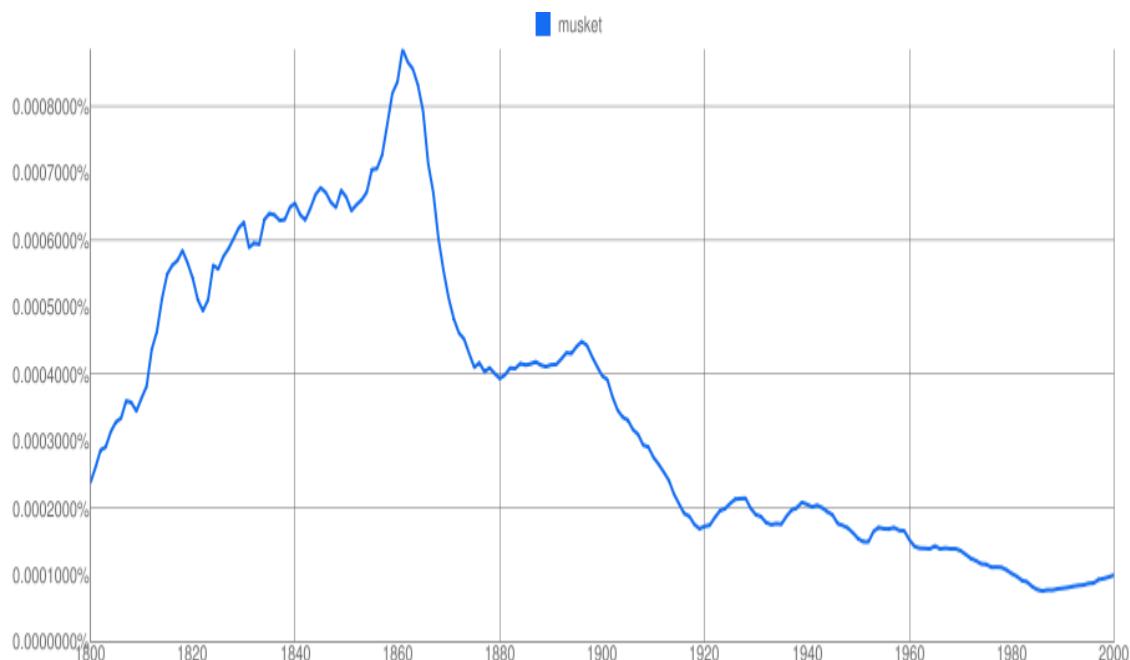
The light bulb was invented by Thomas Alva Edison in 1879 but in 1850 Joseph W. Swan began working on a light bulb using carbonized paper filaments



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Henry Ford worked out the process of the assembly line between 1908 and 1913.



Incidentally, after receiving a graph, such as seen above, one can continue a search Google Books by clicking on a time period such as 1800 – 1817 or 1818 – 1852 to get a list of books obtainable from Google.



## Interpreting Results

The vertical axis of each of the graphs, seen above, represent usage frequency which is the ratio of the number of instances of the n-gram in any given year to the total number of words in the corpus in that year.

As an example, Michel, et al (2010) show that, in 1861, the word “slavery”, a 1-gram, occurred 21460 times in the corpus containing 386,434,758 words giving a frequency of  $5.5 \times 10^{-5}$ .

Note that not all 1-grams are words. There are non-word 1-grams too like 3.14159. Misspellings and foreign words are also found.

There are two changes to consider; cultural change and linguistic change. Cultural change effects the words we use and linguistic change occurs when we use new words that replace older words to refer to an event, a place, or a thing. For example, a linguistic change occurred in our word for bicycle. At one time, a couple of generations ago, it was called a wheel. Too, some words may become more frequently used in response to social whims and movements. For example the prevalence of the word whalewatch was not prevalent at all prior to about 1965 but since then has experienced a very dramatic rise in prevalence and doesn't appear to show any signs of leveling off. This is probably a reflection of the environmental movement.

Words may have synonyms too and that means that a word may decline in usage only because its synonym has become more popular.

One can enter any word or phrase into the search engine to see how their prevalence has changed between 1800 and 2000 which is kind of fun but to more fully appreciate what the graphs are showing, one must have a keen sense of history and culture. It's one thing to see the results of a search but quite another to explain why word/phrase prevalence changes over time. Changes in prevalence may give the user a clue to what people were thinking about in the past.

Other interesting findings by Michel, et al (2010)?

In their *Science* article they have illustrated some very interesting and curious findings. They include:

1. The size of the English language is increasing at about 8,500 words per year.
2. There are more words than appear in any dictionary.
3. There is lexical “dark matter.” Words that do not appear in standard references.
4. Irregular verbs evolve into regular forms.
5. Memory of past events fades at varying rates.
6. The length of the fame of famous people is becoming shorter.
7. Censorship and suppression of events and people become evident in the graphical output.

## Future Plans

The plan includes a study of the evolution of business-related terms over time. Terms like assembly-line, telegraph, cotton gin, Erie Canal, blacksmith, steamboat, stage coach, railroad, gold mining, and



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many more would trace early American business ventures while terms like energy, oil spikes, Blockbuster, internet, computer, solar energy, green, environmental protection, Pepsico, OSHA, Consumer Product Safety Commission, wireless, genetic engineering, etc. would be expected to reflect more modern business activities.

### Related Links

**Hathi Trust Digital Library.** A group of libraries and research institutions whose goal is to digitally preserve cultural records.

**Europeana.** Explore the digital resources of European museums and galleries.

### Google Books

**Visual Eyes.** Navigate maps and other visual representations.

**Digital Scriptorium.** A collections of medieval and renaissance manuscripts.

**Artstor.** Digital library of over one million artworks

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## **EDUCATIONAL VIDEO CONFERENCING OBSOLESCES**

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### **ABSTRACT**

This article is intended to help educate individuals of the history and use of video conferencing technologies in the educational setting. Technologies in the modern classroom are becoming more accessible and user friendly. As such, educators are using as much technology as they can get their hands on in attempt to provide rich opportunities for students to experience the world in relevant and meaningful ways. One avenue for unique and critical delivery of the content is to incorporate the use of video conferencing or telecommunication technologies to broaden the educational spectrum. For educators to accomplish this however, it is important to understand how video conferencing is used in classroom and to understand which companies or websites better fit the needs of individual classrooms keeping in mind learning objectives and available funding. More importantly educators must have a grasp on how video conferencing is delivered and have the capability of understanding which may become obsolete in the near future. For these reasons, this article serves to educate teachers, administrators, curriculum writers and policy makers on the importance of video conferencing with respect to the possible implications that may arise.

**Keywords:** Telecommunication, Video Conferencing, Open Source, Proprietary

### **Video Conferencing**

Video conferencing is a type of telecommunication technology that allows two or more persons to communicate and interact from various locations via video and audio transmissions. In order for one to utilize this technology, one must have access to a device that will allow video and audio transmissions to occur. The components must include a video input such as a webcam, a video output such as the computer monitor, television, or projector, audio input such as microphones, an audio output such as speakers and the internet (Flohr & Stuart, 1996). Following the dawn of this type of technology, video conferencing has been paramount to the educational community. Educators from all over the world were now able to have the opportunity to take learning to a deeper level and allow for their students to interact with people they otherwise may have never had the opportunity. Students could see new places and talk to other children from various cultures right from the comfort of their classrooms. Even with the positive aspects that video conferencing allows for in the classroom, implications in its attainment are beginning to surface and thus produce an obsolescence market.

At the beginning, video conferencing was intended to allow the transmission of “both baseband and broadband signals on a common ‘backbone communication network’ such as a local area network (LAN) which is connected to plurality of user workstations” (Flohr & Stuart, 1996). Essentially, communication could be accomplished within “islands” of networks. An advantage to the



transmission of data was that it allowed individuals to communicate by means of simultaneous video and audio technology thus giving way to immense creative possibilities. An obvious disadvantage however, was that although there was an uprising of communication islands, these islands did not have a means for communication between them. Communication in this capacity was then and still is today considered to be proprietary. A more effective means of data transmission was needed to bridge individual islands of communication.

Cisco is an example of a proprietary means for communication within its own network. It is one of the leading software companies that helps to facilitate quality video conferencing technologies. Cisco offers networking capabilities from one to one telecommunication to more business and educational oriented settings. For a considerable fee, users can sign on to a self created account and interact through online environments that allow for communication between individuals and groups who also have Cisco accounts.

### **Open Source Technology**

If however, the prospect of funding becomes an issue teachers may choose to use the current open source programs available. “Free was the rallying cry of the modern marketer and the consumer never failed to respond” (Anderson, 9: 21 Chapter 1). Open source telecommunications and video conferencing is fairly new and allows individuals to transmit data in much of the same way as proprietary programs allow however, there is little to no cost associated with its usage. Open source telecommunication dissolved the need for individual islands to communicate which therefore allowed for a more global communication. There are several open source video conferencing technologies available on the web. One such resource is vMukti which was developed by an Indian country for developing country needs. They describe their technology as telecommunication “for the masses,” and is made to be accessible on Windows, Macs, and Linux operating systems. It has an open source version that allows individuals to simply sign up for an account then create a virtual environment with unlimited conferences. While conferencing, individuals view panels which display in the browser window. Users can communicate with each other using webcams, type into an IM-style chat window, draw on a communal white board, or conduct polls (Williams, 2007). “In this regard it is a superb open source offering, with real opportunity to slash communication costs and facilitate teamwork” (Williams, 2007).

Another open source video conferencing technology is Oovoo which has a free version available to users that set up an account however, it only allows for two way video chat. Videoconferencing.com is another application that allows for full open source telecommunication capabilities. Videoconferencing.com allows users to sign up for free and create a virtual environment that can be customized. The application also allows users to embed the environment right into their personal websites if an individual chooses to. Finally, the application allows users to have a virtual environment password protected for an additional fee. This application allows up to fifty users to access the environment simultaneously. Furthermore, Skype is another open source application that is gaining headway that allows its users to video conference, chat and hold audio conversations with two or more individuals.



In a story printed in the New York Times (2006) the idea of free internet based communication was discussed as the way of the future. Richtel (2006) suggested that standard telephone operating systems could be in jeopardy with new trends of “cheap internet-based calling” through Wi-Fi based technologies and “reduc[e] the need for a standard phone line in homes with wireless networks.” Today, cell phone companies such as Verizon Wireless, embrace the idea of open source while attempting to keep up with these trends. They use Skype to lure customers in to signing a contract with them. Newer Verizon cell phones have an Application for Skype to be used to make calls using a Wi-Fi connection without having to use up any of a customer’s minutes however, the video conferencing capabilities are not available presently. Verizon’s website says, “Put the planet in your pocket.” Along with cell phone capabilities, Apple’s new iPads also allow for Skype without the video component.

### **Video Conferencing in the Classroom**

Video conferencing in both regards has had a strong impact on classroom use. Teachers face the same obstacles in trends much as the cell phone companies do in having to decide what will make the most impact on customers, or in this case students. In order for teachers to utilize telecommunication technologies, they must have the equipment necessary to operate such endeavors, the knowledge on where to find the most useful resources, support from administration and other entities, and/or a desire to take advantage of the many positive aspects this technology can bring to the classroom despite any personal efficacy issues. In doing so, teachers can create a both relevant and meaningful learning environments for their students. Articles (Bowker, 2010 & Zaino, 2009) have been written discussing the many uses of video conferencing and telecommunications. The most popular classroom use is the virtual fieldtrip. A virtual fieldtrip can allow students to take trips to all corners of the planet right from their classrooms. This in turn, eliminates the need for permission slips, buses, and expenditures. Teachers can act as facilitators of knowledge and students can therefore participate in interactive learning opportunities.

Operating on individual separate islands or networks in today’s ever growing technological society can inevitably lead to obsolesces. With open source video conferencing software systems becoming more in tune the their customers’ needs, the idea of paying for one product versus not paying for another that can function the same can be considered to be absurd. In attempt to understand Cisco’s perception of the company’s future in a growing open source world and their ability to meet the educational needs of classroom, the author of this article contacted a service representative. In a Live Chat, the author asked,

*“I would like some information about your product. I hear nothing but great reviews but I also keep hearing a lot about Skype. I was wondering if you could help me to understand the difference and tell me why Cisco is better (Lozano, 2010, personal communication via Live Chat).”*

The customer service representative, Sibi went on to say,



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*"At Cisco, customers come first and an integral part of our DNA is creating long-lasting customer partnerships and working with them to identify their needs and provide solutions that support their success."*

She then continued to provide a link to an area on the company's website that provided training and events information. Interestingly enough, Sibi was unable to provide a clear distinction, if any, between the benefits of utilizing Cisco versus Skype other than the acclaimed impeccable quality and customer service that Cisco claims to provide.

Bowker (2010), discussed Region XI's, a Texas region located in the Houston area, use of telecommunication technologies to better serve their students. The article described the use of the Texas Education Telecommunications Network (TETN) and its connection to other Texas regions. Wanting to learn more, the author of this article contacted Region XI and was able to engage in a conversation with one of the consultants from the Department of Education Technology. JoAnn Roe (2010), discussed the network composition and its uses by describing how the region maintains the TETN network. She indicated that TETN was created with Texas Educators' and students' needs in mind. Any campus or district can pay a fee to TETN and receive quality imaging and support through TETN. When the author asked Roe to explain how this type of networking was better than open source technologies such as Skype or Oovoo, Roe responded with saying that in TETN, various individuals are able to simultaneously participate in the same virtual environment whether it be a meeting, conference, or virtual field trip. Roe went on to discuss another component of her region's telecommunications network Connect to Texas. Connect to Texas is a virtual environment that allows Texas providers to provide Texas customized information to its network. Customers worldwide are then able to connect to the network and access the Texas based virtual environments.

### Conclusion

Although proprietary networking companies, such as Cisco and TETN, claim to provide their customers with the most quality products, the issue here is that not all districts and campuses have funding available to them to purchase and take part in Cisco or TETN technologies. For this reason, educators must be aware of the resources and opportunities to choose products that will best serve the needs of their students long term. "Free is a word with an extraordinary ability to reset consumer psychology, create new markets, break old ones, and make almost any product more attractive (Anderson, 5:50 Chapter 01). Educators are using telecommunication technology in the classroom to better serve their students with quality education without having to leave the classroom (Bowker, 2010 & Zaino, 2009). If given the choice between costly products that deliver the same technologies as those that are not associated with costs, educators will choose to use open source technologies.

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**SECOND LIFE—TECHNOLOGY FACILITATING THE PARADIGM SHIFT FROM PEDAGOGY TO PRACTICE  
FOR CONTINUOUS PROFESSIONAL DEVELOPMENT**

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**Abstract**

For generations, desks and chalkboards have been the centerpiece of the classroom, with a teacher as the expositor of information to [hopefully] attentive students. And while that image still persists for those of us beyond the childhood years, the new generations of learners find such an image quaint and archaic. In order to maintain the optimum level of excellence for best practices in the teaching and learning across disciplines for today's learner, a continuous professional development forum is essential. This paper discusses the implications of staying connected with Higher Education facilitated by the immersive world-learning tool called Second Life. In a specific example of successful online professional development Maisano, Banker & Long (2010) explored the virtual world of Second Life and its impact on teachers with the use of technology to stay on the cutting edge for best practices teaching.

**Keywords:** Technological Simulation, Global Perspectives, Distance Education, 21<sup>st</sup> Century Learners, Social Justice, Culturally Responsive Teaching

**Introduction**

For generations, desks and chalkboards have been the centerpiece of the classroom, with a teacher as the expositor of information to [hopefully] attentive students. And while that image still persists for those of us beyond the childhood years, the new generations of learners will gradually find such an image quaint and archaic. As the paradigm shift takes place from pedagogy to practice, the need for continuous professional development and a support network for beginning teachers are also



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essential. The immersive learning, led by Second Life, a client program that enables its users, called Residents, to interact with each other through Avatars facilitates the shift.

With **SL**, already a virtual reality, the author of this paper will present the current possibilities and advantages of connecting traditional classroom preparation of pre-service teachers and in-service preparation with the expansive opportunities for classroom instruction provided by this technology format which is part of the system known as *immersive learning*.

Currently, **Second Life Viewer** refers to itself as a free [client program](#) that enables its users, called [Residents](#), to interact with each other through [Avatars](#). Residents can explore, meet other Residents, socialize, participate in individual and group activities, and create and trade [virtual property](#) and services with one another, or travel throughout the world, which Residents refer to as the “grid”. **SL** is designed for users aged over eighteen, while its sister site [Teen Second Life](#) is restricted to users between thirteen and eighteen.

Built into the software is a [three dimensional modeling](#) tool based around simple geometric shapes that allows a resident to build virtual objects. This tool can be used in combination with a scripting language called [Linden Scripting Language](#) for adding movement and function to objects and can be combined with three-dimensional sculpted forms for adding textures for clothing or other objects, animations, and gestures. (Taken February 16, 2009, *Second Life*, Wikipedia, The Free Encyclopedia).

### **Second Life at the Department of Professional Education**

In 2008, the Dr. Maisano initiated a Second Life (SL) component to the Education Department’s pre-service course titled Elementary Methods and Curriculum and she is currently continuing her work in Immersive World Learning Technology at University of North Carolina at Pembroke with Dr. Banker and Dr. Long. A goal of the University at Pembroke is to “make it personal” making sure that Second Life has the same benefits as online teaching. The argument is that Second Life already has the means and structure for making teaching and learning as highly personal face-to-face classes with additional benefits.

As this component was developed, many significant principles of learning (Vygotsky, 1978, Gardner, 1983, Marzano, Pickering, Pollock, 2001, Strong, Silver, Perini, 2001) became available to all the participants, principles that were previously unavailable in a “regular” classroom, because of constraints of time, student schedules, and the already established requirements. The following extensions available through **SL**, are listed here and then detailed, and represent the first steps in the merging of this **SL** technology with teacher preparation:

- **Virtual Classroom Development** which can be modified continuously, as required, for specific subject area learning and attention to individualized needs
- **Subject-Area Availability and Integration** through access to the Internet and human resources



- **Practice Teaching Simulations and Role-Playing** allowing every pre-service student to participate and interact with colleagues
- **Distance Learning Opportunities for Developing Culturally Responsive Teaching** with “distance” being global and communication made possible through immediate translations (ex. Italian to English and English to Italian, etc.) The ability to virtually meet at a central location for continuous professional development.
- **Simulated “Field” Experiences** that take students to “courthouses, hospitals, environmental sites, geographic regions” or wherever else one can actually and, therefore virtually, reach. Furthermore, each of the above aspects of current educational courses are being expanded through **SL** for developing a high-level curriculum which can particularly address the needs of students of diversity who may have previously been “under-served” as outlined below.

The remainder of this paper describes in detail how each of the above aspects of this pre-service course were expanded through **SL**. Combined with these aspects of learning is the research that attests to their value for both classroom teachers and students and can be provided more effectively and efficiently by access to **SL**. This preparation is essential for developing quality teachers imparting a high-level curriculum who can particularly address the needs of students of diversity who may have previously been “under-served” (Rothstein, M. and E. Rothstein, 2009).

### **Virtual Classroom Development**

**SL** allows the teacher, as well as the students, to continuously “modify the classroom.” While most classrooms today have desks, chairs, and writing services (e.g. white boards, SMARTBoards), only a few classrooms are set up as laboratories of learning. In an **SL** scenario, students can set up virtual environments of cities, countrysides, museums, wildlife settings or whatever is related to the curriculum. By creating these simulated settings, teachers and students are involved in active research from the Internet and other media which they can then present to colleagues or classmates for true sharing and discussion. Through this simulation, the teacher guides the students in a true cross-cultural model for individualization of instruction (Maisano, 2004).

### **Subject Area Learning and Attention to Individualized Needs Through Virtual Classroom**

“Planet earth is inhabited by all kinds of people who have all kinds of minds. The brain of each human is unique. Some minds are wired to create symphonies and sonnets, while others are fitted out to build bridges, highways, and computers... (Levine, 2002. 1)

This opening statement in *A Mind at a Time*, while undoubtedly reasonable to most educators, rarely serves as the basis for subject area instruction in schools. Standardized tests and even standards drive the curriculum, setting goals that *all* children must achieve if the school or schools are to be deemed successful. And even though Levine states that “tragic results are seen when we misconstrue and possibly even misuse a child’s kind of mind,” (2), competitive testing, pacing guides, and grade level requirement often take precedence over the needs of the individual child’s mind (Maisano, 2004).



Marzano, Pickering, and Pollock (2001) express a complementary viewpoint on instruction by challenging the concept of what “all children” need (rather than what the individual child needs) by asking if there are instructional strategies that are 1) more effective in certain subject areas 2) more effective at certain grade levels 3) more effective with students from different backgrounds, and 4) more effective with students of different aptitudes (9). In response to these questions, the authors state three strategies that have been shown to have positive effects, which are:

- Student-centered instructions
- Teaching of critical thinking skills
- Use of hands-on “laboratory” activities

While administrators and teachers may agree with the concepts of Levine and Marzano, they may ask, justifiably, how they could possibly create instructional formats that are “individualized” and “student-centered” when all the students must pass the same tests at the same time and know the same information which they must all learn at the same rate.

The answer, or more modestly, *an* answer to this query of school personnel, might lie in the inclusion of Second Life in the classroom which can be introduced and maintained by the current population of pre-service and in-service teachers who enter the classroom with SL knowledge and skills which this paper addresses.

### **Subject-Area Availability and Integration**

E.D. Hirsch's second chapter in *The Schools We Need* is titled “Intellectual Capital: A Civil Right”. Hirsch opens with the statement that “The need in a democracy is to teach children a shared body of knowledge”(17), which he calls *intellectual capital*. and “operates in almost every sphere of modern society to determine social class, success or failure in school, and even psychological or physical health” (19). Hirsch continues to explain the concept of Intellectual Capital as a necessity for economic and psychological well-being, focusing on those children denied access to this “capital.” He empathetically writes, [these children] “fall further and further behind. The relentless humiliations they experience continue to deplete their energy and motivation to learn.” He then compares this lack of intellectual capitalism with money stating that a “child’s accumulation of wide-ranging foundational *knowledge* is the key to educational achievement” (20).

The inclusion of **SL** in the teaching/learning spectrum and in the preparation of pre-service teachers can be a powerful adjunct in the development of intellectual capitalism because not only does it have the advantage of being a virtual modifiable classroom, but because it offers access to specific subject-area topics that, again following through on Hirsch, “can be broadly shared with others” for effective communication and learning (20). Through **SL**, pre-service teachers and students of all ages can “go to” sites on beginning reading, mathematics, chemistry, or whatever curriculum area is needed. A further advantage of this access is the opportunity to truly integrate subjects. At a **SL** site, “Avatars” with different aspects of knowledge can meet to present and discuss, for example, “the relationship of mathematics to chemistry,” or “the history of the English language and its affect on English spelling.” Visitors to the site can bring their high-level intellectual questions and find



other visitors and materials with answers. The learning is not linear and based on a pacing guide, but circular and expansive, and dependent on shared knowledge.

### Practice Teaching Simulations and Role-Playing

SL gives every participant student multiple opportunities to participate and interact with colleagues. In the *History of Education in America*, published in 1994, the authors Pulliam and Van Patten wrote of the “Characteristics of Futuristic Education” 270-281, much of which they have said is not only relevant, but still needs to occur. They begin with the axiom that “Education is more than training”. Training refers to providing students with existing information that focuses on memorization and regurgitation of short-term information. The true purpose of education, they state, “requires an environment in which students are not asked questions for which the answers are known”, but which develop the “ability to solve problems and communicate in a meaningful way” (272). The classroom, as we know it, is a limited setting for pre-service teachers to practice teaching simulations and to role-play not only the teacher, but the learners. The teacher who lectures can only hope that the “wisdom and knowledge” emanating from the lecture reaches and interacts with the brain of the learner.

Two recent publications extend the earlier work of Pulliam and Van Patten: Howard Gardner’s *Five Minds for the Future* (2007) and Daniel Pink’s *A Whole New Mind* (2005). Gardner’s “five minds” represent what he terms “five *dramatis personae*” that allow a person to be “well-equipped to deal with what is expected, as well as what cannot be anticipated” (2). The five minds, according to Gardner, are the *disciplined* mind, the *synthesizing* mind, the *creating* mind, the *respectful* mind, and the *ethical* mind. Gardner’s specific use of the terms *dramatis personae* tie in not coincidentally with the need for “role playing” in teacher preparation.

Daniel Pink (2005) also focuses on the mind, referring to artists, inventors, designers, storytellers, caregivers, consolers, big picture thinkers—those with minds needed for the forthcoming decades. Needed for a successful future will be those people who exhibit the qualities of inventiveness, empathy, joyfulness, and meaning. If we can imagine future teachers having minds that merge the qualities of Gardner and Pink, we can imagine teaching and learning environments well beyond the current classrooms we now have. To begin this process, teachers of the future need to begin their training by simulating and role-playing of what is likely to be.

The addition of **SL** to pre-service teacher preparation is designed by its structure to foster and promote continuous interactions and role-playing, based on solving problems that confront learners and learning, stretching their minds to be disciplined, synthesizing, creating, respectful, and ethical. Every participant in a **SL** setting must interact *cooperatively*, (*not competitively*) a behavior which the authors emphasize is predictive of not only success in school, but success on the job and in life (Pulliam and Van Patten 274). And interacting cooperatively encompasses the qualities cited by Pink. In an **SL** setting, pre-service teachers can be involved in all or most of these simulations and role-playing activities.



### Distance Learning Opportunities for Building Culturally Responsive Teaching

In a specific example of successful online professional development Maisano and Olsen (2010) explored the virtual world of Second Life and its impact on pre-service teachers. A post course survey conducted after taking virtual field trips, interacting with a global community and role-playing classroom scenarios showed that pre-service teachers responded favorably to learning in the virtual world. While Second Life or other virtual worlds are still emerging as viable educational tools, social network sites are so mainstream that their use in education is already happening. Through educational networking, educators are able to have a 24/7 online experience where geography is not a constraint and the time and cost to participate (both for the teacher and the school) are both affordable (Hargadon, 2010).

These aspects of teaching and learning are automatically built into **SL**, with “distance” being global and communication made possible through immediate translations (ex. Italian to English and English to Italian, etc.). With **SL**, pre-service and in-service teachers communicate directly with a variety of educators from other countries and cultures with opportunities to become culturally responsive teachers.

Gay (2000) defines culturally responsive teaching as using the cultural knowledge, prior experiences, and performance styles of diverse students to make learning more appropriate and effective for them; it teaches to and through the strengths of these students. According to Gay, culturally responsive teaching:

- Acknowledges the legitimacy of the cultural heritages of different ethnic groups, both as legacies that affect students' dispositions, attitudes, and approaches to learning and as worthy content to be taught in the formal curriculum.
- Builds bridges of meaningfulness between home and school experiences as well as between academic abstractions and socio-cultural realities.



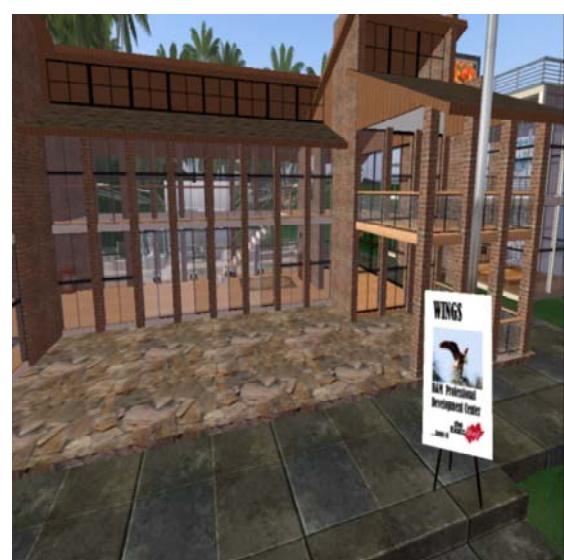
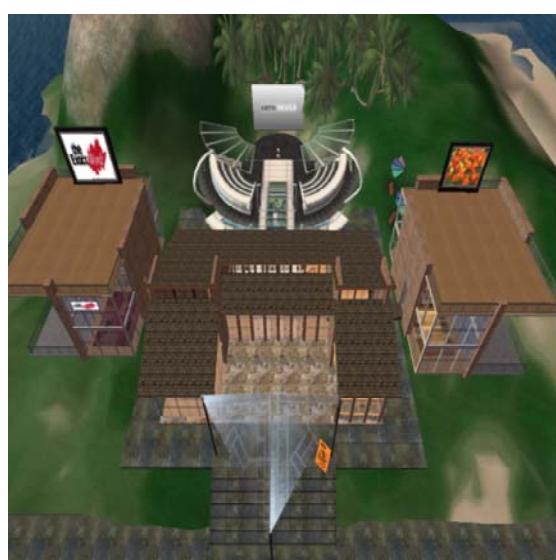
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- Uses a wide variety of instructional strategies that are connected to different learning styles.
- Teaches students to know and praise their own and each other's cultural heritages.
- Incorporates multicultural information, resources, and materials in all the subjects and skills routinely taught in schools (p. 29).

Ladson-Billings (1994) studied actual instruction in elementary classrooms and observed these values being demonstrated. She saw that when students were part of a more collective effort designed to encourage academic and cultural excellence, expectations were clearly expressed, skills taught, and interpersonal relations were exhibited. Students behaved like members of an extended family-assisting, supporting, and encouraging each other. Students were held accountable as part of a larger group, and it was everyone's task to make certain that each individual member of the group was successful.

As the potential of SL develops, in-service teachers have direct experiences in communicating with peers from different cultures and backgrounds. Imagine a group of pre-service teachers from University of North Carolina exchanging methods, concepts, and ideas with teachers from Sardinia, using the technology of **SL** to exchange materials and artifacts, share problems and solutions, and maintain on-going dialogues.

Online professional development allows teachers to receive training in a time that suits them, without having to leave the home, and most obviously can be specific to what an individual teacher wants to learn. Some of the earliest and still most common online professional development involved the teacher sitting at a computer with content delivered in a series of self-guided slides. Sawchuk (2009) describes a model of online professional development that has much promise. The "facilitated" format gives teachers access to certain materials, such as readings, which they read and complete related assignments on and take part in threaded discussions. The format allows for teachers to go back to their classrooms and attempt a new strategy and then connect with peers and facilitators to talk about what worked and what didn't. Virtual environments such as WINGS R&M Professional Development Center seen in the photos are learning centers for pre-service, in-service, online course rooms and the virtual hub for continuous professional development support.





### Simulated “Field” Experiences

SL can take students to or wherever one can virtually reach. In *A Whole New Mind* (2005), Pink outlines six “high-concept, high-touch senses that can develop the whole new mind” that today’s and future students will need. He names these “senses” design, story, symphony, empathy, and play (5,6). While all of these senses can be elevated or raised through participation in SL, “play” can have a special place and a special value in the SL experience. Pink cites the definition of play by Brian Sutton-Smith as “to act out and be willful, exultant and committed as if one is assured of one’s prospect’ (187).

One of the pleasant school activities for most students (adult and children) is a field trip which almost always connotes a day of fun or virtual play. A field trip is not only seeing and being part of a place outside the classroom, but means freedom to walk around, possibly touch plants or animals or unique objects, talking to classmates without disapproval, and learning “outside the box”. Yet field trips are generally infrequent, maybe not more than twice a year and almost always dependent on the school budget. Adding SL “field trips” to a school day, while not quite reality, can be a high-level substitute that expands horizons and offers visualizations beyond those that can be provided in textbooks and other written materials. A virtual visit to a courthouse with its external and internal settings can create a sense of exultation, enhanced by a scenario of role-playing set in an historic period in new geographic locations populated by “characters” of a different era and maybe speaking a different language that is now simultaneously translated on the computer screen.

### **Results of Survey Taken of Pre-Service Teachers at Western Carolina University in Their Initial Introduction to Second Life as well as UNCP and ATU Survey Results.**

The Ultimate Survey Analysis used at WCU was given to 35 pre-service education students at the completion of their Second Life course.

(<http://ultracat.wcu.edu/ultimatesurvey/Analysis/RunAnalysis.aspx?analysisID=957&surveyID=2273>)

[<https://owa.angelo.edu/owa/attachment.ashx?id=RgAAAADYJkgRH%2fLT6uB1qFtC168BwDjOLu6bgXfTYrYTtlhDt0oAxzUIl5aAADjOLu6bgXfTYrYTtlhDt0oAxzUlmcKAAAJ&attcnt=1&attid0=EACbTigTVJAzTL0hVbE2CXfR>]

Two different questions were asked, which resulted in 70% positive responses and 30% negative responses. For the purposes of this paper, we have presented the questions and a sampling of the first ten responses to each question divided in positive statements and negative statements.

A third question asked about the challenges presented by SL which can provide information on ways to improve the immersive learning experience. We selected ten challenges that we believe needs special attention for making SL a fully positive teaching training experience.

Question 1: How did your learning experience in an online course within a “virtual environment” prepare you for your pre-service teaching experience?



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POSITIVE	NEGATIVE
<p>I know how to reach a wide variety of audiences and to teach online.</p> <p>It has given me a new resource to use in my teaching. This is the first time I felt I could meet synchronously in an online course.</p> <p>I feel like I am prepared to teach students in this new technology world.</p> <p>It has given me the chance to talk with other teachers and learn more about teaching in other areas around the world.</p> <p>I have become more aware of the resources found within the “virtual world.”</p> <p>I had an opportunity to interact with my classmates instead of just posting a response to their posting.</p> <p>I think working in a virtual environment made me feel like I was in a real classroom on campus.</p> <p>SL has provided many online resources with helpful information on teaching and curriculum</p> <p>It is a new age technology and will be an advancement.</p> <p>On SL we have addressed different situations which have provided helpful hints for working with difficult students.</p>	<p>I do not think it helped me in any way.</p> <p>I don't think it has. I don't know what I am supposed to do.</p> <p>I don't think one course in SL is enough to feel comfortable in this environment.</p>

Question 2. What was your biggest online educational success from learning in an immersive world environment ?

POSITIVE	NEGATIVE
<p>It was more of a self-awareness, knowing if I had a good idea and could reach a lot of people.</p> <p>Now I am more comfortable with an immersive world environment.</p> <p>The learning experience in a virtual environment made my online learning not feel so distant in distance education.</p> <p>Learning how to create my avatar and maneuvering it.</p> <p>I felt more connected with my teacher and peers.</p> <p>I feel like I understand SL and see how great a tool it is.</p> <p>Meeting teachers from around the world.</p> <p>I could present to outside avatars with my professor.</p> <p>I found some really cool science and literature resources.</p> <p>Getting experience that I can use in my own classroom.</p>	<p>Nothing really.</p> <p>I just did not like it.</p>



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Question 3. What was your biggest challenge to learning in an immersive world learning environment?

- Finding everything and navigating through its landmarks.
- Feeling like I needed more time in SL than the course allowed.
- It's not completely interactive.
- A lot to learn and sometimes overwhelming.
- Too many avatars at once in the classroom.
- The ups and downs of technology.
- Trying to gather what everyone is saying.

### Conclusion

Our own experience with using the immersive learning experience of Second Life is the potential for expanding teaching and learning at the university level as well as students creating an educational network of teachers worldwide for continuous professional development and the global perspectives of both teachers and their students. While many of the teachers struggled with the technology of new software and new ways of interacting both with “avatars” and the demands of the university program, they had the unique experience of “meeting” a global world and have the advantage of “talking” in their language and getting back the translations of people speaking languages they would normally not be able to understand. The teachers could ask a wide range of questions—cultural and educational—and get instant answers which they could then discuss later with their own group and then go back to the source of these questions for further expansion and clarification.

Thomas Friedman (2005) has stated the world is flat, a new way of looking at the globe and its potential for direct communication. Second Life, as one way of immersive learning, can be a starting point for global interaction moving us closer to the long sought after goal of a world of social justice and human rights. With this in mind, students are able to reach beyond the hallowed halls of academia and continue to meet, collaborate and exchange ideas, materials and resources with educators everywhere. Finally, with the use of immersive world learning tools, they may also be given the opportunity to participate in continuous professional development.

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**EXPLORING FACTORS INFLUENCING STUDENT'S GRADE ACHIEVEMENT: A CLASSROOM BASED RESEARCH**

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**ABSTRACT**

Investigating effective teaching strategies and understanding of student attributes enhancing academic achievement is important in college teaching. In this context, this study identifies influencing factors related to student's grade achievement. Data is collected from three business courses, namely Statistical Techniques in Business and Economics, Principles of Macroeconomics, and International Business at West Liberty University in West Virginia. Methods of analyses used are correlation analysis, and an ordered probit model. Dependent variable is grade achieved in a course, and explanatory variables are course structure, course expectation on the first day of class, and student specific attributes. Empirical results reveal significant correlation between grade expectation and grade achievement. Regression result also found statistically significant relationship between grade expectations, residency on campus, gender, and project requirement for the course. Although some of demographic issues such as gender are beyond instructor's scope, understanding its influence on performance and effective course structure such as project assignment policy provide information that can benefit classroom teaching.

*Keywords:* Grade Achievement, Grade Expectation, Demographics, Correlation, Ordered Probit

**Introduction**

Several studies have contributed to the knowledge base surrounding the influencing factors of student's academic achievement. For example, previous research reveals various factors influencing student achievement in a course, such as instructor pedagogies, student's grade point average, and students' income levels. Some of the attributes that have shown direct relationship to a student's performance are their average GPA, time devoted for studies and to some extent their demographic profile such as gender, parent's education, parent's income, and their ethnicity. Previous research has also revealed a link between active learning, participation in sports, attendance, course assessment and peer influence with academic achievement.

Additionally, institution and race shows some influence on undergraduate student performance (Allen, Epps and Haniff, 1991). Demographic characteristics such as parent's education level, income, extracurricular activities, attendance, and course assessment are found to influence their grade (Ali et.al. 2009). A review of literature of student's performance on statistics course by Zimmer and Fuller (1996) suggests student's anxiety and attitude towards a course, computer experience is also found to influence performance. Study focusing on Intermediate Microeconomics found



relationship between students's cumulative GPA, and the choice of academic major with student's academic success (Yan and Rasher, 2005).

Previous research also confirms that students typically have greater grade expectation than the grade they achieve. This phenomenon is referred to as overconfidence or unrealistic optimism. Empirical results reveal that students are usually optimistic about their grade in the beginning of the semester. Overconfidence in grade expectation is defined as an inability to accurately predict future performance. Other aspect of overconfidence is unrealistic optimism towards self-assessment (Nowell and Alston, 2007). Some studies confirmed overconfidence or optimism towards grade among students (Svanum and Brigitte, 2006; Nowell and Alston, 2007; Bound and Falchion, 1989). However, there is still lack of information regarding the relationship between expectation and achievement.

In order to better understand the relationship between grade expectation and grade achievement in the literature, this research effort will identify whether there is any significant relationship between these variables, in addition to other explanatory variables, such as a student's profile. Contrary to previous research on student's attendance and amount of active learning on the academic performance, this study investigates the impact of classroom policies. For example, the relationship between a strict attendance policy and project requirement and grade achievements is investigated. Exploring effective teaching strategies and understanding student attributes enhancing academic achievement will add to the body of knowledge in higher education learning outcome. Therefore, this study has following specific goals:

1. Identify whether there is a direct relationship between grade expectation and grade achievement using correlation analysis
2. Identify factors that influence grade achievement using an ordered probit statistical model

### **Literature Review**

Studies in higher education have investigated the relationship between teaching effectiveness and grade achievement, factors influencing student achievement, and optimism towards grade achievement. The influencing factors for student performance are further explored in the literature. Ali et. al. (2009) identifies demographic factors, active learning, attendance, peer influence, and involvement in extracurricular activities in their analysis. Using correlation analyses, the authors found significant relationship between active learning, attendance and course assessment. Income and education of parents are positively related to student achievement (Chechhi ,2000; Agus and Makbul, 2002).

Studies also show active learning as one of the contributing factors to greater academic achievement (Fleder and Brent, 2003; Wilke, 2002, Laws et. al. 1999; Hake, 1998, Bonwell and Eison, 1991; and Ali et. al. 2009). Role of attendance in academic performance is also confirmed in the literature (Ali et. al. 2009, Stanca, 2006; Rodger, 2001, Marburger; 2001, Romer; 1993; Durden and ellis, 1995). Engagement in extracurricular activities and greater student achievement is also suggested by Ali et. al (2009), Galiher (2006), and Marsh and Kleitman (2002).



Attendance is also recognized as one of the important aspect of grade achievement. Collett et. al. (2007) found attendance to have a significant impact on grade performance. Moore (2006) concluded that class attendance enhances learning on average compared to students who missed classes despite grade incentive. However Park and Kerr (1990) and Schmidt (1993) found inverse relationship between student's attendance and course grade. Moreover, cumulative GPA and percentile rank in the entrance examination was found to be one of the determinants of academic performance (Park and Kerr, 1990; Yang and Raeshler, 2005).

Literature in higher education has also found a relationship between grade expectation and students perception of a course. For example, Nowell and Alston (2007) investigate relationship between gender, overall GPA, academic standing, and overconfidence in an economics curriculum. Authors suggest that male students with lower GPA and in lower academic standing tend to have greater tendency towards overconfidence. In addition, grading practices also influence overconfidence.

Tendency towards grade optimism was also explored by Grimes (2002), Grimes, Millea and Woodruff (2004). The authors also relate the grade expectation with teaching evaluation. Isley and Singh (2005) explores the controversial relationship between expected grades and student evaluations of teaching. Employing class-specific empirical results, they found that some classes in which students expect higher grades, a more favorable average student evaluation is obtained in these classes.

Moreover, over expectation in grade leads to less time allocation for that course for achievement oriented students (Seifert, 2004 and Bandura, 1993). Overconfidence also varies with student characteristics and academic discipline (Falchikov and Boud, 1989; Grimes 2002). Svanum and Bigatti (2006) focus on the psychological aspects of optimism towards grade. They found that 70 percent of students overestimate their grade, and that the expected grade moderately predicted final grade but not course effort. However, grade expectation accurately predicted performance, suggesting a mixture of realistic and informed optimism. The authors conclude that for less accomplished students, a higher grade expectation seems to be "uninformed wishfulness." Exploring whether grade expectation has any relationship with grade achievement and also whether grade expectation, among other factors influence grade achievement will contribute to the literature involving student performance and learning.

## **Methodology**

The methodology section is divided into survey design, theoretical, and empirical models.

### **Research Design**

During the first day of class of each semester, a survey was handed out to the students taking Business Statistics, Principles of Macroeconomics and International Business at West Liberty University; a mid-sized state university in the northern panhandle region of West Virginia. The survey instrumented was completed after thorough discussion of the syllabus and course requirements. Explaining the syllabus would give student's better understanding of course demand and requirement, which would limit the gap between expected grade and earned grade.



All courses where the survey was distributed were instructed by the same professor, to avoid pedagogies bias. The survey sample consists of forty three percent of student enrolled in Business Statistics, forty one percent of Macroeconomics, and seventeen percent of students in International Business courses.

### Theoretical Model

The neoclassical economic model can be used to describe the grade achievement; where grades are established through the supply of information from instructors and demanded from students. An instructor's teaching ability, clarity, personality, and ease of representing materials are usually evaluated on the supply side of grade achievement. Students on the other hand, demand for certain grades also depend on various factors. Some of these relationships are already established in the literature; such as gender, hours studied engagement in extracurricular activities, parent's income, and attendance. Living on-campus versus off-campus may also be contributing factor in grade achievement. The impact of course structure such as attendance policy, project requirement is still unexplored in the literature. One of the unfamiliar attribute evaluated in this analysis is whether student has travelled outside of the U.S. and Canada. It is assumed that exposure toward different culture could be a sign of curious individual. Hence, that curiosity is considered to be one of the supplementary attribute to grade achievement. Canada is not considered different than the U.S. More importantly, grade expectation also may have a significant role on grade achievement.

### Empirical Model

In order to identify factors that influence grade achievement, correlation analysis, factor analysis, multiple regression and logistic regression has been applied. Nowell and Alston (2007) utilized logistic regression to evaluate student overconfidence, where (1) if student was overconfident, and (0) otherwise. Spector and Mazzeo (1980) employed probit model to explain student performance, where dependent variable had a value of 1 for pass and 0 for failure. Using binary logit or probit model aggregates all passing grades in one category. Using multinomial logit/ probit model is also inappropriate since choices are unordered in this method (Greene, 2000), as errors are assumed to be independent for each category.

A course grade is ordinal data, and therefore an ordered probit is used in this study. This methodology is already established by Von Allmen (1996) and Yang and Raeshler (2005). Letter grades in each specific courses are values, which are ordinal in nature. The value of Y = 4 if the student received an A, and 3, 2, 1 or 0 if the student received a B, C, D, and F, respectively. A model that can address ordinal data is needed because grade assignments may not be interval in nature. As Yang and Raeshler (2005) states "while an A may be assigned to students with a final average between 90 and 100, a B may be assigned to students whose final average is 78 to 90 with similar variations occurring for those students who received a C, D, or E". Therefore, ordered probit model with latent regression is used.

The ordered probit model takes the form of (Greene, 2000):

$$Y^* = \beta'x + \epsilon \quad (1)$$



### Hypotheses and variables description

The dependent variable is the final grade received for the course. Explanatory variables are expected grade, gender, cumulative grade point average, travelled outside of U.S. and Canada, attendance policy, project requirement, residence on campus, clear future plan, and engagement in sports. The only demographic variable included in the model is gender. Due to homogeneity of the student population at current institution, age, race, and income were not considered necessary for the model. Ninety four percent of students are white, within age of 18-22. For income, financial aid was used as a proxy for income, given that income variable was not considered appropriate inquiry.

For attendance policy, 5 percentage points were penalized for missing more than 6 classes and 5 percentage points were rewarded if less than 3 classes were missed. Previous studies already established relationship between class attendance and grade performance (Collet et. al. ,2007; Moore, 2005). The goal of this study was to observe the relationship between policy and achievement, not necessarily number of classes attended.

Previous studies have also established the relationship between assignments and grade. Being cumulated as a part of the course grade, assignments were considered in the model. Instead, this study looks at active learning through project requirement. Dummy of project variable is coded as 1 where students were involved in a research project and had to present and write project report as a part of the course grade. For the dummy variable of future plan, the value of 1 was given to responses that had clear career goal such as want to be a CPA”, “work as a sports manager”; “manage my father’s business” etc. Responses such as “not sure”, something related to business were coded as 0.

Moreover, studies has found mixed results on number of hours students study with the grade achievement due to self reported nature of the data (Alston and Nowell, 2007). Therefore, number of hours study is not considered in this study. Peer influence was also important variable in some student performance studies (Goethals, 2001) but was also not used in this analysis due to lack of variance in the data. Every response stated that they do not work with friends. Again due to self-reported nature, it was not possible to find the relationship between peer influences.

Studies have found significant relationship between student's overall GPA and grade achieved for a course (Kruger and Danning, 1999 in Nowell and Alston, 2007). This variable was requested through registrar office, since self reported GPA may not be accurate. GPA and grade achieved in the course had correlation coefficient of 74 percent but was used in the model to be consistent with the previous literature.

### Data Summary

Survey data consists of 40% of the student living on campus, the student population living near the university was 37%. The proportion of sample male students was 70 percent contrary to 44 percent average undergraduate male on campus. This could be due to study related to the field of Business, where more male are enrolled as opposed to nursing or dental hygiene, where female are dominant.



Moreover, 25 percent of sample was enrolled in sports, 81 percent reported they have career goals, and 47 percent had travelled outside of U.S. and Canada. The sample consisted of 27 percent of students involved in sports. In terms of course structure, 71 percent of the sample courses had attendance policy, with 30 percent of the sample with project requirement. The mean cumulative GPA of sample students was 2.71 with the standard deviation of 0.65. Average amount of financial aid \$10,123 with standard deviation of \$6,399. According to University Enrollment and Statistics, West Liberty University common data (2011), average financial aid was \$18,000. These data is considered close to the survey data used in the study.

### Statistical Model

The statistical model used in this study is grade achieved as a function of following explanatory variables. Analysis was done using NLOGIT 4.0 Software.

$$y_i^* = \beta_0 + \beta_1 CGPA_i + \beta_2 gender_i + \beta_3 residency_i + \beta_4 sports_i + \beta_5 future_i + \beta_6 project_i + \beta_7 Attendance_i + \beta_8 Finaid + \beta_9 Expgrade + \beta_{10} travel + e_i \quad (2)$$

Where,  $y_i^*$  = unobserved grade;  $y_i$  = letter grade received,  $y_i = 0$  if  $y^* \leq 0$ , indicating the student received a letter grade F;  $y_i = 1$  if  $0 \leq y^* < \mu_1$ , indicating the student received a letter grade D;  $y_i = 2$  if  $\mu_1 \leq y^* < \mu_2$ , indicating the student received a letter grade C;  $y_i = 3$  if  $\mu_2 \leq y^* < \mu_3$ , indicating the student received a letter grade B; and  $y_i = 4$  if  $\mu_3 \leq y^*$ , indicating the student received a letter grade A.

### Results

Correlation analysis was employed to explore the nature and strength of relationship between dependent and explanatory variables. Correlation coefficient also enables to select the variables that were not serially correlated with each other (Ramanathan (1992). Spearman's rho was used to report the correlation between expected grade and earned grade due to ordinal nature of data. Pearson's correlation is used for binary and continuous variables. The correlation coefficient for expected grade and final grade was 35 percent. Living on campus and involvement in sports was 27 percent correlated. Similarly, gender and sports was 24 percent correlated, attendance and expected grade was 29 percent correlated, project and final grade was 19 percent correlated, attendance and project was 35 percent correlated. Significant correlation was found between final grade and overall GPA at 74 percent. All reported correlations are significant at 5 percent or less.

Table 2 represents results from the ordered probit model. The dependent variable is grade achieved on the course and explanatory variables are gender, sports involvement, travel outside of U.S. and Canada, and residency on campus or off campus. In terms of course structure, project assignment, and attendance policy is used as explanatory variables.



Table 2

*Coefficient estimates for Ordered Probit Model of Grade Achievement*

Variable	Coefficient	t-ratio	P-value
<b>Constant</b>	-0.20	-0.38	0.70
<b>Expected Grade</b>	<b>0.41</b>	3.18	0.00
<b>Residence</b>	<b>0.38</b>	1.98	0.04
<b>Travel</b>	0.16	0.93	0.35
<b>Future plan</b>	0.07	0.29	0.77
<b>Gender</b>	<b>-0.49</b>	-2.36	0.02
<b>Project</b>	<b>0.73</b>	3.10	0.00
<b>Attendance</b>	-0.30	-1.31	0.19
<b>CGPA</b>	-0.00	-0.80	0.42
<b>Financial Aid</b>	0.21	0.14	0.15
$\mu_1$	<b>0.62</b>	6.54	0.00
$\mu_2$	<b>1.46</b>	14.08	0.00
$\mu_3$	<b>2.39</b>	17.44	0.00
<b>Log Likelihood function</b>		<b>-217</b>	
<b>Restricted Log likelihood function</b>		<b>-232</b>	

**Significant variables are on bold at 5% significance level.**

GPA variable was tested for endogeneity between course grades using Hausman's test and the hypothesis was rejected. The model results reveal significant and positive relationship between on-campus residency, expected grade, and project assignment as part of the course grade. Gender has negative and significant relationship, which means female are more likely to receive higher final grade on the course. The sample data did not show any significant relationship between students who have travelled outside of U.S. and Canada, having career goals, involvement in collegiate sports, with high cumulative GPA and receiving financial aid. In addition, having strict attendance policy was also not explained by the likelihood model for grade achievement.

The estimated threshold variables ( $\mu_1$ ,  $\mu_2$  and  $\mu_3$ ) are significant indicating the ordered probit model with 4 different letter grades is appropriate. These threshold variables are determined jointly by the maximum likelihood procedure for the ordered probit model. The McFadden R-square was reported to be 0.07.

## Conclusion

There is a positive correlation between grade expectation and grade achievement, although moderate of 35% is significant. This result is consistent with the regression model. The ordered probit model reveals significant variables that increase the probability of earning higher grade such as being a female, residency on campus, and project requirement. Living on campus and being engaged in project increases the probability of better understanding of course materials, leading to better course grade.



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The empirical result confirms that grade expectation does influence grade achievement. Active learning such as project assignment does influence grade positively. Although many expectations for a class grade relates to preconceived notion towards faculty's grade structure and practices, clear expectation on the first day of class or in the syllabus may enhance grade achievement. More specifically, the presentation of the syllabus sets a tone to meet course demand and expectations.

Being female and campus residency also provides insight on student achievement. It is possible that females are more likely to be more dedicated towards grade achievement. Considerations towards male students and students who commute should be beneficial in classroom management. West Liberty University is located in an isolated setting, with curvy terrains, making the local commute more challenging. The University has already attempted to address this issue by opening up a campus in a convenient location in a more urban setting - The Highland's Center.

The findings from this study are relevant to public institutions with similar demographics, (mostly white, few non-traditional students, small class size, and students mostly from West Virginia, Ohio and Pennsylvania). Generalization of the results may not be appropriate for a different campus setting.

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**SECURITY IN INTERNET COMMERCE: EMERGING THREATS TO CUSTOMER TRUST**

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**ABSTRACT**

On May 29, 2009, President Obama announced the plan to protect the nation's computer networks against attack. He noted that the failure to protect cyberspace is an urgent national security problem and that the nation had experienced intrusions resulting in the loss of hundreds of millions of dollars, theft of intellectual property, and the loss of sensitive military information. Almost 13 years before that President Clinton signed Presidential Decision Directive 63 concerning critical infrastructure protection on May 22, 1998. This order created a Presidential Commission charged with formulating policy recommendations to the President on measures to protect the critical infrastructures of the US from cyber-based attack. In the interim many more plans and strategies were introduced by President Bush, wave after wave of cyber attacks have been suffered by all types of organizations and institutions, and while government and commercial defenses have improved they have been surpassed by the skills, tactics, and procedures used by cyber attackers. The purpose of this paper is to explore these issues as they affect e-commerce by reviewing current and emerging threats to users and to suggest strategies to limit the impact of these threats. The value of this paper lies in its review of the threats to trust in cyber space.

**Keywords:** Electronic commerce, Business-to-business marketing, corporate strategy, Hacking, Cybernetics, Computer security

**Introduction**

There have been numerous cyber attacks on America industry since President Clinton's Presidential Decision Directive on critical infrastructures. These range from those reported in the FBI's National Infrastructure Protection Center (NIPC) two advisories on the targeting of e-commerce and banking sites in 2001 to recent attacks against competitive information. In the 2001 cases initial warnings concerning specific threats were ignored, requiring the release of additional warnings. NIPC Advisory 01-023 (NIPC 2001) dated October 5, 2001 was an update to NIPC Advisory 01-003 "E-Commerce Vulnerabilities" noting continued observations of hacking activity targeting the electric commerce (e-commerce) or e-finance/ banking industry. That advisory was an update of a previous advisory on the same subject.



While earlier threats appeared to be focused on criminal organizations attempting to steal funds from financial institutions more recent threats include more sophisticated attacks on these institutions as well as attacks directed at a broader base of economic activity raising issues of cyber security to the forefront of business and government concerns. For example five large oil and gas companies were targeted by a series of cyber attacks dubbed "Night Dragon". In the Night Dragon case the motive of the attacks appear to be corporate espionage of Chinese origin with the attacks controlling servers in the US and the Netherlands and using them to gain access to computer systems in Kazakhstan, Taiwan, Greece and the US (Shankland 2011; SANS NewsBites 2011). Of particular concern, the cyber attacks occurred in 2008, but the companies did not become aware of them until the FBI contacted them in 2008 and 2009 to let them know that sensitive company information has been flowing out of their systems.

While the attacks and advisories noted above were to some extent outside of the domain of consumers, Rosencrance (2006) noted that 2006 was the first year that consumers lost trust in online banking due to security concerns. The previous year could easily be called the year of stolen identities as the news reported hundreds of thousands of identities stolen due to data breaches and 2006 saw the creation of a separate Jeopardy category for security breaches. (Murray 2006). Security Breaches Reach Jeopardy TV Show Jeopardy category, Record Losses in 2005, answers and questions:

1. A computer with 98,000 names and ssns (social security numbers) was stolen from this oldest campus of the Univ. of Calif. - What is Berkeley?
2. Named for a sport that embodies high society, this Ralph Lauren Co. was hacked for 180,000 credit-card numbers. - What is Polo?
3. This company that owns HBO & Turner Broadcasting lost a backup tape with 600,000 names and ssns. - What is Time Warner?
4. Data on 4 million customers were lost by this group formed by a 1998 merger with Travelers. - What is Citigroup?
5. A medical group lost 185,000 personal & medical records in this city, the seat of Santa Clara County. - What is San Jose?

This milestone indicates that these failures to protect the sensitive information of consumers have achieved a certain level of consciousness with the general public.

Consumer concern with threats to online transactions has been found to impact interactions with institutions across a number of domains. For example a 2010 survey of consumers asked about their level of concern regarding their personal information being accessed or stolen and how those concerns impact their willingness to deal with those sites. The RSA 2010 Global Online Consumer Security Survey found that 86 percent of consumers were somewhat to very concerned with their personal information being accessed or stolen through online banking. In comparison 64 percent were somewhat to very concerned with their personal information being accessed or stolen through healthcare sites, 68% through government sites, and 81% through social networking sites. The study also notes that this indicates that consumers are most concerned with protecting their financial information. However, trust in cyberspace can hardly be called robust.



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Other examples of the weakening of consumer trust in cyberspace are provided by research conducted by the University of Southern California's Center for the Digital Future found that "almost all respondents continue to report some level of concern about the privacy of their personal information when or if they buy on the Internet" (Center for Digital Democracy 2010). Additionally, other surveys suggest that the limited trust in cyberspace is based on a false belief in non-existent government protections. A 2009 study by the University of Pennsylvania found that consumers are confused about how, when or if their data is protected. In this survey consumers were asked true-false questions about companies' rights to share and sell information about their activities online and off. Only 1.5 of 5 online laws and 1.7 of the 4 offline laws were answered correctly because respondents assumed government regulations prohibit the sale of data (University of Pennsylvania 2010). Finally, 64% of respondents to a survey conducted by the National Cyber Security Alliance (NCSA 2010) reported that they have not made an online purchase from a specific website because of security concerns. The following sections of the paper discuss evolving criminal threats and managerial recommendations.

### Evolving Criminal Threats

While trust in cyberspace is certainly limited recent innovations on the part of criminals will make trust more difficult to achieve. For example, a large UK financial institution suffered the loss of approximately £675,000 with approximately 3,000 customer accounts compromised (Leyden 2010). Multiple techniques were used to spread malicious code to as many systems as possible within the UK with the ultimate goal of targeting online customers of a specific bank.

M86 Security (2010) reported that the techniques included:

Infecting legitimate websites with malware

Creating fraudulent online advertisement websites

Publishing malicious advertisements among legitimate websites.

Once the Trojan was installed on victims' PCs and after the victims logged into their online bank accounts, the Trojan initiated the money transfer from their accounts to the cyber-thieves. The interesting aspect of this attack was that the attackers had placed the code on legitimate websites that were not subject to the more stringent security of the financial institution. Once the victims went to those sites the attackers were able to access their bank accounts.

Cisco's 2010 Annual Security Report notes that the remaining consumer trust in cyberspace is under increased assault due to emerging threats targeting the trust consumers have in some legitimate websites as they have become skilled at convincing users that their infected links and URLs are safe to click on, and that they are someone the user knows and trusts (Cisco 2010). Other reports indicate that the attackers are successfully expanding their target set as larger more sophisticated firms increase their security. The Federal Bureau of Investigation issued a story (FBI 2009a) concerning phishing, a ploy by cyber thieves that uses official-looking e-mails to lure the victim to fake websites where the victim is tricked into revealing their personal information. This story also included an example of spear phishing which is a phishing attack aimed at a select group. The e-mails appear to be from organizations or individuals the victim is accustomed to receiving emails from. Shortly after this the FBI reported on a spear phishing attack that targeted law and public relations firms (FBI 2009b). It is very likely that the commercial firms that were the actual target of



these attacks had increased their cyber security forcing hackers to select a softer target. Certainly law firms provide a source of important information on the victim.

An additional example of the pervasiveness of these threats is the successful placing of keystroke loggers on library computers in the United Kingdom. The significance of this case is that private keyboards are now being plugged in to ports at the front of library computers. The concern is that some members of the public use these library computers for online financial transactions and their banking details may have been the target for these attacks (H-Security 2011). Hardware keyloggers are not illegal and when used allow storage of several years of keyboard input. No software needs to be installed on the host computer and the contents can be retrieved by entering a password or key combination on a keyboard.

It appears that in the short term cybercriminals will continue to develop new ways to combat proactive security technologies through the use of combined attacks. They will continue to target social network sites either to exploit end users through vulnerabilities in the sites as well as through various scams (M86 2011). The financial incentive for hackers to develop a full profile of their victims is significant. For example, the average selling price for a U.S. credit card in the fraud underground is \$1USD. However when that single card is sold with a full identity profile, which includes information such as the customer's billing address, Social Security number, mother's maiden name and date of birth, the price is inflated to \$20USD (RSA 2010).

Finally, data breaches continue with 662 breaches exposing 16,167,542 personal records in 2010 (Identity Theft Resource Center 2011) further impacting trust in cyberspace. Of greater concern is that one study found that 63 percent of consumers are dissatisfied with notification letters they received concerning the breach, as a result, 31 percent said they terminated their relationship with the organization, and 57 percent reported they lost trust and confidence in the organization (Ponemon Institute 2008).

### **Managerial Implications**

Given the skills of cyber criminals, the impact of attacks on consumer trust, and importance to trust to customer satisfaction one could reasonably ask why the attacks continue to be successful. The material noted above demonstrates that data breaches are an obvious threat to service quality in marketing, are a threat to customer satisfaction, and result in a loss of customers and sales revenue. Additionally, the cost of data breaches is significant. Ponemon Institute (2010) placed the overall organization cost per incident at \$6.75 million, with the individual cost of a data breach at \$204 per compromised customer record. Consumer concern has resulted in political action and as of 2010, forty-six states, the District of Columbia, Puerto Rico and the Virgin Islands have enacted legislation requiring notification of security breaches involving personal information (National Conference of State Legislatures 2010). On the national level dozens of proposed federal data security and breach notification bills have been introduced, often with bipartisan support, but have failed to become law, recently, on August 5, Sens. Pryor and Rockefeller introduced the "Data Security and Breach Notification Act of 2010" - S. 3742. This bill is similar to many other proposed federal bills; requiring the FTC to issue regulations requiring covered entities to establish and implement policies and



procedures regarding information security practices for the treatment and protection of personal information (Forsheit 2010).

Data breaches are costly public relations failures and firms need to understand some of the reasons for them and take corrective actions to avoid them. Among the reasons that data breaches continue are a tendency on the part of managers to deploy technology on the basis of promised benefits without considering the potential risks. Additionally IT security is frequently viewed as a cost not the competitive advantage that it can be. Of further concern is that there is a total mismatch in resources between attackers and defenders and this includes both the victim and the developer of the technology that is being used. The firm that is victimized by a cyber attack is fully engaged in the success of the firm; tracking emerging opportunities, maintain customer satisfaction, and dealing with the numerous crises of the day and only a small part of their time can be spent on cyber security. The mission of the firm is production and growth, not security while the mission of the thief is theft. It is simply not a fair game when one considers the interconnectedness of organized cyber gangs. Added to this mismatch is a continuing lack of senior marketing involvement in developing the information security programs of the firm. Finally, there appears to be a lack of understanding of convergence and impact of technology and behavior. This last point refers to the mobility of employees, the profusion of mobile devices, the flexibility that comes from a seamless onsite/offsite presence, the risk of unprotected devices accessing corporate networks, and the difficulty of establishing the boundaries of the firm's cyber footprint. Commenting on the Ponemon Institute's 2010 data breach report Messmer (2010) notes that many of the data breaches appear to be within the control of the firm. Mistakes such as lost laptops that contain customer data account for 40% of the data breach cases, system errors such as a third-party sending out statements that should not have been sent out accounted for 36% of the cases, with only 24% being the result of criminal attacks. That would appear to suggest that comparatively simple steps such as standard operating procedures banning personnel from placing sensitive customer data on mobile devices would go a long way in limiting data breaches.

## **Conclusion**

Emerging technologies, legislation, and criminal activities present new risks, potential liabilities and issues. At the present cyber attacks are anonymous, they can originate from anywhere, are frequently the work of technologically sophisticated criminal networks that are in themselves virtual organizations. More importantly these networks are far more adaptable than their array of potential victims. In the past a small marketing research or advertising firm would hardly be of interest to criminals since there were richer targets in financial institutions and major corporations. However as larger firms have increased their defenses criminals have moved to support organizations either as a way of gaining the information they are after or as a way gain access to the larger firms systems.

Dutta and McCrohan (2002) suggest a framework for cyber security that is based on an understanding the security is not a simple technical issue rather it is an issue for senior management. More importantly it is based on information sharing relationships with industry and federal organizations; industry informing sharing organizations and federal agencies such as the Department of Homeland Security and the Federal Bureau of Investigation. They also suggest that



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the organization of the firm; its business environment, culture, politics, use of outsourcing, training and awareness, etc. points to the optimal focus on security. Finally, that the organization of the firm suggests the degree of investment in technology required.

This paper has presented emerging cyber threats that impact the trust that consumers have in firms and associated websites. Consumer trust has been shown to be very fragile and facing continued threat as cyber criminals move to target sites trusted by consumers. This emerging threat environment suggests that stakeholders must take a more significant role in addressing the array of threats to consumer trust in ecommerce.

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**Specialist Degree: A Bogus Degree or Diamond in the Rough**

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Teacher education programs at the baccalaureate, master's and doctoral levels offer a sequence of courses that are reasonably designed and generally agreed upon that lead to becoming a professional educator. Accrediting agencies have done an admirable job in assisting schools of education in developing a vision, conceptual framework, knowledge base, purpose, objectives, requirements and an assessment procedure.

The Specialist Degree program in teacher education, at a glance, appears to be in a void in the arena of academia. In general, a specialist program requires a set number of course credits beyond the master's that are made up of an abundance of Independent Studies, Special Readings, Field Hours and possibly Thesis Hours.

After studying the requirements for a specialist degree as listed on the websites of 12 comprehensive universities located in the southeast, 4 do not offer a specialist degree, leaving 8 that do. Of those offering a specialist degree, the range of required hours beyond the master's degree is 30 to 36. Five require 30 hours, 1 requires 33 and 2, Florida and Mississippi, require 36.

The majority of content courses required for a specialist degree are also required for a master's and/or doctoral degree. Candidates in a specialist program that take a required content course during the master's program must select an additional course not previously taken. Only 2 universities list courses specifically for the specialist program that are not required for either the master or doctoral program. In other words, content courses specifically designed for only specialist candidates are almost non-existent.

One interesting finding is that in states where comprehensive universities do not have a specialist program, public schools offer a pay raise for completing a set number of hours beyond the master's level. In states where a specialist program is offered, public schools offer a pay raise for earning a specialist degree.

So, in essence, Specialist Degree programs are mostly composed of courses that are independently taught, e.g., Individual Study, Special Readings, Field Hours and Thesis Hours. All of the comprehensive institutions studied that offer a specialist program require a thesis, major paper, or in the case of Mississippi, a submitted paper to a refereed journal. In every case, a series of independently taught courses are required to complete the thesis, major paper or submitted papers.

Since there are very few content courses specifically designed for specialist candidates, some professionals refer to the specialist program as a bogus degree designed to primarily help candidates get a raise in salary. This is an understandable perception when the specialist program is compared



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to other degrees requiring academic integrity composed of a series of carefully planned and sequenced courses. However, if the specialist program is viewed as an opportunity to meet specific individual needs, one might consider the specialist degree to be a diamond in the rough.

As presently operated, most specialist programs are a service rather than a program of study. However, when the independent courses are targeted toward promoting professional and personal growth, the specialist program takes on new meaning and may be an exemplar for other programs that allow independently taught courses.

The following are four cases in point that illustrate the uniqueness of a specialist program. They are presented to stimulate thinking as to a range of possible topics for independent study courses when the objective is to meet individual needs that promote professional and person growth.

One candidate indicated a child was recently placed in her classroom diagnosed as having Asperger Syndrome. She wanted to know more about Asperger's and how she could help the student. To promote professional growth, the candidate was assigned an Independent Study and referred to an expert on Asperger Syndrome that was employed outside the university. Also, the candidate was introduced to a parent of an older child having Asperger's. The expert recommended a series of readings and studied the child's evaluation report. After studying the evaluation, the expert offered ideas on techniques that could be used by the candidate to help the student in the classroom. The parent of the older child introduced the candidate to the state's Autism Spectrum Disorder Organization (Asperger is a mild form of autism).

As a result, the candidate developed effective teaching skills that resulted in positive growth of the student, joined the state Autism organization, became an advocate for individuals diagnosed as having Asperger Syndrome and gave a presentation on Asperger's at a professional conference.

Other similar cases earning Independent Study credit that were classified as promoting professional growth include: becoming knowledgeable on No Child Left Behind, developing Response to Intervention strategies, learning and using additional subject specific activities in the areas of reading, math, spelling, science and writing, and conducting case studies on specific students the candidate has in the classroom.

There are many avenues to promoting professional growth that are acceptable for Independent Study credit, but the ones sited above have been judged as worthy of credit and, if appropriate, have been recommended to other candidates for consideration in their own program of study at the specialist level.

While interviewing one candidate, frustration was experienced regarding not having enough time to do everything. After some discussion, it was decided to offer an Independent Study directed at adopting a time management system. The candidate was required to read two books, *First Things First* and *Time Management for Dummies*. Also, the candidate had to attend a one day workshop on time management offered by the Department of Human Services at the university and ultimately, try using some type of planner.



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The result was the candidate started using an electronic hand-held planner, but found it to be more frustrating than helpful. The candidate switched to a popular print matter daily planner, but found it not user friendly. Finally, the candidate developed her own system using a conventional calendar. She took what she learned from reading the books, attending the one day training session, and her experience with the electronic and print matter systems to develop a simple, easy-to-use system that guided her toward getting more things done in the same amount of time. More importantly, the projects she completed were healthier and more purposeful.

To earn Independent Study credit, the candidate explained to the advisor the key points of time management and, specifically, what she learned when a specific planner was used and, ultimately, described the system she developed.

Other cases earning Individual Study credit for promoting personal growth included conducting self-change studies in areas the candidate expressed a need, for example: exercise, nutrition, stress management and attitude adjustment. Most of the Independent Studies judged as being most worthy of credit required data or production of a product rather than the typical written paper.

A highly successful case involved a candidate that chose to learn how to get her own literary agent. For Independent Study credit, she was required to read the book, *How to Write a Book Proposal* by Michael Larsen, write a proposal and submit the proposal to 10 literary agents. The candidate discovered how to write a good proposal.

After 40 submissions to different agents, 30 more than the required 10, the result was an offering and signing of a contract. Months after the Independent Study was completed, a contract was signed with a publisher and a year later, the candidate's first book was published.

Other Independent Studies that exceeded expectations or requirements have resulted in patents, trademarks and academic games. In Independent Studies that exceed expectations, the course provided a stimulus to take a risk, time to fail and in some cases, succeed.

A most unusual case involved a candidate that, during a conference with the advisor, expressed frustration and a small degree of anger. She had been assigned to be in charge of the cheerleaders in the school she worked. The candidate, never having been a cheerleader, not only did not know how to work with cheerleaders, but did not like or respect the idea of cheerleading. The advisor was not too keen on cheerleading either.

Out of frustration and a sense to help, the advisor enrolled the candidate in an Independent Study with the purpose of, at least, helping the candidate get through her assignment of being in charge of the cheerleaders and hopefully help the aspiring cheerleaders get started on the right foot.

The candidate was sent to the person in charge of cheerleading at the university. Promptly, the candidate returned, discussed, with a rather large box of books and videos. The advisor suggested she look over the materials, try some of the things described in them, and return at the end of the semester to explain what she had learned that would be worthy of a grade.



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At the end of the semester, the candidate came to the advisor's office. When asked what she had done to earn credit for the course, the candidate popped out of the chair, and to the amazement of the advisor, the candidate sprang into an enthusiastic cheer. After completing the cheer, the candidate sat down and explained cheerleading was a sport that takes skill, practice, dedication, discipline, teamwork and guts. She pronounced she was a good director and coach. She understood cheerleading, and she liked it. She then pulled out a video tape from her purse of her self-revered team, but before being allowed to proceed, the advisor explained, "I get it," which concluded the conference. The candidate left, the advisor issued a grade "pass" and filed the video, never to be seen again.

Other unusual cases that exceeded expectations often impressed the advisor more than the candidate. Experience has shown, often times, rather than determine the criteria for a grade up front, simply require the candidate to report to the advisor's office at the end of the semester and explain what they learned and did to be worthy of a grade. Most candidates do more than the advisor would have ever thought possible.

Possibly a specialist program filled with opportunities to meet needs, both professional and personal, might do as much good as a well-designed program with a set of prescribed courses that contain academic integrity. Maybe a stellar, world class program, like that at the University of Mississippi, can focus on needs rather than pre-assigned subject matter.

If individual needs upstage subject content, then consider:

1. Listen closely to the candidate
2. Mutually decide what might best meet the need, professional or personal
3. Propose a plan of action
4. Let the candidate do it
5. Require the candidate to return at the end of the semester and justify what was learned and done to earn a grade
6. Record a grade
7. Move on to the next semester

A specialist program just might be what education is all about, promoting professional and personal growth while helping the candidate get a raise.

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**THE EFFECTS OF GENERATIONAL COHORT MEMBERSHIP ON EXPECTATIONS AND LEVEL OF  
IMPORTANCE OF SERVICE QUALITY DIMENSIONS IN PROTESTANT CHURCHES  
THE USE OF SERVQUAL IN A NOT-FOR-PROFIT ORGANIZATION**

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## **ABSTRACT**

The primary purpose of this study was to investigate whether or not generational cohort membership influences expectations and levels of importance associated with service quality dimensions of Protestant churches. A total of 22 churches, representing 11 distinct Protestant denominations, in the Middle Tennessee area participated in the study. Usable responses from 742 church attendees from three generational cohort groups (Baby Boomers, Generation X, and Millennials) were analyzed. The results indicated that statistically significant differences existed between the three generational cohorts in their “expectations” and “level of importance” of service quality dimensions in Protestant churches.

## **Introduction**

Members of Protestant churches represent various generational cohorts, and it is anticipated that generational cohort membership will influence expectations and the level of importance placed upon the service quality dimensions of a church. Although Protestant churches are using market segmentation, such as carving out special programs for young people (Campbell, 2004), there exists a limited understanding of the concept; specifically, the influence of generational cohort membership on expectations and importance regarding service quality dimensions of a church. Therefore, investigating the influence generational cohort membership has on “expectations” and “level of importance” of the quality of service will be advantageous to Protestant churches’ efforts to understand the needs and expectations of each generation cohort group.

## **Definition of Key Terms**

### ***Market Segmentation***

Market segmentation can be defined as division of markets into smaller, homogenous groups (Boone and Kurtz, 2008), with each group displaying its own distinct consumer behavior. The most popular form of market segmentation is demographics: statistics that measure observable aspects of a population, including age, gender, income, education, etc. The “age” measure has given room for what marketers define as “generational cohorts” (Ryder, 1965; Howe and Strauss, 2000; Boone and Kurtz, 2006).



### ***Generational Cohorts***

According to Hawkins, Best, & Coney (2001, p. 172), “Generational Cohorts” are “groups of persons who have experienced a common social, political, historical, and economic environment.” Each cohort (or generation) consists of people born during the span of birth years, such as the Baby Boomer generation consists of those born during the years from 1943 to 1960. Generational cohort analysis is more about which “generation” you belong to, rather than how old you are. For example, a person who is 38 years of age today is part of the Generation X cohort, whereas a person, who will be 38 in say 2020, will be part of the Millennial generation. Therefore, it must be understood that it is not the “age” itself that is pertinent as much as the “experiences” that a generation has lived through.

### ***Service Quality***

Parasuraman, Zeithaml, and Berry (1988, p. 16) define ‘perceived service quality’ as a “global judgment, or attitude, relating to the superiority of services.” It is interesting to note that it is the customer, not the service firm that evaluates service quality. This is very important to service firms because it forces service marketers to examine quality from the customer’s perspective. Therefore, the starting point for providing quality services is measuring service quality from the customer’s perspective.

### ***SERVQUAL***

The most popular form of measuring service quality is the instrument SERVQUAL (Parasuraman, Zeithaml, and Berry, 1991). The instrument has five dimensions of service quality: Tangibles (the appearance of personnel, physical facilities, equipment, and communication materials), Reliability (the ability to perform the promised service dependably and accurately), Responsiveness (the willingness to help customers and provide prompt service), Assurance (the knowledge and courtesy of employees and their ability to inspire trust and confidence), and Empathy (the caring, individualized attention the firm provides its customers).

### ***The Protestant Church***

Kotler and Levy (1969) were the first to encourage extending the marketing concept beyond the profit sector to the non-profit sector to include the Christian church. Since then much work has been done in the area of “church marketing” (Considine, 1999, 2001; Hines, 1996; Joseph and Webb, 2000). The term “Christian Church” includes both the Catholic and the Protestant denomination. Considering “consistency in theology,” only the Protestant Church will be the subject of this research.

### ***Empirical Research***

Research by Santos and Mathews (2001) in the area of church service quality concludes that the three most important service quality dimensions for church members were responsiveness, credibility, and commitment. They also found that female churchgoers considered most of the service quality dimensions to be more important than male churchgoers. The authors used a 16-point tailored measurement tool which incorporated the SERVQUAL dimensions along with other service quality areas that SERVQUAL ignored, such as price.



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In making a case for marketing in Church services, Horne and McAuley (1999) state that applying marketing in a Christian church involves understanding church members' values, creating those values, communicating those values, and finally delivering those values. Stevens and Loudon (1992) state that marketing for churches begins with analyzing church members' needs and eventually developing programs that meet those needs. It is also important for Christian churches to improve their image so that outsiders will have a positive perception of the church services and quality.

### Research Methodology

#### *Sample*

The sample respondents for this study were church attendees/members of fourteen distinct Protestant denominations in the greater Nashville area. A judgment sampling approach was used for this research. This approach was undertaken due to the inability to adequately generate a random sample and that judgment sampling is preferred over convenience sampling.

#### *Survey*

Primary data was collected using the survey instrument, SERVQUAL, which was slightly modified in its wording for this research.

#### *Implementation*

For this research, the SERVQUAL instrument was slightly modified in its wordings as it had not been used with the Protestant Church. Much of the instrument remained the same and modifications were done in the form of replacing four words: "organization" was replaced by "church," "employees" was replaced by "pastor and staff," "customers" was replaced by "church attendees," and "service" was replaced by "activities."

### Results

#### *Response and Participation Rates*

A total of 44 churches were asked to participate in this study. These 44 churches represent 14 distinct Protestant denominations. Ultimately a total of 22 congregations agreed to participate in the study. The three generational cohort groups represented in this study are: Baby Boomers, Generation X, and Millennials. Table 1 provides a view of the number of participants based upon generational cohort grouping:

Table 1 - *Generational Cohort Representation*

Generational Cohort	Number of Individual Participants	Representation Ratio (%)
Baby Boomers	204	27
Generation X	256	35
Millennials	282	38
Total	742	100



### **Test of Reliability and Normality**

The Cronbach Alpha test of reliability showed that seven of the variable measurements of this survey exceeded the agreed upon limit of .70. The three variables approaching the .70 level will be considered acceptable in this context of exploratory research. Hair, Black, Babin, Anderson, and Tatham (2006, p. 137) state that "... the Cronbach Alpha may decrease to .60 and be considered acceptable for exploratory research."

However, the data was found to be non-normal. Since the variable data distribution is non normal, it has violated at least one assumption of ANOVA and as a result, a parametric test such as ANOVA cannot be used. Therefore, the use of non parametric tests will be the option taken for the analyses of hypotheses.

### **Analysis of Research Question and Hypotheses**

#### **Non Parametric Tests Rank Tests – The Kruskal-Wallis Test**

Since the data distribution was non-normal, it is appropriate to try ANOVA's nonparametric counterpart, rank tests. When conducting a rank test for three or more independent groups, such as in this study (three independent generational cohort groups), the Kruskal-Wallis test can be used. The following table presents the testing of the hypotheses:

Table 2 - Analyses of Tested Hypotheses

Tested Hypotheses	Sig.	Decision
H1 <sub>o</sub> : <i>There is no statistically significant difference between generational cohort groups regarding expectations in the tangible dimension of service quality in Protestant Churches.</i>	.000	Reject
H2 <sub>o</sub> : <i>There is no statistically significant difference between generational cohort groups regarding expectations in the reliability dimension of service quality in Protestant Churches.</i>	.000	Reject
H3 <sub>o</sub> : <i>There is no statistically significant difference between generational cohort groups regarding expectations in the responsiveness dimension of service quality in Protestant churches.</i>	.000	Reject
H4 <sub>o</sub> : <i>There is no statistically significant difference between generational cohort groups regarding expectations in the assurance dimension of service quality in Protestant Churches.</i>	.000	Reject
H5 <sub>o</sub> : <i>There is no statistically significant difference between generational cohort groups regarding expectations in the empathy dimension of service quality in Protestant Churches.</i>	.000	Reject
H6 <sub>o</sub> : <i>There is no statistically significant difference between generational cohort groups regarding the level of importance in the tangibles dimension of service quality in Protestant churches.</i>	.000	Reject
H7 <sub>o</sub> : <i>There is no statistically significant difference between generational cohort groups regarding the level of importance</i>	.000	Reject



<i>in the reliability dimension of service quality in Protestant churches.</i>		
H8 <sub>o</sub> : <i>There is no statistically significant difference between generational cohort groups regarding the level of importance in the responsiveness dimension of service quality in Protestant churches.</i>	.000	Reject
H9 <sub>o</sub> : <i>There is no statistically significant difference between generational cohort groups regarding the level of importance in the assurance dimension of service quality in Protestant churches.</i>	.000	Reject
H10 <sub>o</sub> : <i>There is no statistically significant difference between generational cohort groups regarding the level of importance in the empathy dimension of service quality in Protestant churches.</i>	.000	Reject

### Implications of Research

#### ***The Protestant Church***

For the practitioner (the Protestant Church), understanding generational cohort analysis helps in developing and repositioning products and services to be more in line with a given cohort's desires. By identifying a generation's collective hot buttons, mores, values, and memories, advertisers can hone messages and create persuasive icons to better attract that generation (Perkins, 1993).

#### ***Academicians***

From the academician's perspective, this study on the effects of generational cohort membership on service quality dimensions is important as literature in the area of service quality confirms that service quality dimensions are influenced by "external" variables. "Generational Cohort" membership falls under that category of "external" variables (Brinkley and Connor, 1998).

#### ***Researchers***

For the researcher, it is important to realize that in the process of testing for the overall differences between generational cohorts (in relation to their expectations and level of importance of service quality dimensions), an even more specific understanding of how each generational cohort perceives and ranks the five service quality dimensions can also be analyzed and understood.

#### ***Delimitations of Study***

The biggest limitation was apathy, indifference, and animosity toward surveys done in churches. Secondly, in the area of market segmentation theory, the definition of the term "generation" is debatable. Thirdly, the classification of different generational cohort segments is also under scrutiny. The criticism of SERVQUAL is the fourth limitation.



## Future Research

Other areas of future research include considering external variables such as the “maturity” level of the church attendees (number of years one has been a Christian), the number of years a church attendee has been attending the particular church. Also a longitudinal study can be conducted if differences in “expectations” and “level of importance” of service quality dimensions in Protestant churches changes as church attendees age.

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**AFRICAN-AMERICANS' PARTICIPATION IN A COMPREHENSIVE INTERVENTION COLLEGE PREP  
PROGRAM**

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**ABSTRACT**

The National Center for Educational Statistics, in conjunction with the U.S. Department of Education, compiles educational statistical data for U.S. schools. In 2001 they reported nation-wide 76% of high-income graduates immediately enroll in colleges or trade schools. However, only 49% of Hispanic, and 59% of African Americans enroll immediately after graduating from high school. Research demonstrates that “high academic achievers from low-income families are only one-fifth as likely to enroll in college as high achievers from high-income families” (U.S. Department of Education, 2001, p. 1). This paper is an examination of the components of a college prep program titled, GEAR-UP, which is a Federally funded Comprehensive Intervention Program to determine if African-American participants improved predictors of achievement PSAT, SAT and GPA scores.

*Keywords:* Achievement, Attainment, Comprehensive, Intervention, Prep Program

**Introduction**

Nationally, gaps exist between races and differing economic strata in college admission, and success in completion of a college degree. The U.S. Department of Education, National Center for Educational Statistics (2000), reported that “low-income high school graduates are not as well prepared in general; and a significant percentage of those who do enroll in 4 year institutions may lack the academic tools required to succeed” (National Center for Educational Statistics, 2000, p. 64). Findings indicated that Caucasian students demonstrate higher in the areas of reading, writing, and math skills, than do African American or Hispanic students in grades 8 through 12. In 2001, the Center reported that 76% of high-income graduates immediately enroll in colleges or trade schools, but only 49% of Hispanic graduates and 59% of African Americans enroll immediately. Although 33% of all high school graduates earn a 4-year degree before they turn 30, only 15% of Hispanics, and only 21% of African Americans graduate (U.S. Department of Education, 2001). The report demonstrated that “high academic achievers from low-income families are only one-fifth as likely to enroll in college as high achievers from high-income families” (U.S. Department of Education, 2001, p. 1).



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GEAR-UP (Gaining Early Awareness and Readiness Undergraduate Program) is a Federally funded Comprehensive Intervention Program designed to determine if African-American participants improved predictors of academic success and college readiness as measured by PSAT, SAT scores, and GPA. Research was conducted in Maryland over a 5 year period, and tracked data for 124 students. The finding, implications, and recommendations address the need for low-income, African American students to fully participate in comprehensive intervention programs.

### The GEAR-UP Program

The GEAR UP program, created in 1999 exists to “significantly increase the numbers of low-income students who attend and succeed in college” (National Council for Community and Education Partnerships, 2001, p. 1). The program “provides a one-time, 5 year grant as seed funding to begin early intervention programs and strengthen schools” (National Council for Community and Education Partnerships, 2001, p.1). Nationally, GEAR UP reaches out to “low-income students of every race and ethnicity” (p. 1). GEAR UP involves colleges and universities, businesses, and local governments to form partnerships. The goals of GEAR UP projects, cohort and systemic models, are to “provide entire grade levels of students with tutoring, mentoring, information on college preparation and financial aid, core academic preparation, and college scholarships” (National Council for Community and Education Partnerships, 2001, p. 1).

GEAR-UP exists in almost every state in the nation and is described as a post secondary education program designed to be a catalyst for school achievement (Phillips, 2007). It is a discretionary grant program administered by the U.S. Department of Education. The program is supported with legislated funds and w matching business partnerships and states grants. Described as an “innovative approach to diversity,” it is an alternative pre-college education program that provides disadvantaged socioeconomic and low performing students with equal opportunity initiatives to prepare for college entrance (U.S. Department of Education, Office of Civil Rights, 2003). Aligned with No Child Left Behind act, GEAR-UP proclaims a “goal of equal opportunity for all citizens is elusive, in large part, because low-performing schools year after year, and generation after generation, graduate young people who cannot compete on an equal basis with others” (U.S. Department of Education, Office of Civil Rights, 2003, p. 5).

At state level, GEAR UP involves colleges and universities, businesses, and local governments. The program goals, cohort and systemic models, are to “provide entire grade levels of students with tutoring, mentoring, information on college preparation and financial aid, core academic preparation, and college scholarships” (National Council for Community and Education Partnerships, 2001, p. 1).

The Scholastic Aptitude Test (SAT) results, as reported in the Maryland SAT Summary Report (2001), indicated that, in comparing SAT scores from all Maryland schools, the target school district scores were second to the lowest scores in the state. Students scored an average 448 verbal, and 441 math SAT, placing them in the second lowest place statewide (Maryland SAT Summary Report, 2001). The target school district reported the highest dropout rate in Maryland (Maryland SAT Summary Report, 2001). The achievement gap supports the creation of the GEAR-UP discretionary grant program in



Somerset County. The program spanned 6 years, supported with \$500 million, as well as matching funds from states and private investors (U.S. Department of Education, Office of Civil Rights, 2003).

GEAR UP (2004) is conceptualized from social learning theory. It is explained in the following: Designed curriculum based on Bandera's Cognitive Social Learning Theory, which emphasizes observing and modeling behaviors, and attitudes and emotional reactions of others. Effective learning will take place when students are motivated to imitate the models they have observed. The theory focuses on attention (learning must speak to students' world view with focus on their communities and families); retention (students must be able to remember what they have studied); reproduction (learners must translate the images or descriptions into actual behavior); and motivation, provide extensive in-class and after-school tutoring as well as counseling, cultural enrichment, college awareness, and opportunities for parent involvement. (p. 16)

### **Social Learning Theory**

Bandera (1977) stated that “behavior is learned observationally through modeling; from observing others, one forms an idea of how new behaviors are preformed” (p. 1). Conte and Paolucci (2001) explored social learning, social facilitating, and cognitive modeling. Conte and Paolucci identified two main themes regarding the social learning process. First, “imitation needs to be modeled in cognitive terms,” and second, “imitation is a special case of social learning, which in turn plays a role in behavioral and cultural transmission” (p. 2). Social learning is a process of social facilitation and social imitation. Bandura (1977) stated:

Social learning is based upon extrinsic or intrinsic factors of motivations. Intrinsic social learning occurs in social facilitation. It occurs when people are led by others to acquire new means (intrinsic) for achieving old goals. Extrinsic social occurs in imitation, when people learn through observation of attractive and consistent social modeling. (p. 24)

Ryder (1965) defined a cohort as “the aggregate of individuals (within some population definition) who experience the same event within the same time interval” (p. 845). Ryder suggested that the “cohort approach may be generalized to consider any class of event in terms of the experience of successive cohorts defined by time of interval exposure to the risk occurrence of that event” (p. 848).

Phillips (2007) concluded that identification of the variables associated with choosing a Comprehensive Intervention College Prep Program is at the forefront of American education for African-American student's academic attainment and achievement. A growing need exists to design research that measures the successes and failures of comprehensive intervention programs for low income African-American students.

### **Research Design**

In the present Comprehensive Intervention College Prep Program study, a quantitative multivariate non-randomized post test tracked data from 124 cohort students over a 5 year period. A multivariate model with a correlation matrix and a series of hierarchical analysis was implemented.



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Relationships were examined between students (1) participation in the weekend PSAT/SAT instruction, (2) participation in Academic Summer Kamp (ASK) program, (3) participation in tutoring after school mentor program (independent variables) referred to as the components of "GEAR-UP," with their PSAT (math, writing and vocabulary), SAT (math, writing, multiple choice and essay), and grade point average (dependant variables). The non-randomized post-test model was a series of hierarchical multiple regression actions to analyze the independent variable described as participation by hours of engagement. The second model was an analysis of the independent variable with absolute values (dummy variables) as student's who either participated, or had no participation, in GEAR-UP, to the dependant variables PSAT (math, writing and vocabulary), SAT (math, writing, multiple choice and essay), and grade point average.

### **Participants**

The subjects were high school students from the GEAR-UP cohort program. Students were 62.1% female, 37.9% male, 51.6% Caucasian, and 48.4% African-American. Less than 1% was Hispanic American. Self-selected cohort subjects participated in various aspects of program components.

### **Assessment Data**

Of the many assessment results used for predictors of college readiness, the PSAT (math, reading and writing), SAT (math, verbal, multiple choice and essay), and scores recorded from the cohort subjects were the standardized assessment results selected for this research study. Additional data utilized as standards of measurements were student GPA. Components of GEAR-UP were measured by the number of hours students participated in (a) academic summer camp, (b) mentoring, (c) weekend PSAT instruction, and (d) SAT instruction.

Criterion-referenced tests and measurements "differ from norm-referenced tests in a number of ways that influence how a reliability coefficient should be determined" (Black, 1999, p. 291). Black argued that, in criterion-referenced measurements, the distribution of scores may not be a normal distribution as criterion scores may differ from mastery to non-mastery cut-off points, but are instead intended to measure how well a person has learned a specific body of knowledge and skills. Black noted that "criterion-referenced tests do not result in any predetermined distribution" (p. 292). Borg and Gall (1979) contended "Most achievement tests used in the public schools evaluate the performance of the individual relative to the performance of a well-defined group that was tested in order to develop the test norms" (p. 223). Norm-referenced tests compare a person's scores against the scores of a group of people who have already taken the same exam, called the "norming group." Borg and Gall view the goals of these tests as differentiating among students for different achievement levels. To better understand predictors of academic success and college readiness, research questions were designed to understand the correlations among the relationships.

### **Research Question**

To better understand the correlations among the relationships between participation in GEAR-UP, measured by hours and pre-college predictors of readiness, three research questions were asked:



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Does the intensity of participation in GEAR UP affect the Preliminary Scholastic Achievement Test (PSAT), the Scholastic Achievement Test (SAT) scores and high school grade point average GPA of African American Students? The following sections are a discussion of the predictors of academic success and predictors of college readiness among African American students.

### Predictors of Academic Success

The best traditional predictors of academic success for post secondary education readiness are high school percentile rank and ACT scores (Brashears, 2003). Brashears recognized arguments for and against postsecondary education comprehensive programs. However, opportunities for all students to learn are the standards for the creation of today's postsecondary comprehensive education programs. Opportunity-to-learn (OTL) standards describe the nature of educational inputs and resources that are needed to recognize expectations for student and school performance (Stites, 1999). The OTL standards were recommended by the National Center for Educational Statistics to provide an "equal playing field" to protect the assumption that "potential inequity of raising expectations for all students without ensuring that all have equal opportunity to meet those higher expectations" (p. 7). Stated in the 1993 report by the National Academy of Education, "before performance can be fairly assessed, it is moreover necessary to determine whether all students have had adequate opportunity to learn the prescribed content" (p. 8). Comprehensive education programs are an attempt to create an even "playing field" for all students to learn under the standards-driven reform model and NCLB.

### Stratification

Understanding stratification in educational achievement and attainment is urgent because of the increasingly diverse population estimates reported by the U.S. Census Bureau. The Bureau cited with two important results. The first: "racial and ethnic gaps in educational achievement and attainment have narrowed over the past 3 decades" (Kao & Thompson, 2003, p. 435). The second: "however, substantial gaps remain, especially between less advantaged groups such as African Americans, Hispanics, and Native Americans and more advantaged groups such as whites and Asian Americans" (p. 435).

### Longitudinal Data

Research into postsecondary education predictors of success is a longitudinal effort involving gathering and analysis of large amounts of data. Choy (2002) conducted a 10 year longitudinal evaluation for the American Council on Education. This meta-analysis tracks several longitudinal studies by analyzing data gathered from (1) the National Education Longitudinal Study (NELS, 2000), (2) the Beginning Postsecondary Student Study conducted from 1989-96, and (3) the Baccalaureate and Beyond Study conducted between 1992 and 2003. The data collection tracked high school graduates who were about to enter postsecondary institutions and recorded the reasons why some did not enter college. Contributing factors that affected their decisions was also tabulated. The compiled data indicated that in 1997 only 66% of tenth graders had aspirations of obtaining a Bachelor's degree, 56% were minimally prepared academically, 52% took the SAT or ACT exams, and 47% applied to 4 year colleges; however, 40% of the students never enrolled (National Education



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Longitudinal Study, 1988). Choy concluded “for low income (\$25,000 per year) and middle-income (\$25,000 to \$74,000 per year) families, finances were a concern” (p. 16). Supporting evidence indicated that, “the price of attending college is still a significant obstacle for students from low- and middle-income families” (National Education Longitudinal Study, 1988, p. 2).

Variables identified in other research indicate that those variables affecting African-American students prior to postsecondary education include “individual differences in academic performance among students that are based on variations in aptitude, interests, life history, personality, and the characteristics of the evaluator” (Trelfa, 1999, p. 1). These variables among African American students are identified as standardized tests otherwise known as predictors of college readiness that are measured with ACT, PSAT, SAT scores and GPA.

### Predictors of College Readiness

College readiness is measured with several high school traditional pre-college predictors.

Traditional predictor variables include the ACT, the Preliminary Standardized Aptitude Test/National Merit Scholarship Qualifying Test, the SAT, GPA, Class Ranking, Advanced Placement courses, and the State High School Assessments (Brashears, 2003). The first predictor of pre-college readiness is the SAT. Such tests were first used outside the classroom in the early 1900s. Amrein and Berliner (2002) reported early-developed standardized tests determined which immigrants would gain entrance into the U.S., and who would be rejected. Early 20th century test scores from the Army Alpha, test now known as the SAT, were used to “confirm the superiority or inferiority of various races, ethnic groups, and social classes” (Amrein & Berliner, 2002, p. 3).

Porter (2004) concluded there are sufficient numbers of college predictors represented in many forms of tests and measurements. These predictors of readiness are not representative as standards across colleges and universities. A recurring theme for many researchers is that college readiness does not have “the same meanings across dramatically different types of post secondary institutions” (p. 30). Porter investigated validity issues and methodologies of indicators of college readiness, and the present study revealed three problems which relied on placement tests as criterion of college readiness. These findings included the following:

1. There is no universal cut point for both ACT and SAT tests, and setting cut points is a local option.
2. In addition to the ACT and SAT tests, many colleges and higher education systems have their own placement tests.
3. The validity of the placement tests and their cut scores are unknown (Porter, 2004).

Jones (2005) found college academic support programs and studies are not limited to a few intervention programs for post secondary education. These programs are known as college preparation programs, intervention programs, race neutral alternative programs, pre-college academic programs, raising academic achievement programs, and comprehensive student services support programs, just to name a few. These programs are designed to intervene in areas such as “academic enrichment, summer programs, social/cultural activities, mentoring/counseling and financial aid (stipends)” (p. 7).



### **Measureable Participation**

Various related literature reported three main integrated components that are measurable by participation, namely:

1. Participation in Academic Summer Camp program, a week-long (college on-site) academic summer camp offering instruction in math, science and English.
2. Participation in mentoring/tutoring after school program with on-demand tutoring/mentoring offers group and individual instruction at school or via the Internet.
3. Participation in the weekend PSAT/SAT Instruction in math and English providing PSAT and SAT preparation and training students in college application essay writing offered several times a year prior to and after the tests (U.S. Department of Educations, 2003).

### **Non-Measureable Components**

Numerous smaller components are not measurable. One of these is professional development activities for teachers designed and intended to be job-embedded over the course of a term to enhance instruction for cohort students. Professional development is not designed as school reform, but is described as workshops in math, writing, general instruction, and classroom management (Phillips, 2007, p. 38). Other non-measurable components are computers, equipment, books, and software purchases that are required to assist in effective instruction and are described as instructional tools.

### **Findings, Implications and Recommendations**

In the overall findings, (47.6%) of the cohort participated to some degree in the GEAR- UP program. Female students outnumbered male students almost two-to-one (62.1% versus 37.9%). About an equal number of African American (48.4%) and Caucasian (51.6%) students participated. For the combination of race with gender, the most frequent categories were African American females (33.1%) and Caucasian females (29.0%). Less than half the sample (41.9%) participated in the program.

Overall, fifty nine students participated in the program to some degree, either in PSAT/SAT weekend instruction, or PSAT/SAT summer camp program. Little or no participation was reported in the after-school mentoring program, so it was discontinued early. Over half (55.9%) of the students attended at least one SAT preparation class, and 71.2% attended at least one PSAT course. In combination, 89.2% attended at least one SAT and/or PSAT course. Forty-two percent attended the week-long (40 hour) academic camp at least once. Overall, students participated in program activities between 3 and 196 hours.

The aggregate of students were compared for hours of program activities based on gender. There were no significant differences between male and female students for the five program participation metrics. Students were also compared for hours of program activities based on racial background. Significant differences occurred between Caucasian and African-American students for the number of hours participating in SAT preparation programs. No significant differences were observed between Caucasian and African-American students for the four program participation metrics.



### Research Question 1

Research Question asked: "Does the intensity of participation in GEAR UP affect the Preliminary Scholastic Achievement Test (PSAT), the Scholastic Achievement Test (SAT) scores and high school grade point average GPA of African American Students?

Student's grade point average was positively correlated with all measures except hours of camp attendance and total hours of all kinds of preparation. The total hours of seminar preparation was positively correlated with all the variables. Gains in PSAT Verbal and Writing scores were not significantly correlated with any of the measures. The amount of gain in the student's PSAT Math scores was positively correlated with the total seminar hours of preparation, hours of SAT preparation and hours of PSAT preparation; therefore, in these instances, intensity in participation showed significant gains as displayed in Table 1.

Table 1

*Pearson Product-Moment Correlations for Selected Variables (N = 124)*

Variable	Seminar GPA	Verbal Preparation	Math Gain	Writing Gain	Total Gain
Grade Point Average (GPA)	1.00	.31 ** **	.16	-.01	-.12
Total Seminar Hours of Preparation	.31 ** **	1.00	.06	.35	** ** .05
Hours of Camp	.01	.34 ** **	.10	.03	.04
Hours of SAT Preparation	.33 ** **	.73 ** **	.08	.27	** * -.06
Hours of PSAT Preparation	.23 **	.92 **	.04	.31	** ** .10
Total Hours of All Preparation	.06	.49 ** **	.10	.09	.05
Highest SAT Reading <sup>a</sup>	.69 ** **	.26 *	.20	-.02	-.04
Highest SAT Writing <sup>a</sup>	.70 ** **	.33 *	.23	-.04	-.04
Highest SAT Multiple Choice <sup>a</sup>	.67 ** **	.32 **	.21	-.05	-.04
Highest SAT Math <sup>a</sup>	.74 ** **	.28 *	.19	.17	-.17
Highest SAT Essay <sup>a</sup>	.54 ** **	.36 *	.12	.14	-.03

<sup>a</sup> Correlations based on student who took at least one SAT test (n = 69)

\* p < .05. \*\* p < .01. \*\*\* p < .005. \*\*\*\* p < .001.



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Phillips (2007) found the study demonstrated that African American student's program participation in the components of GEAR-UP is vital to raise academic performance predictors of college readiness. Use of standardized high stakes tests have many researchers expressing deep concerns over the negative and harmful results of testing on schools, teachers, and the curriculum, as stated by Haney (2000). An implication of the present study is the lack of vertical alignment of curriculum, assessment, and instruction. Vertical alignment provides GLE's (Grade Level Expectations) and benchmarks to measure student's performance on high stakes tests like the PSAT and SAT. It allows teachers to teach to the tests. Phillips (2007) suggested that African-American student results could be related to a lack of vertical alignment of curriculum, instruction, and assessment with the predictors of college readiness tests. Vertical alignment provides Grade Level Expectations' (GLE's) and benchmarks to measure students' performance on high stakes tests like the PSAT and SAT (Phillips). GLE allows teachers to teach to the tests. Suggestions for improvement stress the importance to incorporate the components of comprehensive intervention programs into the regular school day in a systemic model. The contributions and benefits to education realized from the present study are for stakeholders (schools, colleges, and universities) involved in pre-college comprehensive intervention academic development cohort programs, which consume hundreds of millions of dollars. These programs utilize college readiness predictors that affect decisions regarding high school curriculum, instruction, and assessment, college/university admission, retention, and completion. Clearly, there is a need for further research. A similar, but inclusive study of African-American students utilizing post secondary comprehensive intervention programs preparing for college would yield a larger population to establish generalizability among variables. Future research may isolate other predictor of college readiness for African-American students preparing to enter postsecondary education.

**References for this research paper are available upon request.**



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**ARE ACCREDITATION AND GLOBALIZATION MUTUALLY EXCLUSIVE – THROUGH  
THE LENS OF A U.S. REGIONAL PUBLIC BUSINESS SCHOOL**

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**ABSTRACT**

Business Schools around the world are seeking partner relationships that will support the growing need for well educated business professionals. The dilemma for many U.S. regional business schools is the tradeoff between establishing international partnerships while ensuring educational integrity through quality assurance frequently measured by standards set by various accreditation agencies. This article uses a case analysis to track one regional business school's approach to bridging the perceived paradox of globalization and accreditation. The article explores issues of transfer credit, short term and long term relationships and the differences between international affiliations and international partnerships. It provides candid insight into the difficult decisions faced by a regional public business school that could readily provide application for public, private, and small to mid-size business schools facing similar issues.

*Keywords:* Accreditation, International Partnerships, Globalization

**Introduction**

Clearly, the focus on business whether small, medium, or large, is international activity. Likewise the challenge for business schools is the preparation of their students to work in this global environment. Business schools in the U.S. and abroad understand the need to prepare their graduates to become globally competent business leaders. However, the inescapable concern for an accredited business school is whether international university relationships meet business education standards for transfer credit. Perhaps a course or two of business transfer credit warrants little concern, but when a semester or longer stay results in the transfer of substantial business credit, an accredited business school must more actively engage in serious quality assurance issues. What guidelines should a business school use to determine such issues without jeopardizing its own accreditation status?

This paper is a case study of one institution's (Cameron School of Business (CSB) – University of North Carolina Wilmington (UNCW)) strategic development of its international programs while



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balancing the needs of international accrediting agencies. UNCW is a mid-sized regional public university with approximately 13,000 students with 52 bachelor programs; 35 masters programs and 2 doctoral programs. The CSB currently has approximately 2000 undergraduates participating in nine concentrations offered under the bachelor of science of business administration degree and 250 students in four masters programs.

The CSB introduced its international business concentration in 1995. In 1996 the CSB met with four European universities and two other perspective U.S. partners to discuss future collaborations. The result of a three day meeting was 1) a new tentative alliance named TABSA (TransAtlantic Business School Alliance), 2) an agreement to apply for a joint FIPSE grant through the EU-US Atlantis program, and 3) a formal agreement to work together. These early beginnings ultimately resulted in a successful grant application for the development of dual degree programs. Following the institutional processes for review the first side-by-side degree program was developed and passed with France then Germany in 1998. At each stage careful consideration was paid to the level of transfer credit and joint participation requirements essential for accrediting agencies.

Fast forward to 2010, the CSB has since gone through a Southern Association of Colleges and Schools Commission on Colleges (SACS) review and one AACSB review for initial accreditation and a reaffirmation in fall 2010. The TABSA program had grown and in order to balance student exchange numbers, summer programs, semester and yearlong study abroad programs flourished and dual degree seeking international students now numbered 40 plus annually within the CSB. The school culture embraced internationalization which was apparent in its mission and goals as well as a global strategic goal at the university level. However, three new initiatives caused consternation within the school. During the TABSA formulation years it was determined no new partners would be added until curriculum and relationships could be solidified and made effective. When the British university in the founding TABSA group pulled out of the alliance due to strategic shifts in their own university, a new British member was needed. Additionally the TABSA partners expressed a strong desire to move into other areas of the world outside of Europe thus adding new universities to the alliance and associated transfer credit. Secondly a subset of the TABSA alliance members had partnered with a school in Russia and had formed a unique masters program to which the CSB was invited as a new member. This program was a dual degree program with the fall semester providing core business education and the spring semester in a second country with a focused specialization and thesis requirement. Finally UNCW with its global focus was rapidly growing in worldwide relationships in which business students wanted to study abroad, with which the business school had no direct knowledge or relationship. One of the many issues associated with these three opportunities was the affect on accreditation for both SACS and AACSB. The question became could the CSB actively continue to grow globally and expand opportunities for its students if they partnered with non-AACSB business schools (especially for graduate programs)?

### **Initial Steps**

The TABSA program fostered the ability for international students to come to the CSB for extended periods of study as well as the opportunity for CSB students to earn a degree outside the U.S. The curriculum that resulted was carefully reviewed not only to meet rigorous course requirements but also, to meet university restrictions, SACS accreditation, and AACSB qualifications. The CSB process



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for approval was followed, 1) CSB curriculum committee, 2) faculty town meetings, 3) CSB full faculty vote and 4) approval by the UNCW faculty senate, and finally the signature of the Provost. This resulted in increased numbers of dual degree seeking students and substantial growth in summer study abroad and semester/yearlong study abroad. It is at this juncture that re-consideration of accreditation issues became a stronger consideration. This was due to two factors, 1) changes in the various accrediting agencies requirements (student learning outcomes (SACS) and Assurance of Learning for AACSB) and 2) the University's drive for greater internationalization. These questions and more necessitated serious conversation and analysis related to who and how new partner schools should be considered. The following sections describe the decision filters used to develop a comprehensive process.

### **First Filter– Should the CSB Partner Only With International Business Schools Accredited by AACSB?**

The dual degree partner schools with the CSB are at various stages of business accreditation development. The French school has obtained EQUIS accreditation and is now seeking AACSB accreditation. The British and Russian schools have each had programs achieve EPAS accreditation, one of the early steps in EQUIS. The Spanish school is a doctoral granting large university that has no desire to seek specific business school accreditation and the German school of business considers the German qualification process as adequate.

An analysis of AACSB accredited business schools was conducted for the countries in which the CSB was currently partnering. The underlying idea was that perhaps requirements for new partners might be restricted to only those schools with AACSB accreditation. It became readily apparent that many of the schools that were AACSB accredited were also accredited by business accrediting agencies EQUIS and AMBA.

The 'gold' standard for business schools is the achievement of accreditation by one or more of the internationally recognized accrediting agencies, AACSB, EQUIS, or AMBA. When evaluating perspective partner schools using AACSB as a benchmark the following was found:

Table 1: Assessment of International AACSB Schools in Partner Countries

Country	# of AACSB Schools	# EQUIS	#AMBA	Other/No Indication
France	13	13	10	
Germany	3	1	1	1
Russia	-	-	-	
Spain	4	3	3	
United Kingdom	13	10	12	1

Developed from AACSB, EQUIS and University Websites in 2010

Of the 596 AACSB member institutions, 497 are accredited at both the undergraduate and graduate levels. Of these, 477 are in the United States. Thirty seven different countries are represented. (The Association to Advance Collegiate Schools of Business, 2010). Clearly if most regional universities



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sought to create long term sustainable international partner relationships with only AACSB schools it would be difficult. Additionally based on the table above, there may be no value added for international business schools to engage in small to mid-sized business schools or regional publics. Business schools committing resources to multiple accreditations are focused on developing strong collaborations with similar mission driven institutions globally. So, if the sole criterion to select an international partner is based on AACSB accreditation this would clearly limit or possibly even prohibit substantial transfer credit for many U.S. business schools.

### **Second Filter – International Partner Schools National Accreditation Activities**

Throughout the world countries have established their own form and structure for accreditation to ensure a common standard of educational excellence. For countries in the European Union such activities are overseen at both the European Union level and frequently at the country level as well. In Russia a national accreditation body exists. An analysis of the various accrediting criteria and process for higher education in different countries was conducted.

### **Third Filter - International Business School Accreditation**

#### **European Quality Improvement Systems (EQUIS)**

The fundamental objective of EQUIS is to raise the standard of management education worldwide. EQUIS assesses institutions as a whole. It assesses not just degree programs but all the activities and sub-units of the institution, including research, e-learning units, executive education provision and community outreach. Currently 125 institutions are accredited representing 35 countries. Institutions are granted accreditation for 3 or 5 years and in addition to the demonstration of high general quality in all dimensions, institutions must demonstrate a high degree of internationalization.

#### **The Association to Advance Collegiate Schools of Business (AACSB)**

The criteria for seeking AACSB accreditation include (The Association to Advance Collegiate Schools of Business, 2010): 1)a collegiate institution seeking AACSB accreditation must be a member of AACSB International; 2)an institution seeking accreditation by AACSB must offer degree-granting programs in business or management; 3) degree programs in business must be supported by continuing resources; 4) all degree programs in business offered by the institution at all locations will be reviewed simultaneously; 5) consistent with its mission and its cultural context, the institution must demonstrate diversity in its business programs; 6) the institution or the business programs of the institution must establish expectations for ethical behavior by administrators, faculty, and students; and 7)at the time of initial accreditation, a majority of business graduates shall be from programs that have produced graduates during at least two years.

#### **Common Standards across All Accrediting Agencies**

Benchmarking the various national and regional institution standards and business specific accreditation agencies yielded the following conclusions:

- 1) All national and program specific accreditations seek to use external agencies for review
- 2) The terms of accreditation vary from 3-6 years



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- 3) Although there are some variations in assessment areas of each agency, it appears that general qualifications for all agencies include, 1) some assessment of mission, goals and strategic objectives, 2) quality assessment involving educational processes, student outcomes, and faculty assessment based on various standards (e.g. focus on research versus teaching standards), 3) resource adequacy (finances, libraries, technology support, etc.), 4) methods for continuous improvement, and 5) affiliation with external stakeholder (employers, alumni, etc).

### How Then Should a Regional Public Institution Proceed?

If it is not feasible for all regional public business schools to affiliate with only AACSB schools due to sheer supply and demand problems, what reasonable approach might such business schools use to actively engage in global expansion? One of the overarching considerations of all accrediting agencies, although not directly listed, is consistency and continuity. It is reasonable to expect that institutions engage in continuous quality improvement, sustainable organizational support, and consistent delivery of educational programs as examples. The premise of assessment is the systematic and scheduled interval review of the various universities with the underlying goal of assessing continuity of standards. If this concept can be considered as a key part of the process of international engagement, many of the standards of all accrediting institutions can be met.

The Cameron School of Business is committed to establishing and sustaining a strong, strategic network of global partnerships with other high-quality schools of business around the world. The School pursues this goal in the belief that global relationships, learning and research is critical to the success of its students and faculty and the continuous improvement of its academic programs. In order to accomplish this and to meet the various criteria of accrediting agencies a guide for international partner engagement was established. The School has four levels of relationships:

- a. Exploratory schools. These are universities/schools whom the CSB is exploring possible formal relationships. The determining factors for exploration may be predicated on a strategic focus to develop a new geographic region, e.g. Turkey. This desire is frequently associated with regional business needs, future economic growth belying the possibility of a key world player in which a presence is essential, strong student desire (based on student surveys) or perhaps partner/alliance member desire to explore a new geographic area.
- b. Tier I schools. These are universities with which UNCW has continuing relationships and Memorandums of Understanding (MOU's). These relationships facilitate general education courses, and most importantly foreign language support. These institutions vary in mission, size, and scope and may or may not have business schools. “On the ground support” personnel, faculty quality and coursework qualification are frequently not known by the CSB. Individual visits to all such schools by the CSB are financially prohibitive and may not be in the long term strategic interests of the CSB. UNCW students may apply only one three-credit hour business course for academic credit towards degree completion.
- c. Tier II schools. Tier II schools are those schools that the CSB has researched, visited, and whom they know the administration, faculty, and overall mission, goals, and quality assurance standards. Students and visiting faculty from these schools are received by the CSB and the CSB has a good understanding of the education and the success of the international business schools’ visiting students. The relationship is in a growth and evolving



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stage, frequently initiated and supported in the short term through grant support leading to long term self-supported strong partners. UNCW students may apply more than one three-credit hour business course for academic credit towards degree completion.

- d. Tier III schools. Tier III schools are those schools in which the CSB has had a long-term relationship. Strong institutional support both at the CSB and the partner school has resulted in summer programs, semester and yearlong programs, multiple methods of faculty exchange, staff to staff support and knowledge, and the possibility for a CSB student or the partner school student to secure a dual-degree (from both UNCW and the partner school). These relationships currently exist at both the graduate and undergraduate levels.

### Ideal Global Partner

The CSB, utilizing the standards from both domestic and international accrediting agencies sought to develop decision criteria for partner consideration. The result was a hierarchy of fit that encompasses accreditation standards while allowing for international cultural differences. The ideal global partner (Tier II and Tier III schools) for the Cameron School of Business will meet the following factors:

- a. Be a very strong **fit** for UNCW/CSB (and vice versa) as determined by mission, institutional support, strategic direction, and shared values.
- b. Be committed to a strong, long-term **relationship** involving students, faculty and academic programs for each school. This is evidenced as the institution progresses through the various tiers over time demonstrating continuity and sustainability.
- c. Be able to demonstrate a strong commitment to **high-quality** students, faculty and academic programs, appropriate to the level of proposed partner relationship (undergraduate and/or graduate).

Evidence of factors must meet the following definitions:

- a. Assessment of factors is ongoing. The assessment of factors for a global relationship requires a thorough due diligence review. The following statements set forth expectations for reviews:
  1. While the factors of fit, relationship and high-quality are all important, the expectation of high-quality is the most important factor in establishing and/or sustaining global relationships.
  2. Expectations for the factors rise from Tier I to Tier III and from undergraduate to graduate levels.
- b. Evidence of a very strong fit for UNCW/Cameron (and vice versa) includes:
  1. Mission, culture and quality of both schools are well in sync.
  2. Existing strong interest by Cameron students (and vice versa).
  3. Existing strong interest by Cameron faculty (and vice versa).
  4. Portfolios of existing partnerships for each school are complimentary.
- c. Evidence of a commitment to a strong, long-term relationship involving students, faculty and academic programs of each school includes:
  1. Interest and ability of the proposed school to establish and sustain a strong, long-term relationship involving students, faculty and academic programs.
  2. Level and duration of any existing formal relationship with UNCW.



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3. Level and duration of any existing formal relationship with the Cameron School of Business.
4. Portfolio of existing sustained formal relationships with other high-quality universities.
- d. Evidence of a strong commitment to high-quality students, faculty and academic programs, appropriate to the level of proposed partner relationship (undergraduate and/or graduate), is best demonstrated by the possession of AACSB, EQUIS or AMBA accreditation (best evidence). If without such accreditation, an appropriate combination of the following factors may yet provide critical assurance of overall high-quality:
  1. Candidate for AACSB, EQUIS and/or AMBA accreditation.
  2. Existing formal relationships with other universities with AACSB, EQUIS and/or AMBA accreditation.
  3. Other evidence of external institutional and/or peer review, such as achieved through national/ federal or globally recognized accrediting agencies, the attainment of external grants such as from FIPSE EU-US Atlantis program or the US-CAPES program as examples.
  4. Evidence of high-quality students.
    - a. Achievement by the proposed partner's students enrolled at UNCW.
    - b. Achievement by the proposed partner's students enrolled at existing CSB partner school(s).
    - c. Achievement by UNCW students enrolled at the potential partner's school as well as feedback from students and/or visiting faculty.
    - d. Other meaningful, appropriate evidence.
  5. Evidence of high-quality faculty.
    - a. Critical mass of high-quality faculty.
    - b. If proposed Tier III status, appropriate academically (AQ) and professionally qualified (PQ) faculty teaching in the joint program.
    - c. Other meaningful, appropriate evidence.
  6. Evidence of strong program learning goals, objectives and assurance of learning process.
  7. Other meaningful, appropriate evidence demonstrating overall high quality.

### Concluding Comments

As business schools continue to seek to expand international relationships, each institution must define and establish its own framework for review and decision making that is consistent with its mission, strategic direction, resources, and accreditation needs. Although there is no “magic formula” to ensure complete success in all situations, small to mid-size business schools can and should continue to seek global opportunities in order to ensure an educated workforce for our future.



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**TEXTING AS A TEACHING COMMUNICATIONS TOOL**

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**ABSTRACT**

Texting is a true alphabetic shorthand communications system that can very easily be used in the classroom for every purpose between accessing homework help to taking notes. The purpose of this proceedings is to review the literature dealing with texting in the school setting, as well as within greater society. One of these purposes includes note-taking which increases retention. Using texting as a means of taking notes is another learning/teaching strategy that students can use to strengthen their preferred learning strategies. Schools have begun to allow cell phones into the classroom and some school districts are recognizing that the only electronic device that students need to do their work is smartphones. A major component of real-world writing is through text messaging and we are doing our students a disservice if we do not acknowledge and teach this form of communications to our 21<sup>st</sup> Century students. The second purpose of this presentation is to preview a software application developed by the authors, the Ruby Translator. It is a unique innovative texting communications tool. The software application is designed not just for the texting generation, but for all individuals, to improve and expand their texting communications capabilities, speaking the language of today, in the most efficient process possible.

*Keywords:* Texting, Communications, Ruby Translator

**Introduction**

As a generation of non-verbal communicators sits in our classrooms, is it time to embrace texting technology as a communications teaching tool? This is a question that faculty across the world are beginning to ask. According to Schwartz, texting can be used for classroom purposes from accessing homework help to taking notes.

Texting is defined as the act of typing and sending a brief, electronic message (less than 160 characters) via a wireless network to another person so that they can view the short message on any number of mobile or handheld devices, such as a Blackberry, a cell phone, a PDA, or a pager (Netlingo). It is also referred to as SMS or short message service. Texting words are often in the form of logograms or logographs. For example they can be as follows: b = be, 2 = to, @ = at and x =



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kiss. Logographs can also be used in combination such as: b4 = before, @oms = atoms, 2day = today, xxx = kisses and zzz = sleeping. Pictograms or pictographs, on the other hand, refer to visual shapes or pictures that represent objects or concepts. Pictograms are generally referred to as emoticons or smileys. For example: :- ) = smile, ; - ) = wink, :- @ = screaming, (^ \_ ^) = cute, and (\*o\*) = surprised. Ruby and Ruby, at the annual Arkansas Juvenile Officers Association Conference, March 16, 2011, defined texting as a true alphabetic shorthand communications system that can very easily be used in the classroom, Board Room or just to jot a note to one's self thereby increasing retention and need not include the need for a second or more persons to communicate with.

Texting was actually envisioned by Serbian born physicist, Nikola Tesla, who wrote in *Popular Mechanics* magazine in 1909, that one day it would be possible to transmit "wireless messages" all over the world and imagined that such a hand-held device would be simple to use and one day everyone in the world would communicate to friends using it, according to Technology Editor Seth Porges ([http://economictimes.indiatimes.com/\\_/news/news-by-industry/et-cetera/US-physicist-predicted-about-SMS-in-1909/articleshow/5889105.cms](http://economictimes.indiatimes.com/_/news/news-by-industry/et-cetera/US-physicist-predicted-about-SMS-in-1909/articleshow/5889105.cms)).

Statistics regarding the use of texting abound. The general population of the statistics is for teenagers, ages 12-17. Amanda Lenhart's research found that 75% of 12-17 year-olds now own cell phones. Eighty-eight percent of teen cell phone users are text-messagers. One in three teens sends more than 100 text messages a day. Fifteen percent of teens who are texters send more than 200 texts a day. And while 64% of teens with cell phones have texted in class, 25% have made or received a call during class time. In a study by Tindell and Bohlander, 95 percent of university students bring their phones to class every day and 91 percent have used their phones to text during class time (Mayk).

Schools have begun to loosen their restrictions on bringing cell phones to school. Students are now allowed to use their phones when they are not in class. Teachers are now being encouraged to find uses for smartphones in classroom assignments. Some teachers text messages and reminders about schoolwork to parents and students [after the school day]. One high school teacher allows her students to text her about homework, absences, or just life questions and concerns. Some teachers fear that the use of texting language will ruin the English language, but research has failed to bear this out. Research is supporting the use of texting with new evidence that it teaches some positive language skills and some realists feel that having a battle against texting is hopeless. Teachers report that when they acknowledge the importance of texting to their students they appreciate being met at their level (Feldman).

Collegiate High School Principal Tracie Rodriguez said the science and English departments use texting the most with class assignments. Teachers can choose whether they want students to text them. The trend began with a student asking if it would be OK for them to text their teacher (Marsilio). Middle School Principal Ernie Jackson has shown that students who were allowed to text in an English class scored 40 percent more on statewide exams than those who were not allowed to text (Schwartz).

At the University level Georgia State University Professor David McDonald, director of emerging technologies in the Robinson College of Business, created the Text Question System to allow



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students to send questions about a professor's lessons directly from their cellphones during class. The questions scroll across the bottom of the classroom's overhead screen, similar to the news ticker in Times Square. McDonald will answer the questions during class or, if he runs short on time, will address the information during the next class period (Diamond).

Michigan State University professor and researcher, Jeff Grabill, found that college students now rank texting as the number one form of writing and cell phones as a top writing platform. He studied the writing behaviors <http://wide.msu.edu/special/writinglives/> of more than 1,300 first-year college students across the nation from a variety of institutions and locations. Based on his research college students lead complex writing lives and write more than any other generation. Texting is the way the real-world works. It is efficient and comes as second nature to our 21<sup>st</sup> Century students. "Teaching students how to write about literature doesn't teach them how to write to various audiences or about various subjects," Grabill said. "We would better serve students by helping them to solve the writing problems they encounter in their lives using the technologies appropriate for those tasks (Parker)."

Feldman reports that studies have found that texting may actually help teens' writing in informal essays and many other writing assignments. In a study that featured a conversational essay about happiness when teens were asked "What does it mean to be happy?" teens that used more texting shortcuts performed better than their peers who did not. It is very rare that the texting language appears in schoolwork, according to Feldman.

What many teachers fear from over-reliance on texting—a drop in written communication skills—isn't supported by research, Rosen notes. Rosen and four colleagues studied more than 700 students to explore the relationship between "textisms" and formal and informal writing. They found that a drop in written communication skills was not supported, and in fact, students who used more texting shortcuts performed better than those who did not. Lisa Nielsen helps educators harness the power of such technologies to enrich teaching. She is the author of *The Innovative Educator* blog (<http://theinnovativeeducator.blogspot.com/>), and points out that cell phones are actually mini-computers. "They are the most ubiquitous interactive tool available in American households, and there is no additional cost to schools or training involved," she says. "Cells are part of society. Not integrating them into learning is a disservice to students." Liz Kolb believes that the 21<sup>st</sup> job force will demand texting literacy (NBEA).

Instead of schools requiring students to spend money on laptops, desktops, iPod touches, iPads, and/or clicker response systems, using cell phones is a bargain. Some schools have decided it is in their financial interest to purchase the students cell phones instead of purchasing these other types of electronics.

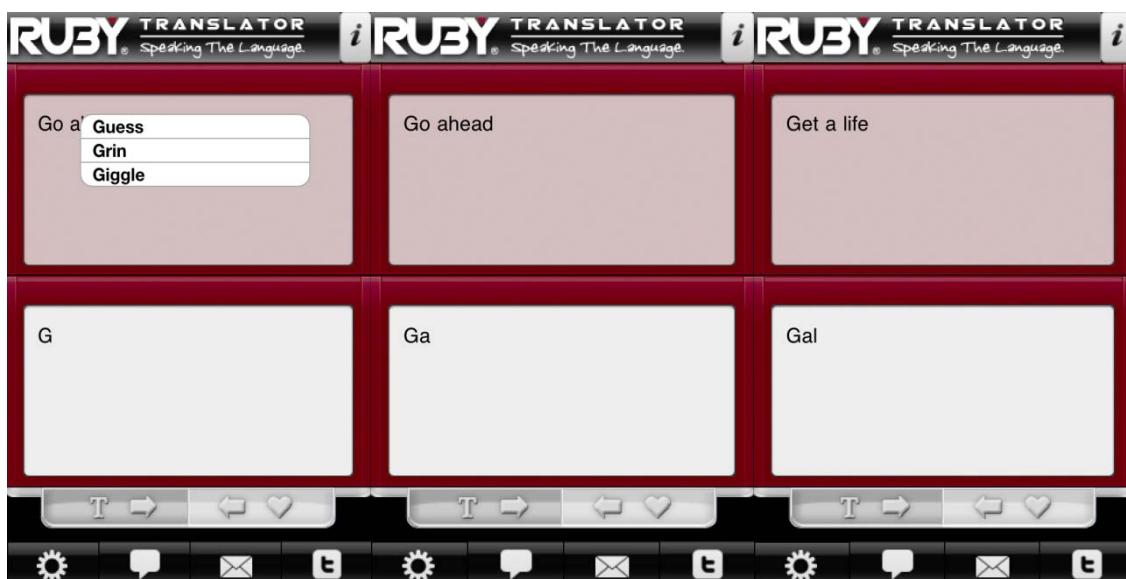
To integrate texting as a universal form of communications several key features are required that have not been available until recently. To communicate the receiver must understand the sender's text. Until this point in history this has not been the case – not everyone understands the alphabetic shorthand system known as texting. To ensure that both sender and receiver are able to communicate a text message there needs to be coding and decoding [translation]. Until now the



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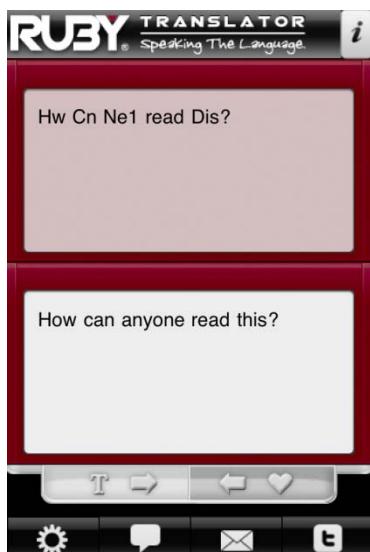
only coding and decoding available has been one word to one meaning. And this decoding has not been available on mobile devices.

Some text words have multiple meanings – some as many as 80 different meanings. So both the sender and receiver must have a system that provides all of the meanings for each text word in a fast and convenient user-friendly system. This is obviously not an easy task. Following the images below, for example typing the text word GAL. G by itself is a text word with three meanings Guess, Grin or Giggle. GA is a text word with the meaning of Go ahead, and the text word we are typing, GAL, has the meaning, Get a life. So in typing the text word GAL we actually have to type two text words G and GA prior to getting to the text word we want GAL. Possibly you can begin to see the issues and why previous translators had you type the full text word then press a translation button. Did we mention that we also want all of this FAST and the only way to get FAST is to type and translate “on the fly.” This monumental task has been conquered.



Communicating with one's self also requires the ability to save a note for future reference and put into a text editor to be able to perform all text editing functions. Your universal texting communications system must provide several modes of sending a text message – Twitter, email, SMS, etc.

The Ruby Translator©™ (Patent Pending) is a software application developed by the authors. It is a unique innovative texting communications tool. The Ruby Translator is designed not just for the texting generation, but for all individuals, to improve and expand their texting communications capabilities, speaking the language of today, in the most efficient process possible. The software is an App that allows users to translate text messages written in the texting shorthand into standard English. Standard English can also be translated into texting shorthand. The message can then be emailed to its recipient or saved to Microsoft Word or your text editor as shown in the iPhone platform of the Ruby Translator.

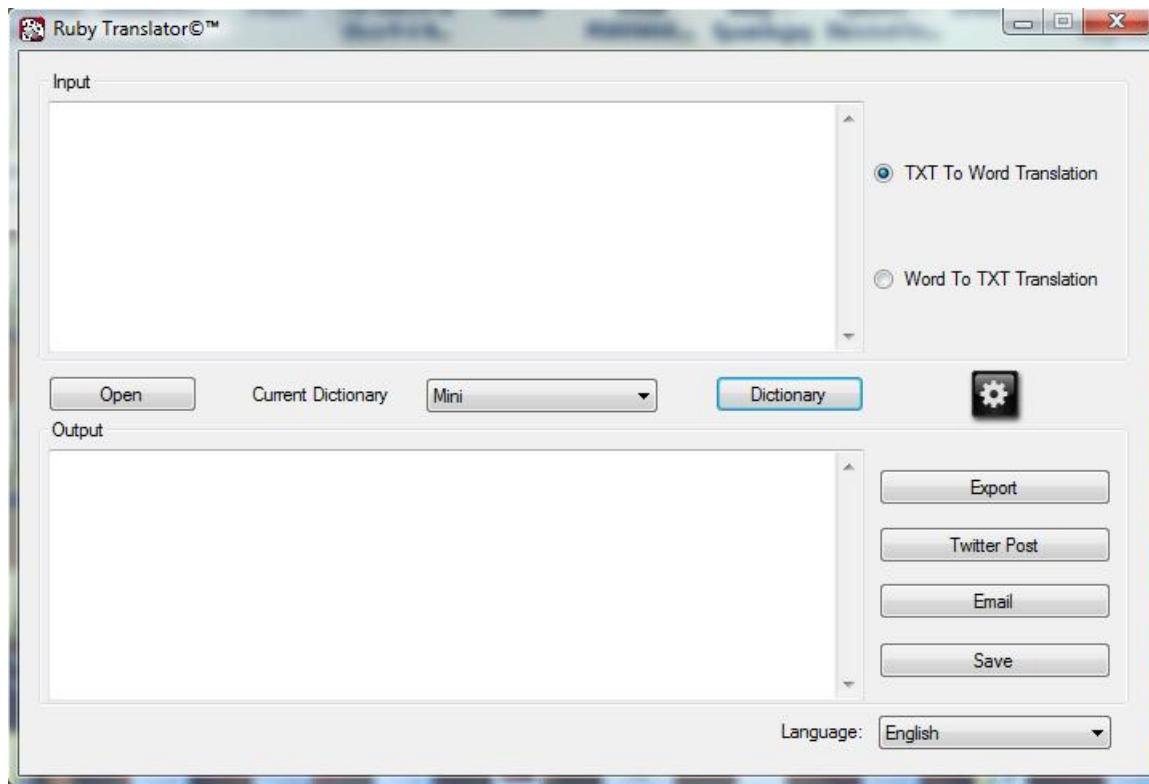


The strength of the Ruby Translator lies in its add-on dictionaries. The texting language is not limited to English, but dictionaries are provided for French, Italian, German, and Spanish. It is truly multi-lingual. Two of the leading texting translation Web sites have partnered with the software application so dictionaries are provided by Netlingo© and My Text Talk©. The authors have developed an English texting dictionary that is for single word texting as opposed to the texting phrases that are common. The English texting dictionary is the most functional in texting for note-taking. In addition a dictionary of common drug and alcohol terms is available. This dictionary was developed in partnership with John 3:16 Ministries, a spiritual boot camp for men with addictions, to provide assistance in monitoring and/or knowing addiction terms by concerned parents, loved ones, educational personnel, drug counselors, law enforcement agencies, medical field personnel and all other interested and concerned parties. The dictionaries can be viewed on the monitor, printed, merged and completely edited.

The Ruby Translator consists of two pages in the Windows platform: the Home Page and the Dictionary Page. Following each page is a list of the buttons on the page and a description of their uses.



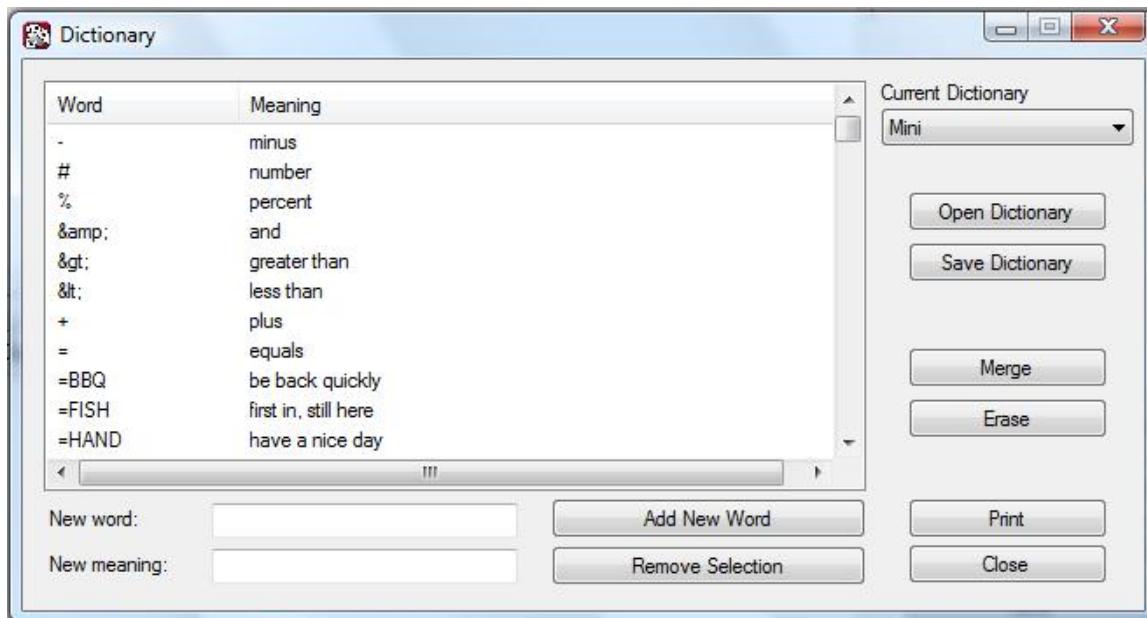
HOME PAGE



- a. **Input:** This text area is where you enter the text that is to be translated.
- b. **Output:** This text area is where the translated text will appear.
- c. **TXT to Word Translation:** Having this selected will translate text abbreviations into coherent words. **Example – Today I was LOL! = Today I was laughing out loud!**
- d. **Word to TXT Translation:** Having this selected will translate coherent words into standard text message abbreviations. **Example – Today I was laughing out loud! = Today I was LOL!**
- e. **Open:** This button allows you to import saved text files into the input area (NOTE: in order to open a saved translation, you must save in TXT format).
- f. **Current Dictionary:** This button allows you to view all of the dictionaries available and to download one of these dictionaries.
- g. **Dictionary:** This button takes you to the dictionary page. Here you can perform many functions including Open using the Current Dictionary drop down menu, Save, Merge, Erase, Print, and Close. Content editorial functions are Add a New Word, Replace a Selection and Remove a Selection.
- h. **Export:** This button exports your translation into your default text editor. *I.E. Microsoft Word.*
- i. **Twitter Post:** Allows you to post a message to twitter directly from Ruby.  
 Requests Twitter Username and Password.
- j. **Email:** Allows you to email a message directly from Ruby.
- l. **Save:** This button will save your translation directly from the translator. You can choose the location and file type from this menu (NOTE: in order to open a saved translation, you must save in TXT format).
- m. **Language:** This button allows you to select a language for the button names.



DICTIONARY PAGE



- a. **New word:** Type the word [Texting word or abbreviation] to be added to the dictionary in the **New word** input box.
- b. **New meaning:** Type the meaning of the New word in the **New meaning** input box.
- c. **Add New Word:** This button adds the new word and meaning of the word to the dictionary.
- d. **Replace Selection:** This button replaces the present dictionary with the new selected dictionary.
- e. **Current Dictionary:** Displayed is the title of the current dictionary. The actual word and meaning of the dictionary is displayed to the left. Click on down arrow to display all dictionaries available. To change a dictionary click on a dictionary name displayed.
- f. **Saved dictionary from Excel file** -- need to be careful when loading dictionary as an Excel document. The file MUST have two columns. One for TXT and the other for Word. If this format is not followed Ruby will not accept the file and will consider it as a corrupted file.
- g. **Save Dictionary:** This button saves any modifications you make to a loaded dictionary.
- h. **Merge:** This button allows you to combine two dictionaries into one usable dictionary.
- i. **Erase:** This button will clear all words and meanings from a loaded dictionary.
- j. **Print:** This button prints the contents [Word and Meaning] of the dictionary.
- k. **Close:** This button closes the dictionary and returns you to the Input area. When closed the latest dictionary is saved.

A modern day curriculum is not complete without the incorporation of texting and the three keypads used on unique devices such as the iPhone. Courses where texting should be a major component are keyboarding, business communications, note taking, word processing, and microcomputer applications.

Texting is the newest non-verbal form of communications. The possibilities of using texting are endless. Some of those are note-taking by executives on an airplane or in the Board Room, 911 coordinators, fire departments, law enforcement agencies [local, state and federal], Border Patrol,



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informants, school counselors and more. As educators we can embrace the use and add it to our toolbox of teaching strategies to reach this generation of learners. Are we up to the task?

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**IAM QUOTIENT FOR IMPRESSION MANAGEMENT:  
A GUIDE TO APPEARANCE AND BEHAVIOR FOR YOUNG PROFESSIONALS**

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**ABSTRACT**

As Business School teachers and management consultants, the message we all too often must deliver is the need to understand the part appearance and behavior plays in getting a job, a promotion or possibly a date! The role appearance and behavior have on differing job-related outcomes for employment, retention and promotional issues will be addressed by our newly introduced Image Appearance Management Quotient (IAM Quotient). The value of the IAM Quotient lies in its self assessment guidelines and its usefulness as a tool to share with those who need help in the quest to get more from their God given and worked for productive selves. This article is designed to be used in a class, with clients, by search firms or those that are having trouble getting a job or promotion. Our IAM Quotient was developed from data gathered from our research, the extant literature and experiences. The ability to understand the image you project and its part in your career is a key to becoming more of what you can be.

*Keywords:* Appearance Behavior Image Candidates Promotion

**Introduction**

All “candidates” for an initial interview or promotional assessment are relatively equal and acceptable on-paper or they would not be in the pool. The applicant resumes that are selected for further consideration look alike and provide a picture of what and who a candidate is related to job specifications for knowledge, skill and abilities. And, one’s performance appraisals and related work histories generally show high performance or they never get considered. And, in America today where GMAT, LSAT, MCAT, SAT and so on, are essentially IQ tests, the IQ of old is there (Service, 2005b and 2005c; and Sternberg, 1985b and 1996). This leads us to conclude that if image played no part in selection, then there would be little reason to have face-to-face interviews (Ridley, 2003). Therefore image becomes key to a candidate getting what they seek. By image we mean what comes to mind when a name is mentioned since most often there is painfully little in the way of long term involvement. The image of “you” is developed quickly in someone else’s mind. Image is what people think of you when they “observe” you in action in an interview, assessment center, social setting or from afar in work or school situations (Peters, all dates). The ability to manage one’s image



within the context of what can and cannot be controlled is the key to success. We believe the successful candidate is one who can translate image or appearance into a behavior that is seen as valuable to the hiring manager, supervisor or key decision maker.

*As we help students and beginning workers to become young professionals with managerial and leadership responsibilities, and move away from the mentality of students or workers, we are constantly struck with the need to describe appropriate appearance and behavior. There are hundreds of books on appearance and manners, yet, we still find little that gets to the point and describes clearly how and possibly more importantly how and why one is to appear and act as a young organizational professional (Charan, 2007). Additionally, we must admit what is often called common sense is all too often in reality un-common sense especially related to appearance and behavior (Blanchard, 2007; Charan, 2007; Friedman, 2005 and 2008 and; Levitt and Dubner, 2005 and 2009). Even small children will quickly say that good-looking people are smart and nice and that the more appearance-challenged are both dumb and mean (Goleman, 2000; Service and Cockerham, 2007; Service and Fekula, 2008; and Service and Lockamy, 2008). Look around and you will see this stereotypical “appearance-is-it” attitude when decisions about hiring, firing, promoting, marriage, friends, management and leadership are made.*

### **Research Question and Methods**

The social sciences research world of “Business School” disciplines is characterized by globally multiply confusing social phenomena where varied perceptions, ambiguities and complexities abound. All “social” researchers experience cloudy complexity that is multifaceted as we dissect human actions and interactions, and more especially perceptual concepts such as appearance and behavior for purposes of comprehending the abstraction of order useful in developing solid research questions that can lead to useful answers. “What is important is that research findings do not oversimplify phenomena, but rather capture some of the complexity of life. . . . conditions/consequences do not exist in a vacuum (Corbin and Strauss, 2008: p. 91).” The key to developing useful research requires observing data no matter its source with an unbiased objective eye: yes it is impossible, but a worthy goal.

For this study data were gathered from many forms of literature and reported research, and experience as well as questionnaires from over 1,100 working respondents. Data from over 1,100 respondents (average age of 36 with 15 years of working experience and 17 years of education) was merged with personal experiences and observation, and 500 published sources to develop our models for image (questionnaires are demonstrated in Service and Arnott, 2006). “Remember, the primary purpose of doing qualitative research is discovery, not hypothesis testing (p. 317). . . . not trying to control variables, but to discover them (Corbin and Strauss, 2008: p. 318).” Therefore, our research question becomes: “What are useful precepts in determining, and improving, one's own level of appearance and behavior in order that one can become more of what they are capable of becoming by avoiding superficial limitations because of how one looks or acts?”

### **Background: how, why and Impression Management**

It seems that too much has been written about appearance, how you impress others as you appear to be a leader or manager; and simply how appearance can be what gets, keeps or improves



employment. In popular media, we are inundated with messages about the external. We wish the internal made a greater impact, but we must submit to society's demands and worry about appearance. Maybe you feel that nothing can be added to the existing literature about appearance. However, from what we have witnessed in educational institutions and in the business world either there needs to be more or what is out there is not being applied. We start filling in the blanks here by noting that there are two organizational imperatives, 1) to become and remain innovative-organizationally and personally, and 2) to understand why someone would do business with you or your organization. This article focuses on a small but ever more crucial part of #2-why someone would do business, promote or hire you! Such issues revolve around appearance and behavior: image of you represented by your IAM Quotient.

**The Appearance Component -** The theme here is to manage appearance.

The popular press and news media of all types meet our demands for short easy lists for everything and in that vein we are attempting to frame our IAM Quotient models into more general and unfortunately hard to test principles. Generically speaking, anyone desiring to advance in employment status should be able to demonstrate how they will:

- Be the “appropriate” image your “impression management” exemplifies
- Add value - be a net positive + deliver results all around your job
- Communicate and exemplify integrity-with everything and everyone
- Invest in relationships in-outside of an organization
- Sell one’s self and manage the image others perceive as the real “you”
- Gain perspectives of others: more important than what is, or what you think
- Be easy to manage-have a replacement for yourself
- Always watch all the “little things” and avoid messing up: there are many image, substance, behavior and personality de-railers (Badowski and Gittines, 2003; Begley, 2004; Goleman, 2000; Hesselbein and Goldsmith, 2006; Kawasaki, 2005; Lewicki and Hiam, 2007; O’Toole and Lawler, 2006; Peters and Peters and . . . all dates; Scott, 2007; Service and Arnott, 2006 and; Smith 2000).

Impression Management is another view of you described by Erving Goffman in his seminal work *The Presentation of Self In Everyday Life* (1959). Goffman said we must understand the need to and consequences of defining ourselves in the public eye. For once we define ourselves in a certain status not only can we expect to be treated that way, we must realize we will be judged in appearance and behavior against the status we have sought and assigned to ourselves. Conversely, we also forgo all claims to be something we do not appear to be. When you define what the “is” of you is, people believe that what they ought to see the is that “is” through your appearance and behavior.

Understand that the image “secrets” above are the results of impression management; and that successful results from even a near perfect image are **not** deterministic, rather they are probabilistic. The more of these issues one manages relative to one’s appearance and behavior, the higher probability of getting hired or promoted. Only those that understand how others perceive them will find work in today’s highly competitive job market, or continue moving up the organizational success ladders. Manage the image that others see as “you” in order that it may be more like the “me” you wish them to perceive. True understanding of factors and self are required; not just the ability to



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categorize factors and one's self. All of these factors rest on a foundation of relationships. It is a grave mistake to think that others value what you value, and even when they do, they simply do not value it the same way you do (Goffman, 1959).

We advise outside reading on etiquette, protocol, and civility in order to know what is expected of you as a young professional. In a recent *Bloomberg Business* piece we see young professionals are turning to image consultants and etiquette coaches to prepare them for the business world. New graduates are finding it more and more difficult to transition from the "social" atmosphere of college days where dress code expectations were non-existent, to some levels of decorum in the business world (Wayne, 2010). A recent article in our local newspaper quoted *social strategist* Deborah O'Connor as saying "The biggest problem people have is knowing what's appropriate in what situation (Temple, 2011: p. 5E)." Yes this is the problem and, even the title of *social strategist* did not appear on anyone's radar screen until very recently. Social strategist would suggest:

- Holding yourself erect with good posture-young people do not do this!
- Maintaining proper level of eye contact-do not over or under do.
- Not swaggering as you walk-young athletes often walk too slow!
- Dressing appropriately-yes different for different effects and settings.
- Entering into discussions with poise and confidence-not-over or under.
- Having a pleasant voice-tone and level + amount!
- Understanding what *good* small talk is-fit and balance.
- Knowing how to be a conversationalist: focus on other's interest.
- Avoiding talking down to or up to (Service and Arnott, 2006).

Start by asking have you responded to the opportunities that your looks have given you? Everyone has weaknesses they can neutralize, and strengths they can polish and leverage. Recall all of the less-than-attractive people who have become great leaders, and improve in areas you can to offset any weaknesses. We think education is a great way to offset deficiencies in looks. Maybe many of us sought a profession where looks were not important. Few care what a professor, doctor, computer or research scientist looks like.

We suggest a simple switch in thinking. Instead of thinking about your attractiveness (or lack thereof), start thinking about appearance skills and behaviors. Skills are generally classified into technical, interpersonal, and conceptual categories, and all of these can apply to appearance. Understand the technicalities of standing erect, posture, etiquette, and decorum, and mix these with the interpersonal skills necessary to show people you care about them enough to adjust behavior. When you do, you will find that others begin to perceive you as "better-looking" (Service, 2005a and c, and Service, 2009). "[S]elf-awareness, through various means, is becoming key in many organizations. . . . The first step to . . . effectiveness is being aware of one's strengths, weaknesses, and personality characteristics (Nahavandi, 2003: p. 80)." In this area Richard Bolles's, *What Color is Your Parachute?*, makes a contribution to your explanation. In annual editions, Bolles gives great guidelines to understanding yourself, the world, your mission, and how you might fit in and begin to stand out as a success in the world of organizations (Bolles, 1995).

We make up our minds about another person in about 5 seconds. It takes 5 seconds to initiate a process, 21 days to start a pattern, and 100 days to start a habit. Eye contact is most effective when



made during 60% of the time people spend together. Handshakes are best when they are two medium pumps with a fairly firm grip and a dry hand. The way you enter a room and converse are more important than what you say. Success in most significant roles is 15% technical skills and 85% people skills (Service and Arnott, 2006). An ounce of image is worth a pound of performance. Civility is not noticeable but uncivil is (Ifill, 2009)! We notice persons nonverbally before we notice them verbally. We like people who talk about us more than we like people who talk about themselves. We often do not see what people look like because of how they sound. We prefer our news to be read by a good-looking people. We value looks over intellect or sincerity, and *looking* nice over *being* nice it seems. Obese white-collar women are paid 30% less than slimmer colleagues are, yet men pay little penalty for being overweight ("Obese," 2004: p. A1).

One of the hardest things to do is to tell someone about their appearance. Maybe we should not do it unless it is something they can do something about. Even when it is, your comments won't have any benefit unless they are requested. Dr. Phil McGraw recently said, "If you want better, give better. . . . Everyone loves to be admired and respected (1999: p. 181). . . . I strongly believe that the difference between winners and losers is that winners do things losers do not want to do. . . . I've never yet seen a real, big-time successful person who was a lone wolf (Bosch, 2004, p. 182)." These principles certainly apply to appearance: give more, respect others, work at difficult things, involve yourself with others; and your appearance improves.

Managers and leaders are figureheads who have to look the part or people will not take them seriously. But can anyone *look* like a leader or a manager? Here are a few words people reported to us in our research about what leaders and managers exemplify:

- Humility - Enthusiasm - Self-confidence - Warmth - Sense of humor
- Extroversion - Stability - Honesty - Tenacity - Work ethic

Yes, these actions make appearance increase, and they have little to do with beauty.

### **Do Not Fear Looks – Manage them**

Remember you are managing someone's impression of a given. How you internalize flaws and subsequently externalize them for your benefit will speak volumes of your inner strength, and ultimately your value in the organization. When you finally get a chance to succeed, do not run away from it, but approach it with confidence, worrying little about your God-given appearance. Life is not a Donald Trump *Apprentice* episode. Even "The Donald" is not as he appears in his show. Trump recently said, "This is the high point of my career. But I never viewed myself as having much of a low point (Naughton and Peyser, 2004, p. 49)." This comes from a man who in 1992 was worth approximately a negative \$900 million! In reality, our appearance is as much about what we think we look like as what we actually look like. Being fearful about your appearance will show through. We are sure that the world has been "media-ated" into believing people are all nice-good looking, yet these looks exist only as fragmentations of our imaginations: human appearance is seldom as it seems. We are directed to believe that people generally look different than they really do, causing many psychological problems when we try to look perfect as perfect is depicted without saying it on TV. Pay attention when the up-lights are away from almost any TV personality. It seems there is no



one on TV or in the movies who has not had some form of corrective surgery to make them look better. The world of reality is that most people do not look like those examples we see on TV and in the movies. Our newscasters, and movie actors and actresses have numbed us to what the normal person actually looks, and sounds like. We never see things as they are truly are, but we see things as we are. "I'll believe it when I see it," more correctly should be: "You'll see it when you believe it."

Take each new day and work on your appearance, but realize you have many other attributes, knowledge, skills and abilities that may be more important to worry about, change, or hone. Too often we dwell on those things we cannot change when in reality those that we can change can often override those that we cannot. The dean of coaches, UCLA's John Wooden, said that we should never let what we cannot do get in the way of doing what we can do: this doubly applies to appearance and behavior (Wooden and Jamison, 2007). Also do not confuse cannot with will not and many more platitudes that can help you if you can find the truth in them. Yes, internalize a principle for you use and it will remain of value. Each of us has some unique appearance traits that will work for us.

### **The Behavior Component**

The theme here is: your actions are speaking so loudly others cannot hear what you are saying (Harari, 2002). This is a starting mindset to the discussion of attitude and behavior that influences others' image of you. As previously discussed, our natural appearance may not be changeable but it can be improved or enhanced to a degree. We may not be able to naturally add hair, change our skin color, or increase our height, but we can change others' feelings towards us by how we capitalize on our behavior.

Inner reflection is discipline that may be difficult for most people. Instead we are more easily tempted to reflect on the behaviors and actions of others. No principle or trait (we are labeling all *precepts*) will help you in the area of appearance and behavior until you internalize that precept. It seems that so often we are quick to judge others but slow to judge ourselves. We too often get satisfied being stuck no matter how much we might wish to un-stick ourselves; we most often wish something would change instead of working at changing it (Blair, 2010). This especially applies to appearance and behavior as others see and perceive them, not as you see and perceive them: they know only what they see. Think inwardly enough to discover what others think of the image of you.

In London Professor Service worked with Rona, a theatre teacher who would insist that we look at every actor and ask, "Did the way the actor performed benefit the moods, feelings, understandings, or emotions the playwright and director wished to be created and felt by the audience?" Apply Rona's lesson to behavior. Would it not be appropriate to ask how your behavior relates to your acting as a leader, manager, follower, or like you want the promotion or job? Behavior can add to, or take away, our appearance. "Suit the action to the word, the word to the action (Hamlet from Laurie, Rona, 1994: p. 55)." Remember, that business leaders now "perform" in a goldfish bowl. And, our quickly viewed appearance and behavior defines who we are to most others.

"Did you know that each of us influences at least ten thousand people during our lifetime? So the question is not *whether* you will influence someone, but *how* you will use your influence (Maxwell,



2002: p. ix)". Leadership is so closely aligned with influence that the words are almost interchangeable. Leadership and management are lifetimes of growing knowledge, skills and abilities. "Nearly all of which can be learned and improved (p. 13). . . . It's [often] unfortunate because as long as a person doesn't know what he doesn't know, he doesn't grow (p.14)." Your external behavior is an exhibit of how others judge you as a leader, manager or candidate for a promotion. Remaking an image must begin with remaking the behavior that stands behind it. If it takes 1,000 words to describe a picture, how many words must it take to convince someone who saw your behavior that it is not the correct indication of the person you are? We must accept image and appearance as factors influencing behavior, and the converse. If either becomes unbalanced the other will suffer. Behavior and appearance are movies about us.

Yes, people watch you; and quite often, they mimic what they see you do. Your behavior can be seen as a lever by which you pull similar behavior out of those you interact with at work, home and play: is it the behavior you desire? We most often know others are clever, reliable, or even trustworthy because of what we have observed them do—we have no better metric for measuring their behavior. We have comparison others—or icons, for all of our actions. Likewise, we are comparison others. Think about the fact that your behavior highlights who you are and that you may not get a second chance. As you think about that, try to move from behaving as "I" please, to behaving as if others are always judging me by what I do because they are. "However much we may deny it, the way other people see us does influence the way we see ourselves (Handy, 1998: p. 88)." Image is circular, but your behavior is simply you to others. And, good behavior is a hygiene factor that will normally get you very much appreciation, because people expect it as they should (Sternberg, 1996).

Tattooing and body piercing seem to be the rage. These "marks" of self-expression were once used as a sign of rebellion to distance one's self from the norm. Now they seem prevalent. We caution the reader to realize that tattoos and too many misplaced piercings are still frowned upon in the job market. In this highly litigious age, hiring managers want candidates with predictable behavior patterns. Permanent and highly visible marks are still seen as having some level of criminality in the behavior of the person wearing them (Durkin and Houghton, 2000). Remember, when you are being considered for employment or a promotion someone will produce a file of your behavior. Bosses are paying attention. Your behavioral file proves they were right most often; it is what they think of your markings not what you think! Lastly, people want to see that you are paying attention and picking up on the right things: your markings might indicate a lot here! Big things are made up of little things and people rightly figure the best predictors of future actions are past actions (Bill George, 2003).

#### **Behavior: A Craft to Be Mastered**

Benton (2003) emphasizes the need for our actions to encourage others to get useful things done. Integrity, confidence, and communications—verbal and nonverbal—all add the substance that you



must have in order to be normal enough for hiring or promoting. Make your normal style of behavior under stress a winning style where your strengths are heightened and your weaknesses are put aside. Pay attention to your behavioral game and understand how others see you. For this purpose, there is no process that is perfect, but 360-degree feedback evaluative systems can be helpful in identifying weaknesses and developing new skills and competencies through awareness: always look 360 (Cascio, 2010). Understand how others perceive you, regardless of how you think you are, even when you are right (Tornow, London, and CCL Associates, 1998; and Maxwell, 2006). In the final analysis, no system works unless you work to make it work (Service and Loudon, 2010). Tools are tools and are only as useful as the craftsman using them. Start using any tool with the intent to improve dedicated relationships. Continually share knowledge inter-organizationally with dedicated suppliers and all those you interact with, inside and outside your organization (Childress, 2001). If your organization does not have a good 360-degree evaluative format, you should develop one to use for yourself.

Also realize behavior is exhibited via Facebook, Twitter, blogs, e-mail, or voice mail (Buhler, 2010). It is always out there and nothing is really protected. Many firms hire consultants to look at your private accounts or require you to give them access to your Facebook or they will not consider hiring you. What you write or record yourself doing in picture or video form will be recorded for all to see for all time (Wayne, 2010).

Figure 1 - *Self-improvement matrix - Tailor the Matrix below for yourself!*

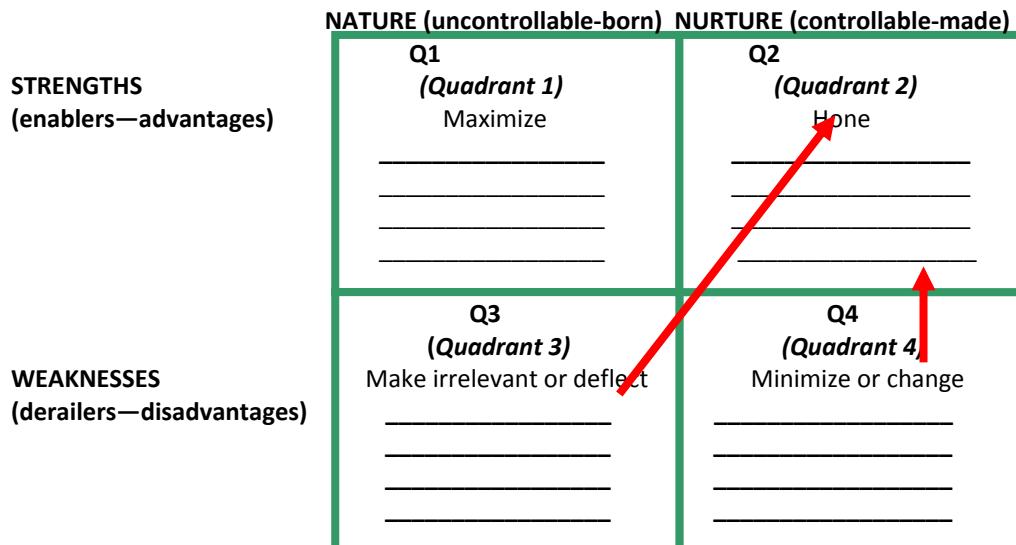




Figure 2 - IAM Quotient Measurement and Improvement Matrix

(Evaluate yourself against these reported traits)

NATURE (uncontrollable-born)		NURTURE (controllable-made)	
Strengths (enablers- Advantages)	Appearance <b>Behavior</b> <input type="checkbox"/> attractive <input type="checkbox"/> <b>authentic-inspiring-moral</b> <input type="checkbox"/> good height-to-weight ratio <input type="checkbox"/> <b>courageous</b> <input type="checkbox"/> nice appearance <input type="checkbox"/> <b>grace</b> <input type="checkbox"/> confident about appearance <input type="checkbox"/> <b>personable</b>  (your other IDed trait)	Appearance <b>Behavior</b> <input type="checkbox"/> good posture <input type="checkbox"/> <b>an influential</b> <input type="checkbox"/> appropriate decorum <input type="checkbox"/> <b>trustworthiness</b> <input type="checkbox"/> good appearance knowledge <input type="checkbox"/> <b>savvy-flexibility</b> <input type="checkbox"/> polished appearance <input type="checkbox"/> <b>respect</b>  (your other IDed trait)	
	Appearance <b>Behavior</b> <input type="checkbox"/> unattractive <input type="checkbox"/> <b>Lack of credibility</b> <input type="checkbox"/> bad height-to-weight ratio <input type="checkbox"/> <b>deceitful-cheater</b> <input type="checkbox"/> mean appearance <input type="checkbox"/> <b>selfish-coward</b> <input type="checkbox"/> unconfident about appearance <input type="checkbox"/> <b>disrespectful or self-centered</b>  (your other IDed trait)	Appearance <b>Behavior</b> <input type="checkbox"/> poor posture <input type="checkbox"/> <b>pretentiousness</b> <input type="checkbox"/> poor/inappropriate decorum <input type="checkbox"/> <b>temper + cowardness</b> <input type="checkbox"/> poor appear. knowledge <input type="checkbox"/> <b>greed</b> <input type="checkbox"/> unpolished appearance <input type="checkbox"/> <b>crudeness</b>  (your other IDed trait)	

Following are descriptions and discussions of the precepts shown in the Figure 2 model; and how to use Figure 1 in order to ID and improve in those areas of IAM Quotient.

### The Appearance Traits That Have Been Reported to Us

In the next two sections we discuss the precepts shown in Figure 2. All of these precepts were gathered through the instruments shown in Service and Arnott (2006). What follow are descriptions and discussions of those precepts.

Understanding what is reality about your appearance and behavior and their effect on your success as a young professional is foundational to IAMQ. But the most difficult part is changing what's in your head, not what's on your face. Dr. Phil McGraw has many popular self-help books that are intended to help people change their lives. His 1999 book and 2000 workbook on life strategies are exemplars on how to address what you want to change. "Books do not change people. People change people (2000, p. xi). . . . Take a good long look at yourself. What do you see in the choices and outcomes (p. 21)?" He reminds us that there is no human reality, only perceptions. It is about you and the desire to change. He encourages us to stop blaming others for our "lack of", or "not doing." For you on good, realistically define your actual self and ideal self and make strategies to "mind the gap" in order to get the two more closely aligned.



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We are excluding the extremes of the severely disadvantaged and the super-ability outliers, i.e., those of Michael Jordon, Miss Universe, et al.; because most of us do not fit into those categories. We simply must stop using outliers as our primary exemplars (Gladwell, 2008). Outliers as examples are useful to help us get it or become it, but their value are often limited. For the disabled or disadvantaged in the appearance area, the only advice we offer is to think of your abilities, not disabilities.

### ***Normal Natural Appearance Strengths—Quadrant 1 of 2X2 Matrix (see Figure 1 & 2)***

The first natural trait we found is being **attractive**. Some leaders emerge in organizations largely because of how they look. When we tell our students and clients this is how we got ahead. They laugh? How you look in person is, in some cases, becoming less important than how you look on TV or social media. Think of the many leaders who succeeded in part because of their media-genic looks. The experts define good looks in the form of symmetry, smoothness, and no overly unruly features. Some people are given the gift of beauty at birth and others have used plastic surgery and many other techniques to improve their attractiveness. Be cautious here for plastic surgery often results in noticeable and visually offensive appearance; sorry, but take notice!

**A good height-to-weight ratio** makes a large contribution to appearance. Anyone who is striking because of their physique is at a decided advantage. People notice them and want them to be the out-front person. Being selected for special treatment makes us feel better and we do indeed become better (Pink, 2009; Pinker, 2002; and Ridley, 2003).

The next trait is hard to explain, but you know it when you see it: people who look **nice**. Eventually looks and actions have to match.

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### THE LANGUAGE OF LEADERSHIP: HOW TO MOTIVATE YOUR STAFF

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#### **ABSTRACT**

This paper presents a review of research On Motivating Language Theory (MLT) and proposes it as a basis for helping higher education administrators/leaders motivate direct reports and other staff members through strategic use of language. The theory proposes three types of messages that help effectively motivate followers: Direction Giving, Meaning Making and Empathetic messages. Examples of each type of message are given. Specific recommendations for using Motivating Language Theory as part of leader/administrator training as well as broader executive development programs will be discussed. Current research will be reviewed and suggestions for developing a training program based on Motivating Language Theory that could be used to identify leader training needs and serve as a basis for further leader development. Suggestions for further research and other improvements will be made. Since Motivating Language Theory focuses on sending messages, the inclusion of listening as an extension of the theory will be proposed as well.

*Keywords:* Motivation, Leadership, Language

#### **Introduction**

Leadership is a process enacted as a Higher education administrator/leader attempts to influence the behavior of direct reports and other staff members toward some objective. This influence is accomplished through communication. The importance of communication is implicit in much research on leadership. Only recently, however, has work has been undertaken to define the impact of communication on leadership, and specifically, language use by leaders on their success in this influence process which is typically labeled leader effectiveness.

#### *Research on Leadership*

Leadership is one of the most widely researched and written about concepts in the field of business management, organizational behavior, and educational administration, This interest has been a focus since the earliest students of organization began their writings. While there are a myriad of theories and research proj2008with research support) are labeled transactional, transformational and exchange theories. These build on the more traditional leadership style theories which focus on task-centered or employee-centered leader behaviors. In reviewing these three “modern” theories, it is obvious that the role of leader communication is more central to the theories than earlier behavioral and contingency theories of leadership, including both the Ohio State and University of Michigan studies as well as contingency theories such as the work of Fiedler, Vroom, Hersey and Blanchard, House, etc. (Schermerhorn, et al. 2010)



Noted scholar, James MacGregor Burns defined leadership as "...the reciprocal process of mobilizing persons with certain motives and values, various economic, political, and other resources, in a context of competition and conflict in order to realize goals independently or mutually held by both leaders and followers." (Burns, p. 425) According to Flauto, Burns identified two basic types of leadership, transactional and transformational (1999. p. 87). Other researchers have focused on the interaction of leaders and followers as a vertical dyad and have developed Leader-Member Exchange Theory to study leader behaviors. (George & Jones, p. 406)

Transactional leaders recognize that their own goals and the goals of their followers are independent. The leader and followers exchange rewards, efforts, or other intangible rewards so each can achieve their independent goals. Transformational leaders, on the other hand, attempt to change the goals of their followers to a higher level that represents the pooled interests of both leaders and followers. (Burns, pp. 425-6)

Leaders who follow Leader-Member Exchange Theory develop different kinds of relationships with their various followers. This theory investigates the relationship and interaction between the pair (dyad) of leader-follower and focuses on "perceived contribution, loyalty, and affect." (Flauto, p. 89) Relationships between leaders and followers are divided into two categories: the in-group and the out-group. Based on the relationship, the leader-follower interaction may be significantly different with the in-group dyad having a strong interpersonal relationship while the out-group has a more traditional, formal relationship. (George & Jones, p. 406) The nature of the relationship will affect the nature of the interaction (communication) between the leader and follower.

These approaches to leadership have received significant attention in recent management and leadership literature. The use of communication seems implicit in these three theories. The premises on which most leadership theory and research have been based include simplifying assumptions that the majority of leader language is an exchange of uncertainty-reducing information, and that all leaders communicate equally well with their subordinates. (Mayfield, Mayfield, & Kopf, 1995, 1998).

### **Motivating Language Theory: The language of Leadership**

Recent research has begun to examine the role of language as the means by which leaders express behavioral intentions to followers; and as a result, researchers have collectively begun questioning the previous simplifying assumptions (Conger, 1991; Fairhurst, 1993; Fairhurst & Chandler, 1989; Jablin, 1985; Jablin & Krone, 1994; Lamude, Daniels, & Grahm, 1988; Mayfield et al., 1995, 1998; Scandura & Graen, 1984; Sullivan, 1988; Waldron, 1991).

Motivating Language Theory (MLT) (Sullivan, 1988) "predicts that strategic applications of leader oral communication have positive measurable effects on subordinate performance and job satisfaction." (Mayfield et al., 1995). Further research has investigated the relationship between Motivating Language and both work innovation and commitment (Mayfield and Mayfield, 2002, 2004) as well.



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Motivating Language Theory proposes that the effectiveness of a leader in using three types of communication with their followers has an impact on important organizational outcomes. These three types of communication are:

MEANING MAKING – explains rules, structures, and values of the culture of an organization.

DIRECTION GIVING/UNCERTAINTY REDUCING – clarifies instructions, clears up confusions, etc.

EMPATHETIC – expresses emotions of a leader through shared feelings, praise, criticisms, etc.

Motivating language theory includes four additional assumptions as well. First, language covers “most verbal expressions that can occur in leader-to-worker talk.” Second, the effect of ML on worker outcomes is moderated by leader behavior in the majority of cases. Third, if leader language and leader behavior are incongruent, then the effect of leader behavior will dominate; that is, language “will only get a leader so far, and speech must be congruent with behavior to be taken seriously over time.” (Mayfield, et al., 1995). The fourth assumption is that leaders are most effective through the “powerful use” of all types of ML. (Mayfield, et al., 1995).

### **Measuring Motivating Language**

Mayfield et al., (1995, 1998), operationalized a scale to assess the use of Motivating Language by leaders as first proposed by Sullivan (Sullivan, 1988). This scale “measures both a leader’s general oral communication skills with subordinates and his/her strategic use of spoken language variance to motivate workers. [And as noted, is] firmly grounded in current management and communication literature and [encompasses the] most relevant leader oral communication with workers.” (Mayfield et al., 1995) Further investigation of the scale (Sharbrough, et al., 2006) supports the validity of this instrument.

The survey instrument developed by Mayfield et al. (1995) asks respondents to consider how their supervisor might talk to them and asks a series of questions that are examples of the types of messages a supervisor/leader might send. Respondents are asked to respond to questions concerning how often a leader engages in certain types of communication (types of messages) using a five point scale from very little to a whole lot. Factor analysis by Mayfield et al., 1995) echoed the three categories of Motivating Language originally proposed by Sullivan (1988). Sharbrough et al. (2006) used the same instrument with a different sample and found the same factor clusters. A partial list of the types of questions from the three categories is listed in Table 1.

Motivating Language Theory (Sullivan, 1988) theorizes that strategic use of language by leaders is an important motivational tool which has a positive and measurable impact on employee performance and job satisfaction. As described by Mayfield and Mayfield (2002, p. 91), a 10 percent increase in motivating language will increase job satisfaction by approximately 10 percent and performance by approximately 2 percent. In similar research, Sharbrough, Simmons, & Cantrill (2006) found a 12 percent increase in job satisfaction.

### **An Extension of the Motivating Language Instrument**

Mayfield and Mayfield (2002) extended the original instrument to create a self-report instrument for leaders. They developed a diagnostic checklist for how often leaders engage in using Motivating



language with their followers. This instrument "incorporates relevant leader communication tactics that have received wide research support." (Mayfield and Mayfield, 2002, p. 92). This survey instrument has been modified by the current author and a colleague to include a 5 point response scale and has been designated the MLQL. Copies of the MLQL may be obtained from the author.

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Table 1

*Example Questions from Motivating Language Scale*

**Direction Giving:**

My supervisor:

Gives me useful explanations of what needs to be done in my work.

Provides me with easily understandable instructions about my work.

Offers me helpful advice on how to improve my work.

Meaning Making:

My supervisor:

Tells me stories about key events in the organization's past.

Offers me advice on how to behave at the organization's social gatherings.

Tells me stories about people who have been rewarded by this organization

Empathetic:

My Supervisor:

Gives me praise for my good work.

Shows concern about my job satisfaction

Asks me about my professional well-being

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Initial data has been collected from supervisors in a variety of local business organizations and analysis is underway. Factor analysis will be conducted to determine whether this scale has similar properties to the ML scale as proposed by Mayfield, et al. (1995) and corroborated by Sharbrough et.al. (2006). If this scale has similar properties to the Motivating Language Questionnaire (MLQ), then both could be used to determine whether leader and follower perceptions of Motivating Language are congruent and identify areas for training to improve the use of Motivating Language and thus, leader effectiveness, follower productivity, and job satisfaction. Further, these instruments could be used to identify specific leader communication skills within leader-member dyads, (Flauto, 1999) to help improve leader communication, worker loyalty and innovation (Mayfield and Mayfield, 2004), employee commitment (Mayfield and Mayfield, 2002), job satisfaction and productivity (Mayfield et al., 1996), and perceived leader effectiveness (Sharbrough et al., 2006).



## **Conclusions**

Motivating Language Theory provides a useful tool in understanding the use of language by leaders. It lays out a method for explicitly considering communication as inherent to all leader attempts to influence their followers. The two instruments discussed here provide insight into these attempts through the various types and frequency of messages used by leaders. Further, by studying these messages from the viewpoint of both the sender (administrator/leader) and receiver (staffer/follower) valuable information can be gathered. While the explicit study of communication in leadership is still in its infancy, current research has provided a beginning to better understanding the role of communication in leadership.

Motivating Language Theory can become an important part of leadership training efforts for higher education administrators as well as leaders in other kinds of organizations. For example, role playing exercises utilizing various situations administrators may encounter can be developed as an experiential training/developmental tool. Several role playing scenarios have already been developed that are indicative of how a leader might (or might not) be using Motivating Language. Examples may be obtained from the author.

## **Suggestions for Further Research**

While the original Motivating Language questionnaire has been validated in several populations, additional samples will only add strength to its validity. A more gender diverse population may yield differing perceptions across genders as well, providing another tool to better understand how different genders perceive leader influence attempts (Aldoory, 1999; Winter, et al., 2001)

Researchers should continue to collect data using the original Motivating Language Questionnaire, especially in educational institutions at both the higher education and secondary school levels. Further, the newer, self-report instrument requires validation and increased and varied sample populations to validate its use.

Finally, a comprehensive leader training program should be developed based on ML. Then the program should be tested and improved to gain additional information on training leaders in ML. Additional role playing scenarios could be developed and tested that are specific to the fields of education, business, government, etc., and included in training presentations based on applying ML as leaders.

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**VIRTUAL MENTORING AS AN ENHANCEMENT OF  
UNDERGRADUATE ACCOUNTING STUDENTS' EDUCATIONAL EXPERIENCE**

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**ABSTRACT**

Mentoring of individuals by someone with more experience is a centuries-old process. Within the educational context, mentoring is a form of active participation in the process of experiential learning and provides benefits due to the interaction among students, perspective employers and universities. However, practical constraints often make 'face-to-face' mentoring difficult. The 'virtual' mentor process has emerged as a means of overcoming the limitations of 'face to face' mentoring, and has become particularly effective given available technologies. Many professions have incorporated virtual mentoring into the education process; however, its use in the accounting field has been limited. This limitation is inconsistent with the goals of the profession on the use of experiential learning to aid students in becoming more successful accounting professionals.

The purpose of this paper is to explore the role of virtual mentoring in undergraduate accounting programs. Results of a field study that used a virtual mentor project in an undergraduate, financial accounting class are presented. Students were matched with a mentor who was an accounting professional. Emails between students and mentors were exchanged. Students were asked self-reflective questions or administered a questionnaire about their experiences. Overall, students provided a positive assessment of the project and their experiences. Some difficulties were noted, mainly lack of responses by some mentors.

The implications of the results of this pilot study suggest that it would be useful to extend the research to assess the perceived benefits of a virtual mentor program for all affected parties – students, employers/mentors and the universities.

*Keywords:* Virtual Mentors, Experiential Learning, Accounting Education

**Introduction**

Mentoring of individuals by those with more experience has been a process that has evolved over centuries. Numerous studies have demonstrated the benefits of mentoring, particularly from the perspective of professional development and learning. Within the educational context, mentoring is a form of active participation in the process of experiential learning and provides additional benefits as a result of the interaction among students, perspective employers (mentors) and universities. However, practical constraints and logistical difficulties often make 'face-to-face' or physical mentoring difficult and limit the ability of mentors and mentees to work effectively together. The 'virtual' mentor process has emerged as a means of overcoming the limitations of 'face to face' mentoring, and has become particularly effective given available technologies. Many professions



rely heavily on mentoring as part of the education process; however, its use in the accounting field has been limited. This limitation is inconsistent with the goals of the profession on the use of experiential learning to aid students in becoming more successful accounting professionals.

### **Purpose**

The purpose of this paper is to explore the possibilities and uses of virtual mentoring in undergraduate accounting programs to enhance students' educational experiences and assist in their professional development. A description and the results of a field study of the use of a virtual mentor project in an undergraduate, financial accounting class at a regional university are discussed in the remainder of the paper. The implications of the study are useful for extending the study to assess the benefits of a virtual mentor program for all affected parties – students, employers/mentors and the universities and serve as a pilot study for a more comprehensive analysis of the topic of virtual mentoring as a means of enhancing a student's learning experience.

### **Review of the Literature**

There is an extensive literature that addresses mentors in general, and virtual mentoring specifically. A mentor has been described as an experienced person who gives advice to someone less experienced. The idea evolved from its historical roots in Greek mythology. Odysseus assigned his friend, Mentor, the task of educating his son while he was away fighting in the Trojan Wars. The Merriam Webster Dictionary defines a mentor as “: a trusted counselor or guide; b : [TUTOR, COACH](#)”. Thus, the concept of the assistance provided by a mentor has a long established history.

The benefits of mentoring have also been extensively reviewed (see for example, Stanek (2007)). The limitations of face-to-face mentoring and advantages of virtual mentoring have been summarized in Stanek (2007), Bennett (2009) and Knouse (2001), among others. Virtual mentoring represents a form of active learning, a preferred method that yields higher retention rates of information (Felder & Brent, 1997). Given the current technology and vehicles such as email, virtual mentoring has become increasingly popular as an educational technique to aid experienced individuals in sharing and mentoring others. Virtual mentoring has been used in professions and activities, such as medicine and surgery (Grant & Sosin, 2010), teacher training in education (example, Watson, 2006), training adjunct college professors (Puzziferro, 2004; Pecorino, et al, 2009), and IT training (Hansen, 2000).

Virtual mentoring has also been used in undergraduate business education (Tyran & Garcia, 2005) and graduate MBA ethics courses (Brennan, 2008) as a means of experiential learning. However, despite the perceived advantages of the use of virtual mentoring, it has only had limited, if any, use in accounting education. The limited use of virtual mentoring in accounting education is interesting in view of the accounting profession's positive position on experiential learning. Experiential learning is recommended by the American Institute of Certified Public Accountants as a means to "... help students: (1) make informed career choices; (2) apply knowledge and skills that they have been exposed to in class; (3) develop knowledge and skills that are difficult to introduce in a class setting; and (4) possibly secure permanent employment." (AICPA, 2005). Universities and professional accountants have engaged in different forms of experiential learning activities for students, such as



in fraud and forensic accounting cases, fraud investigation and low income taxpayer clinics (Allen, 2011) and particularly with internships (Singleton, 2009). Thus, it would be interesting to see if virtual mentoring could serve a role in enhancing accounting students' educational experience and fostering professional development as reflected in the AICPA's objectives of experiential learning.

### **Procedure**

The approach to determine if virtual mentoring is a positive experience for students and if it enhances their professional development was to conduct a field study that utilized undergraduate accounting students in a virtual mentor project. The virtual mentor project was established in the Accounting Department at a regional, comprehensive public university in 2004 and continues to be part of the accounting curriculum. Other departments in the same university have also developed mentor programs; however, each works independently. The virtual mentor project is required in the 3d term of an intermediate financial accounting class that is usually taken by students in the final term of their junior year. Students are accounting majors or combined majors where accounting is a major component of their program. The point value assigned to the virtual mentor program is 15 points out of 350 possible points for the entire course. The virtual mentor project also satisfies a portion of the University's Writing Proficiency requirement. Thus, students are given incentives to participate in the program (See Appendix 1 for the virtual mentor requirements). Requirements have changed or evolved over the years; however, the basic structure and requirements have remained basically the same. For example, initially, 5 emails were required; however, the number was reduced to 3 given the relatively short time period of the term (10 weeks).

Students are assigned mentors selected from a pool of mentors and contacts that have been developed over the years. In a few cases, students provide a mentor of their own selection, after approval by the professor. The matching of students and mentors is based on the interests expressed by students in an "Introduction" questionnaire provided at the beginning of the term. The mentors range in experience from 1 to 30 years, and have varied professional responsibilities, such as CFOs, entry level accountants, partners in public accounting firms (local, national and international firms), controllers, staff accountants, governmental accountants, IRS and state revenue agents, and other related fields. In some cases, the mentor may no longer be in accounting, but nonetheless provides valuable insights as a mentor into how the accounting background and information assist in their current positions.

Students provide drafts of each email prior to sending. The professor reviews each email and returns it to the student with suggestions and comments to satisfy the Writing Proficiency component of the class. After revisions, emails are then sent to mentors, and responses received before sending the next email. All emails are sent and the project completed by the end of the 10 week term (quarter system).

Specifically, the project consists of a student sending their assigned mentor 3 interactive emails. The first email is an introduction. The next email addresses a specific, pre-assigned, technical topic that usually has been covered in one of their intermediate accounting classes. Examples of topics would be the issue of fair value accounting, the 'managed earnings' controversy and application of deferred tax concepts. Alternatively, the email could address the role of accounting in a social/global context



with questions such as the role of accounting in the recent financial crisis, adoption of IFRS and environmental or social accounting concerns. (Students do have the flexibility to select an alternative question that might be more appropriate than the pre-assigned one.) The final exchange has the student develop their own question. Examples of student questions for the final exchange are:

“What are some of the biggest challenges that you face at work?”

“How does accounting information assist you in performing your job?”

“What are some suggestions for making myself more marketable for a professional position in accounting?”

“Do you think an MPAcc degree would be more beneficial than an MBA?”

The student-designed questions usually focus on development of personal competencies instead of technical accounting issues.

The final part of the project asks the student to send a ‘Thank You’ email to the mentor and to provide some post-reflective comments about their experiences with the project. Initially, the student post-reflective comments were ‘open’ responses to the questions posed at the end of the assignment (Assignment available from author upon request). Starting with Fall, 2010, the format for student assessment or self-reflection was changed and students were asked to answer similar questions, but within the framework of a questionnaire (see Appendix 1). The change to a questionnaire format was more of a research design choice so that responses could be classified, categorized and measured easier for future work.

Content analysis of student summaries was conducted for the 2004-2010 timeframe, and for the ‘open’ questions at the end of the questionnaire format. Responses were categorized and classified if a frequency response rate of 25% was reached. For brevity, only the most frequently noted responses are reported in the tables below (additional details and responses available from the author). Specific responses for some time periods were not available, thus, some summarized results are more anecdotal and extrapolated from consistent patterns of responses than on the actual comments themselves.

## **Discussion of the Results**

### **Student Assessment –**

A summary of the most frequent student responses to the post-reflection questions about their experiences with the virtual mentor project are summarized in Table 1 for the ‘question’ format and in Table 2 for selected questions from the Questionnaire format. An overall observation is that the student comments rated the project highly favorable. Also, the comments were fairly consistent over time. In some cases, students indicated that they would recommend the program to friends even if they had difficulty receiving responses from their mentors.



Table 1

*Summary of Responses to Assessment Questions*

*About the Virtual Mentor Experience*

1. What did you like most about your virtual mentoring experience?

*Allowed me to get answers to questions not received in an academic setting*

*Talking to (or making contact with) a real person practicing in the field*

*Confirmed that class material was relevant in practice*

*Find out what the job entails*

*Great career advice*

*Practice communicating with professionals*

2. What did you like the least about your virtual mentoring experience?

*Response times (or related to the difficulty of slow or non-responses from mentors)*

*Takes away from other activities (however, students still recommended the program despite the time requirements)*

*Experience depended greatly on how whether the student had a 'good' (involved)*

*Mentor*

3. What was the most interesting piece of information you gathered from your mentor?

*(Varied greatly, and very similar to responses in question 1)*

4. What would you change about this virtual mentoring process?

*Increase the number of emails*

*Start in Acct xxx (first course of 3 course sequence) and carry through all 3 courses*

*Increase the point value of the project*

*Have the mentors visit the class or meet in person*

*More choice in topics for questions*

*Choosing mentors that are more likely to respond*

5. Would you recommend this experience to your peers?

*Overwhelmingly positive – (interestingly, in the 'written' response format, the number of responses indicating a 'positive experience and recommendation' were consistently over 95% of responses; however, in the questionnaire format in Table 2, the recommendations were only 59% 'Excellent', with 32% 'neutral or no strong feelings either way'. Presumably, the neutral responses would still recommend the program, as the '...should not be required' responses were 0%. )*

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Table 2

*Summary of Responses to Selected Questions of Virtual Mentor Questionnaire*

(Note – reported % do not always equal 100% - only summary information provided for some questions)

#3 – Average response time from mentor (cumulative)

15% within 1 day; 50% within 3 days; 74% within 7 days;. Non-responses = 6%

#4 – Mentor's responses

65% were thoughtful; -0% were not very meaningful

#6 – Rate mentor experience

59% excellent; 32% neutral; .03% did not enjoy the experience but should be required;  
-0% did not enjoy the activity and it should NOT be required

#8 – Prefer another project to the Virtual Mentor Project?

15% yes, prefer an alternative project; 74 % No, would prefer the Virtual Mentor Project.

Responses to questions about “What did you like most...”, “What did you like least...” and “What would you change...”? were similar to those in Table 1.

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Professor's Assessment –

The assessment of student experiences and development are subjective; however, some observations were:

*Many students demonstrated an increased or improved writing proficiency by the end of the project; There was more active engagement and involvement in classroom discussions of many topics, particularly those raised on mentor questions; and The project provided a better connection with mentors, especially with alumni.*

In summary, the results from both students and professors were positive and supportive of the use of virtual mentors in the students program.

**Implications and contributions of the results**

The original question or purpose of the paper was to determine if the virtual mentor experience “...enhanced students' educational experiences and assisted in their professional development.” Enhanced experience can be measured by the responses to the question “Rate mentor experience” and implied by responses to “Prefer another project”. Responses to both questions were overwhelmingly favorable. The responses to “What did you like most....” also indicated a positive experience. Thus, results suggest that accounting students educational experiences were enhanced by the virtual mentor project.



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Professional development is indicated by student responses relating to career choices and information and networking for possible employment. Also, specific skills, such as leveraging technology via email, improved written communication skills and ‘asking questions’ were accomplished. Assistance with making informed career choices, improved communication skills and leveraging technology were specific objectives advocated by the AICPA for experiential learning activities. Accordingly, responses indicate that students’ professional development was increased as a result of the interactions with their virtual mentors.

The results of the study support the recommendation of the virtual mentor program as an effective tool for enhancing accounting student educational and professional development experiences. Also, the research indicates a technique for fostering relations with the professional community and with alumni development . Finally, the research serves as a pilot study to address broader questions, such as mentor perceptions about the program, cross-disciplinary benefits when working in conjunction with other departments and the role of mentoring in human resource development.

### **APPENDIX 1**

#### **EXAMPLE OF VIRTUAL MENTOR QUESTIONNAIRE**

This Questionnaire is part of your Virtual Mentor Project. You will need to submit the separate Participation Record to receive credit for this portion of the assignment. Your responses are intended to be anonymous, so please do not include your name or other identification on this page. Thank you for your participation.

TERM: XXXX

1. How many emails did you send your mentor during the term?
  
2. How many responses did you receive from your mentor this term?
  
3. What was the average time to wait for a reply from your mentor?
  - a. Replied within 1 day
  - b. Replied within 3 days
  - c. Replied within 7 days
  - d. Replied within 14 days
  - e. None of the above. Average response time was \_\_\_\_\_
  - f. No replies received during the term \_\_\_\_\_
  
4. Select the answer that best describes your mentor’s responses to your emails?
  - a. Answers to your emails were thoughtful and all parts answered \_\_\_\_\_
  - b. A portion of your emails were answered, but somewhat incomplete \_\_\_\_\_
  - c. The emails seemed to be hurriedly answered and responses not very meaningful \_\_\_\_\_
  - d. Responses were rarely received \_\_\_\_\_



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5. Check the industry in which your mentor works:
- Public Accounting \_\_\_\_\_
  - Private Industry \_\_\_\_\_
  - Governmental Accounting \_\_\_\_\_
  - Other \_\_\_\_\_
  - Not Sure \_\_\_\_\_
6. How would you rate your mentor experience (check one)?
- Excellent and would recommend to another student \_\_\_\_\_
  - Enjoyed, but should be an elective activity and not required \_\_\_\_\_
  - Neutral or no strong feelings either way \_\_\_\_\_
  - Did not enjoy the experience, but it should be required \_\_\_\_\_
  - Did not enjoy and the activity should not be required \_\_\_\_\_
7. Select the appropriate comment concerning the point value of the Virtual Mentor Project in your overall grade:
- The current point value is appropriate \_\_\_\_\_
  - The project should have a higher point value (how many points?) \_\_\_\_\_
  - The project should have a lower point value (how many points?) \_\_\_\_\_
  - The project should be elective with -0- point value \_\_\_\_\_
8. Would you prefer to complete another project or activity of equal point value instead of the Virtual Mentor Project?
- Yes, would prefer an alternative project \_\_\_\_\_
  - No, would prefer to continue the Virtual Mentor Project \_\_\_\_\_
  - Indifferent of whether to complete the Mentor Project or an alternative project \_\_\_\_\_
  - Prefer not to do either the Mentor Project or an alternative project \_\_\_\_\_
9. If you selected "Yes" for question #8, the preferred alternative activity would be:
- N/A – did not answer (a) or "Yes" for question #8 \_\_\_\_\_
  - Would prefer a selection of 4 cases related to chapter content \_\_\_\_\_
  - Complete a major research project on accounting theory \_\_\_\_\_
  - Work on Resume' and cover letter development \_\_\_\_\_
  - A comprehensive Financial Statement Analysis project \_\_\_\_\_
  - Other activity – please describe: \_\_\_\_\_
10. How many mentor emails should be assigned each quarter (currently, 3 are assigned) \_\_\_\_?
11. Where in the program should the Virtual Mentor Project be assigned?
- In the Intermediate III class (currently) \_\_\_\_\_
  - In Intermediate I and carryforward to Intermediate II and III \_\_\_\_\_
  - In another accounting class (specify which one) \_\_\_\_\_
  - Not required in an accounting class, but by the Accounting Society/Beta Alpha Psi \_\_\_\_\_
  - None of the above. Specify how or when the Program should be assigned \_\_\_\_\_



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12. What did you like most about the Virtual Mentor Project?
13. What did you like least about the Virtual Mentor Project?
14. What would you change about the current Virtual Mentor Project?

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## **DESIGNING AND DEVELOPING ONLINE COURSE ASSESSMENTS**

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### **Abstract**

Online instruction continues to thrive, but instructors and designers often struggle to develop effective forms of online assessment that are relevant and accurately measure learning. Despite the widespread use of computers in teaching and learning, their use for assessment has only been limited. How can we construct successful assessment strategies and frameworks that are specifically designed for online learning environments? How can instructors ensure that their assessments are aligned with course objectives, activities, and assignments? How can we effectively implement the different types of online assessment?

### **Introduction**

Online course assessment is the process used to measure certain aspects of information for a set purpose where the assessment is accessed on a computer via the internet or a similar computer network. It is used primarily to measure cognitive abilities, demonstrating what has been learned after a particular educational event has occurred, such as the end of an institutional unit or chapter. With the wide availability of course management software, the world-wide-web has become increasingly attractive mechanism for delivery assessment. Using effective techniques is an essential part of effective teaching and learning in the electronic environment.

There has been a long standing tendency to associate computer-based assessment with automated multiple-choice questions, possibly because it was one of the earliest uses of computer technologies. Computer-based assessment not only automates routine tasks like marking multiple-choice questions, but can enrich student's learning experiences (Brown, Race and Bull, 1999). To have an effective online assessment, the types of assessment selected for an online course should: measure the stated objectives; be consistence with course activities and resources; be specific and descriptive for the evaluation of students' work and participation; and avail for timely student feedback. To be able to design and develop online course assessment, one must consider and answer the following:

1. How can we construct successful assessment strategies and frameworks that are specifically designed for online learning environments?
2. How can instructors ensure that their assessments are aligned with course objectives, activities and assignments?
3. What technologies can be implemented to support the various assessment options?



### Assessment Strategies and Framework

How can we construct successful assessment strategies and frameworks that are specifically designed for online learning environments? When the right considerations and plans are put in place to create an online assessment, that is using computers in assessment, there are a number of perceived benefits which Harvey and Mogey (1999) list as:

- Large numbers can be marked quickly and accurately
- Students' response can be monitored
- Assessment can be stored and reused
- Immediate feedback can be given
- Assessment items can be randomly selected to provide a different paper to each student.

Assessment can draw upon a myriad of testing or measurement tasks ranging from informal, teacher designed activities to norm referenced tests. There are several effective online assessment strategies such as objective and performance assessment. An objective online assessment must be stated and defined for the students. Some examples of objective online assessments are quizzes, tests, exams, homework, peer assessment, and self assessment. These types of assessment can be used with considerations for cheating and plagiarism. Performance online assessment makes effective use of rubrics (content, processes, and attitudes), peer assessment, student self-assessment, cases and projects, and student portfolio.

Selection of an appropriate assessment strategy is another key to developing and designing online course assessment. To select appropriate assessment strategy, one must first establish the online course expectations and what it will take to fulfill the expectations. The Illinois Online Network (2005, 1) recommended the use of a variety of online assessment strategies including discussion, chat, team/group for collaboration and corporation, and individual assessments. These online techniques should be used to assist in developing and designing an overall assessment strategy for the online course and when they are used, developing assessment then becomes easier

### Course Objectives, Activities and Assignments

How can instructors ensure that their assessments are aligned with course objectives, activities and assignments? The fundamental role of assessment is to provide meaningful feedback for improving student learning, instructional practice, and educational options. Managing students' assignments, providing feedback to students, and assessing students' learning are all key factors to aligning online course assessment to course objectives, activities and assignments. Instructors and designers must establish the purpose of assessment, the criteria being measured, and the intended outcomes before meaningful assessment can be achieved (Gaytan 2002).

To create an assessment that aligned with course objectives, activities and assignments, the learning outcomes must be determined and the process of developing assessments should be employed. To determine the learning outcomes, focus must be on what students should know in order to function in authentic situations; what students should know or accomplish based on the critical course content; and what evidence must student display as proof of knowledge or accomplishment. The



process of developing and designing assessment involve determining: what needs to be assessed, using formative and/or summative assessment; the function of the assessment and appropriate measures, aligning assessment with course activities and learning outcomes; and the appropriate feedback through graded or ungraded assessment.

### **Types of Online Assessment**

Online assessment is the process used to measure certain aspects of information for a set purpose where the assessment is delivered via a computer connected to a network. It is widely accepted that assessment has many powerful effects on student learning and most often the assessment is some type of educational test. These effects include not only what is learned, but also students' approaches to learning. Different types of online assessments contain elements of one or more of the following components, depending on the assessment's purpose: formative, diagnostic, or summative. Instant and detailed feedbacks as well as flexibility of location and time are just two of the many benefits associated with online assessments. There are many resources available that provide online assessments. Pre-Testing can be done prior to the teaching of a lesson or concepts, where students can complete an online assessment to determine their level of knowledge. This form of assessment helps determine a baseline, so that when a summative assessment or post-test is given, quantitative evidence is provided showing that learning has occurred.

Research suggests that high-quality formative assessment has a strongly positive effect upon student learning. Formative Assessment is a self-reflective process that intends to promote student attainment. Cowie and Bell (1999) define it as the bidirectional process between teacher and student to enhance, recognize and respond to the learning. An assessment is considered formative when the feedback from learning activities is actually used to adapt the teaching to meet the learner's needs, it occurs when educators feed information back to students in a "low-stakes" manner that enables the student to learn better and engage in a self-reflective process regarding the feedback. Its purpose is to provide both feedback on performance and suggestions during the learning process for improvement. In online assessment situations, objective questions are posed, and feedback is provided to the student either during or immediately after the assessment. Such an assessment can be provided using a wide range of methods, in a form of quizzes, tests, exams, homework, peer assessment, and self-assessment. If the primary purpose of evaluation is to support high-quality learning, then formative assessment ought to be understood as the most important online assessment.

Black and Williams (1998) referred to formative assessment as assessment for learning, as opposed to assessment of learning. They stated that the key elements of formative assessment include:

- The identification by faculty and learners of learning goals, intentions or outcomes and criteria for achieving these.
- Rich conversations between faculty and students that continually build and go deeper.
- The provision of effective, timely feedback to enable students to advance their learning.
- The active involvement of students in their own learning.
- Faculty responding to identified learning needs and strengths by modifying their teaching approach(es).



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Formative assessment is integral to a good online learning experience. Weekly lessons can have their learning goals and outcomes explicitly stated. The discussions boards, chat rooms and blogs allow for rich and reflective conversations (synchronously or asynchronously). Online quizzes can give instant feedback. Groups can be set up for peer-review and feedback. Through monitoring, faculty members can adjust their approach as necessary

Summative assessment in an online environment differs in form and function from the formative assessment process. It represents a "higher-stakes" evaluation of student learning at a given point in time, generally used to assign grades to students; it requires making a judgment about the learning that has occurred; and it is not designed to provide the immediate feedback useful for helping students during the actual learning process. Summative assessments provide a quantitative grade and are often given at the end of a unit or lesson to determine whether the learning objectives have been met. It can also be used to check students' mastery of a subject every few weeks or months. Some examples of summative online assessment include high stakes tests, interim tests, midterms, and final exams.

### Conclusion

Designing and developing online course assessments provide instructors with concrete clues about students' achievement of learning objectives. To facilitate a successful online course assessment, instructors must construct successful assessment strategies and frameworks that are specifically designed for online learning environments; ensure that the assessments are aligned with course objectives, activities and assignments; and effectively implement the appropriate online assessment.

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### THE CONCEPT OF SUSTAINABILITY AS PROPOSED BY HARDIN'S *TRAGEDY OF THE COMMONS*

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#### ABSTRACT

Forty-two years ago Hardin's classic essay, "Tragedy of the Commons" was published and attempted to explain and encourage the concept of sustainability. His essay is influential in how we think about the marine environment and resources. The concept of sustainability is foundational in marine resource planning, conservation, and preservation. However, findings show that many educators have a limited understanding of this important concept. A suggested cause of this poor understanding is the expanding nature of the concept.

*Keywords:* Sustainability, Environment, Conservation, Resources, Hardin

#### Introduction

Currently environmental education is proliferating in school settings. States and local education agencies have established environmental science as a course option. Adding to the National Science Education Standards (NRC, 1996) a set of National Environmental Education Standards (NAAEE, 2000) have been developed and disseminated. Many government agencies and non-government organizations have developed a wealth of curriculum materials in environmental science for teachers to use. This should not surprise anyone, due to the increased concerns about local and global environmental issues over the last few decades concerning the environment and climate change. An important concept embedded in the current mainstream of marine, both formal and informal, is "sustainability."

Sustainability has broad and widespread applications from artificial systems, to world economics, to resource management, or artificial systems. The context considered here is ecological sustainability, which can be defined as: meeting 'the needs of the present without compromising the ability of future generations to meet their own needs' (Baden, 1998). Ecological sustainability may be considered within local systems or in terms of large systems such as the atmosphere and oceans. At this point great confusion has occurred over a simple definition of sustainability. The term sustainability has been attached to anything labeled as "green". We now frequently encounter terms such as sustainable construction, sustainable agriculture or a sustainable future. There is a growing number of social theorist that view sustainability as an act of human evolution. While these are good ideas, it can lead to over generalization of the concept.

This study focuses on the marine environment as a specific example of an attempt to understand sustainability. As marine ecosystem-based resource conservation and preservation efforts are made, the ability to sustain, renew, or conserve that marine ecosystem or marine resource is of primary consideration. This is not easy to accomplish. Fisheries managers have for decades



struggled to develop optimal sustainable yields. The crash of the North Atlantic cod industry is evidence that even the best science of biological/economic modeling can sometimes fail to sustain a fishery. Gruson (1997) points out that sometimes the proper move may even contradict common sense—for example, that throwing back undersize fish and keeping the large ones actually increases the fitness of the smaller fish and encourages the demise of the larger ones.

But there are also less visible resources. Consider the microworld of thousands of species of plankton that live in the world's waters and which forms the bases of aquatic food chains. There is a need to expand to our students' perspectives of critical shared resources at various scales. The issue of scale has also contributed to difficulties in understanding sustainability. Is sustainability the umbrella term for saving the planet or is it a resources management term? Many will answer yes, and see overlap in the use of the term, but others are confused and they are often times school children who are just developing notions of complex ecological relationships.

In 1968, Garrett Hardin published an essay in *Science* entitled: *The Tragedy of the Commons*. In this context, a “commons” is any resource used as though it belongs to all. A commons is destroyed by over utilization, absence of individual ownership, and lack of oversight by any person or government entity. Hardin uses a public pasture to illustrate such exploitation. Herders can quickly exceed the carrying capacity of that pasture (system) and thus degrade or completely destroy the pasture (resource). Hardin’s pasture is also considered to be a metaphor for other aspects of society, such as our parks, roads, air, airwaves, oceans, and groundwater. They are all commons.

Since Hardin’s essay was published the population has nearly doubled. Increasing affluence and ever increasing demands on energy have escalated pressures on common-pool resources (Kennedy, 2003). Because of its centrality to ecological thought, it bears examining how science teachers and marine science educators understand the essay, the *Tragedy of the Commons*, and the concept of sustainability.

An 8-item questionnaire was developed as a probe to help gain insight into educator’s ideas related to Hardin’s essay and sustainability. It was administered to teachers participating in a summer science education inservice workshop and to the members of a statewide environmental education organization (N=102).

## Results

The results of the questionnaires given to the teachers indicated a general lack of understanding of Hardin’s essay and the concept of sustainability. I then queried another group; the members of a national organization devoted to aquatic education--testing the idea that this group would have a greater understanding of the *Tragedy of the Commons* and the concept sustainability because this specialized group is more involved in education about fisheries and other ocean-based common resources. These responses were analyzed separately for comparison purposes (N=63).

In response to the question regarding knowledge of Hardin’s essay, 59% of the science teachers have not heard/read of Hardin’s *Tragedy of the Commons*. Of the remainder who did indicate they had heard/read of the *Tragedy of the Commons*, very few (16%) indicated a coherent understanding of



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the principles involved that indicated a general knowledge of the “Tragedy.” Below are some excerpts showing science teachers’ limited or flawed understanding:

- Everyone owns the common resource (the sea or the Boston Commons grazing rights) so all users try to get to it before it is gone. Too many users deplete the resource, totally, sense no one is responsible for its upkeep.
- When a resource is available to everyone (free)—each takes as much as they need or can without regard to sustainability.
- Every farmer is trying to maximize his or her own profits and everyone goes broke. It gives many peoples’ ideas about using a free area to its max. If I don’t use it, someone else will!
- Resources owned by all and cared for by no one. When individuals try to maximize their property to the point of using up the environment.

The aquatic educators organization members’ responses revealed that one third (33%) did not have any knowledge of Hardin’s essay. However, 52% responded with a clear understanding of the essay and its principles. Sample excerpts indicating at least a partial understanding include:

- Since no one owns the common, no individual has a self-interest in maintaining it.
- When things are held in common (like our marine fisheries), they belong to everyone, and to no one in particular. Therefore, people tend to exploit rather than conserve resources. “I’d better catch those fish before someone else gets them.”
- That is when everyone equally together owns a resource and access to the resource is unrestricted, there is a tendency for the resource to ultimately be depleted completely—to the detriment of the commons, since each person “wins” in the short run by taking what they can in the form of dwindling resources.

Question #2 asked the teachers to define sustainability. This concept also seemed to elude this group of teachers. Only 3 of the 28 responses (9%), contained an answer that even marginally defines sustainability. These answers were:

- use only to the extent that renewable resources can renew them.
- use resources without their depletion or degradation to produce goods and services.
- the ability to use a resource without depleting it.

The characteristic of the ability to continue to live, survive, or exist was used by 28% of the respondents in their definitions. Thus, teachers appear to be limiting their answers to living entities without regard to abiotic natural resources such as air and water.

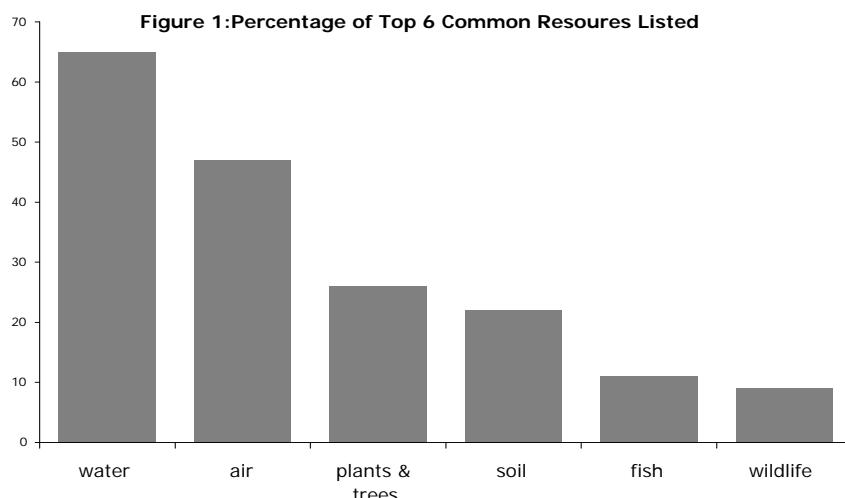
The responses from the aquatic educators organization members indicated a clearer more detailed understanding of the concept sustainability. Forty percent of the respondents displayed a scientific understanding of the concept. In addition, only 5% made reference solely to living resources when describing sustainability. Response excerpts include:

- Refers to the level of use of resources, which guarantee that the resource will remain viably/healthy over the long haul.
- Able to maintain over generations, with future generations being able to use and benefit as well as my generation.



- The use of various resources without seriously depleting them. That would include not rendering the resource unusable through pollution etc.

Question #3 asked the teachers to list three things they considered to be common resources. A total of 23 different resources were listed. The top six common resources listed by teachers, by percentage, can be found in Figure 1.



When the teachers were asked about how they would manage a common resource for maximize utilization (Question #4), their answers varied widely. Responses included increased regulations, strict enforcement, time or seasonal requirements, and distribution by need. They didn't seem to recognize when a particular management strategy is appropriate. This serves to illustrate unawareness of the complexity of managing a common resource.

The aquatic educators organization members were given three choices for solutions with a Likert-type-scale (1 to 5, with 5 having the highest rank) to indicate its perceived effectiveness. The average ranking given by participants to each choice:

- Access to the resource must be limited (4)
- A moratorium on utilizing the resources should be evoked. (3.6)
- Legislated heavy fines should be imposed for exceeding legislated utilization of the resource. (3.7).

It seems that the aquatic educators organization members strongly favor limiting access to the resource, while the other two methods are also viewed as almost as effective. Aquatic educators organization members were also given an opportunity to suggest other possible solutions. While responses varied a great deal, one fourth (25%) stated education should be part of any possible solution.



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In response to the query probing knowledge of curriculum materials that support learning of the principles of the *Tragedy of the Commons*, most teacher-respondents did not know about Fish Banks, the BSCS Tragedy of the Commons CD-ROM, or the award winning book, *Common Ground* (Bang, 1997). Only a few listed other relevant materials.

The aquatic education organization members were asked to list the concepts they were necessary to understand sustainability. Out of 186 concepts listed, population dynamics and resources (both renewable and exhaustible) were listed most frequently (See Table 1).

Table 1

*Most frequent concepts listed as necessary to understand sustainability out of 186 concepts listed.*

Concept	Number of responses
Population dynamics	24
Resources	21
Carrying capacity	7
Economics	7
Cycles	7
Time	6
Food chains/webs	5
Growth rates	5
Biodiversity	5

Population dynamics and resources were selected by approximately one-third of the respondents as being crucial to understanding sustainability. After that, note that there is little agreement (and perhaps, understanding) of the network of concepts vital to understanding the sustainability of a commons.

### Discussion

An insightful article published by the journal *Science* entitled "Principles for Sustainable Governance of the Oceans" (Costanza, et al., 1998), identified five major Tragedy-of-the-Commons-related marine ecology issues: overfishing, ocean disposal and oil spills, destruction of coastal ecosystems, land-based contamination, and climate change. Each is eminently suitable for teaching and learning. "Ocean Examples" are ideal to convince teachers (and students) that they need to apply "Tragedy of the Commons" thinking" to their ecological decision-making and stewardship practices. Why? Because if even the vast oceans are being impacted by the pressure being exerted by human population pressures on natural resources, then the largest ecosystems on earth are calling out for sustainable governance. The six keys to successful governance are:

- (a) access to environmental resources carries attendant responsibilities to achieve sustainability, economic efficiency, and social fairness;
- (b) ecological problems are multiscale and must be dealt with in an integrated manner;
- (c) ecological decisions should err of the side of caution when potentially irreversible environmental impacts are involved;



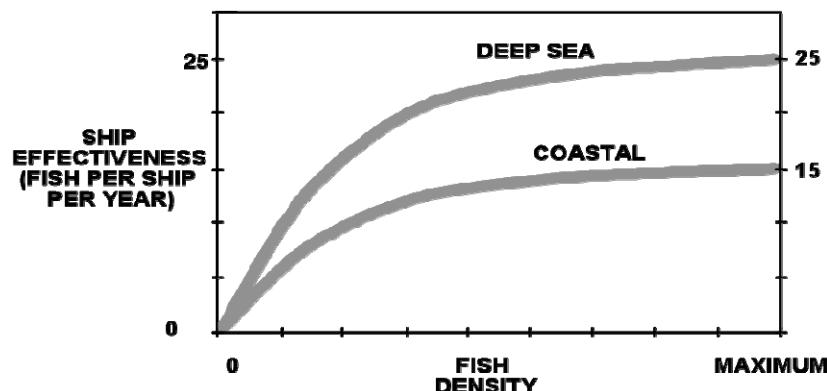
- (d) adaptive management is needed whereby information is continually gathered and assessed;
- (e) alternative decisions concerning the use of environmental resources should each be subject to a full-cost allocation, both social and ecological, and markets adjusted to reflect full costs;
- (f) all stakeholders should be involved in environmental resource decisions so that credible rules and responsibilities emerge. Ultimately, individual incentives should be developed consistent with the social objective of sustainability.

Based upon this survey, findings suggest that many science teachers (and therefore, their students) lack a well integrated coherent conceptual understanding for the concepts of sustainability and a commons nor do they understand the variables that govern them. In fact because of the diverse scope of concepts listed, teaching the concept by teaching a set of concepts that leads up to an understanding of sustainability may not be difficult. The above keys to governance might serve as a better organizing framework for teaching about sustainability.

It is bothersome that the questionnaire responses indicated a failure to understand that time is important to understanding sustainability. Time, across generations and even centuries, is a necessary aspect of sound ecological thinking regarding sustainability. It has been suggested that we need to learn to live in a 200-year present. The temporal aspects of sustainability are hard to grasp because they do not occur within time frames we humans can relate to. Therefore, learning activities which require the use of various long-term time scales should be developed to focus students' attention beyond the "here and now" approach to resource utilization. Fishbanks, Ltd. simulation includes instructional materials that illustrate models of sustainable fishing (see Figure 2). These models may serve as a visual schematic to help students understand sustainability.

Figure 2. Population model used in Fishbanks, Ltd. Simulation.

### Graph of Ship Effectiveness



It can be argued that the *Tragedy of the Commons* is not just a topic in an ecology unit or an aspect of marine education it encompasses the heart and soul of ecological thought. Instructional resources like the Fish Banks, Ltd. computer simulation, the BSCS "Commons" CD-ROM reference base, and the award winning, children's science picture book, *Common Ground* are welcome and more such compelling materials are needed. One hope for globally optimum oceans management lies is



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heightening stakeholders' awareness, including multiple viewpoints, and adapting to new information, while following a set of mutually agreed-upon core principles. If teachers and students learn fundamental marine ecology from oceans literacy teaching examples, we think the next step is to attempt to apply those "Commons principles" to other ecosystems in a long-term ecological, issue-based, series of classroom-effective lessons emphasizing sustainable-renewable thinking and applying the latest ecological research. In this way, Hardin's classic can live on in the hearts and minds of today's students--who are tomorrow's ocean literate adults.

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## THE CONCEPT OF SOCIAL PRESENCE IN DISTANCE EDUCATION

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### ABSTRACT

Learners enjoy the convenience of being able to take online courses, yet many report missing the face-to-face contact with their peers. This researcher has sought to tap into the vision of Ferratt & Hall (2009) whereby educators and technology designers are encouraged to extend the vision of online learning to “virtually being there and beyond.” Thus, the purpose of this study was to examine innovative synchronous technology and pedagogy as a means of promoting social presence in online learning. The inquiry was quantitative in nature. Through adapting Garrison and colleagues’ community of inquiry framework (Garrison, Anderson, & Archer 2000) it was noted that students perceived the use of synchronous Centra technology to be beneficial in promoting a sense of social presence in online learning. Through one-on-one conversations within Centra, it was discovered that the use of this technology also had a positive effect on student retention. There was a correlation between learners’ perception that the instructor promoted an atmosphere of online community and there being a sense of social presence. There was evidence of satisfaction with instructor as evidenced by high student evaluation ratings. Instructor ratings were above the department mean and the university mean.

*Keywords:* Social Presence, Centra, Online Learning, Emerging Technology

### Introduction

With the advent of new interactive media, new research questions about communities of online learning, collaborative inquiry, and the effort to foster innovative methods of pedagogy have taken place. There is a challenge to systematically explore the integration of pedagogical ideas with new technology in an attempt to further the evolution of education as opposed to merely reinforcing existing practices (Garrison, Cleveland-Innes, & Fung, 2010). One such pedagogical idea is the use of emerging technology to promote social presence in online learning. Typically, online courses are designed around asynchronous learning environments. Learners receive assignments, complete them, and submit them back to the instructor for feedback. With this method, classmates rarely have an opportunity to discuss the assignments together as they would if they were in a face-to-face setting. Discussion boards are used to post a discussion. This method yields a delayed response time by group members. And, when responses are given, they tend to be very brief, and not of higher-order skill quality. No real substance is added to the topic of discussion. Chat sessions are conducted by typing conversations synchronously; however, a drawback to this method of communication is that some learners’ type too slow and by the time their message is entered, the conversation has progressed to another topic. They tend to feel left out of the conversation, become frustrated, and go into the silent mode. It then becomes the task for the instructor to encourage and nudge these



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learners to participate in the session. There is no sense of real community; no sense of actually belonging (Stodel, E., Thompson, T., Macdonald, C., 2006). Thus the question, How can new and emerging technologies be incorporated into the learning environment so as to promote social presence in online learning?

Ferratt and Hall (2009) have extended a challenge to educators and technology designers to extend “the vision of distance education to learning via virtually being there and beyond” (p. 425). Their vision for online learning goes beyond the boundaries of learning in structured isolation, using asynchronous technology, focusing only on academics, consisting only of written words; their vision encompasses also the idea of learning through use of the best technology-enhanced classrooms, using also synchronous technology, also focusing on the person, and incorporating voice along with written words. They contend that the person should be able to “virtually” be in the classroom, but acknowledge that constraints of lack of appropriate technologies must be overcome in order to see their vision realized. Like Ferratt and Hall, many researchers are grappling with the idea of virtual online learning or creating a social presence in online learning. And, if promoting social presence is the vision, then exactly what is ‘social’ presence?

Socialization is the ability of learners to “identify with community, communicate purposefully in a trusting environment, and develop inter-personal relationships by way of projecting their individual personalities” (Garrison 2009 in Garrison, D.R., Cleveland-Innes, M., & Fung, T., 2010, p. 32). It is the degree to which they “feel affectively connected one to another, and is seen as realized through affective expression, open communication, and group cohesion” (Diaz, S., Swan, K., Ice, P., & Kupczynski, L., 2010, p. 23). Learners are able to speak to each other, share ideas and information (Irwin C., and Berge, Z., 2006); and, they have the ability within a community of inquiry to project themselves emotionally as well as socially (Rourke, Anderson, Garrison, & Archer, 1999 in Stodel, E., Thompson, T., Macdonald, C., 2006). They perceive the other person in the communication as being a ‘real’ physical person” (Kreijns, K., Kirschner, P., Jochems, W., & Buuren, H., 2007, p. 180). It is important for the social space to be sound, and it is designated to be sound if it is “characterized by affective work relationships, strong group cohesiveness, trust, respect and belonging, satisfaction, and a strong sense of community” (Kreijns, et al., 2007, p. 179). In addition to the importance of social space, it is also important for social psychological processes such as forming groups and establishing their structures as well as sustaining social relationships to be embraced. To ignore, forget, or neglect these processes would be considered a pitfall (Kreijns, Kirschner, & Jochems 2003 in Kreijns, et al. 2007).

Assuming that students will work together is the pedagogy behind online discussion forums; this is different from their working independently in traditional distance education. This brings about the need for a new theoretical model to explore as well as explain the educational experience. As a result, the Community of Inquiry (COI) framework was born. This framework was introduced by Randy Garrison, Terry Anderson, and Walter Archer in 2000. It is social constructivist in nature, and built upon the premise of John Dewey’s (1938) idea of practical inquiry (Swan, K., & Ice, P., 2010). A brief review of the COI and research surrounding social presence will be discussed.



## Literature review

The premise of the COI framework evolves around the notion of higher-order learning being best supported by a community of learners who are engaged in critical discourse and reflection. This framework identifies three core elements—teaching, cognitive, and social presence. An overlap of these three elements provides structure to comprehend the dynamics for a deep and meaningful online learning experience. A study was conducted to explore the relationship among the three core elements. There were 287 student participants from four institutions in Canada and the United States involved in the study. Results revealed that the COI framework is useful in understanding the complexities of the causal relationships among the three core elements. “The framework has provided the theoretical foundation for the development of an empirical survey instrument that opens the possibilities for conducting a wide range of studies that were not possible using qualitative methodologies, such as transcript analysis alone” (Garrison, D., Cleveland-Innes, M., & Fung, T., 2010, p. 35).

To ascertain learners’ perspectives on what was missing from the online learning process, Stodel, E., Thompson, T., & Macdonald, C., (2006) conducted a qualitative study using the theoretical model of online presence—the COI framework created by Garrison. One of the categories identified by Stodel, et. al (2006) was that of social presence. He cautioned, however, that the educational experience is more than the development of a social community. Rather, defined learning outcomes must be achieved, and cognitive development must be promoted. Interactions must be systematic and structured as opposed to being social and loose. Stodel’s, et. al (2006) study revealed evidence of social presence. He discussed the categories of emotional expression, group cohesion, and open communication. Social presence appeared to be greater within small groups as opposed to a whole class. First, with regard to emotional expression, there was evidence of self-disclosure. Learners shared personal stories such as information about families, vacations, hobbies, and professional interests. Learners felt they were able to get to know each other better than they would have if they were in a face-to-face class. However, they felt that humor was lacking in the course; they seldom used emoticons. Second, group cohesion was evident. Learners assisted each other with technical problems, course requirements, and resources they thought might be helpful to each other. Finally, open communication occurred between learners. They responded to each others’ message, signaled agreement as well as asked questions. However, there was a need to post comments that challenged and provoked learners to reflect and stimulate in-depth discussion as opposed to simply saying ‘I agree’ or ‘good point’. There should be a focus on encouraging learners to engage in meaningful discourse that fosters higher order skills. While social presence indicators were present within this study, learners identified social presence as still being what they missed most in online learning. One learner noted, “I just want to have the feeling that the communication is real and that I [am] talking with a real person in real time” (Stodel, et. al, 2006, p. 13.) Learners also stated that they questioned who wrote postings when they read them. They felt that learners remained faceless. Several learners expressed annoyance at postings because they were not able to put a face with the discussion. Learners reported missing the ability to be able to steer the conversation. The concept of anthropomorphism towards computers was noted as two students revealed they yelled at their computers out of frustration over something that was posted instead of yelling at the person who wrote it. It was noted that the increase in social presence would likely reduce the application of anthropomorphism.



One implication for practice noted by Stodel, et. al (2006) was to explore the use of diverse technologies to enhance communication and to foster social presence. To support this stance, they noted the argument of Haythornthwaite, Kazmer, Robins, and Shoemaker (2004) in that synchronous communication fosters community building and “provides simultaneous many-to-many contact that helps stave off feelings of isolation” (p. 48). They also noted the argument of Wang and Hewlin (2001) who contended that social presence is enhanced by chatrooms in ways that can not be accomplished using asynchronous communication. Chatrooms afford the ability to provide immediate feedback and answers to questions, provide encouragement, foster learner perceptions that educators genuinely care and are invested, personally connected, and engaged with them.

### **Purpose of the study**

The purpose of this study was to examine innovative synchronous technology and pedagogy as a means of promoting social presence in online learning. The technology selected was Centra. Centra is a synchronous software system that incorporates real-time audio and video. Students actually see each other and talk to each other simultaneously.

### **Methodology**

Research participants included 93 participants; 46 information technology undergraduate students, and 47 vocational and technical education graduate students at a large urban university in North Carolina. The university offers doctoral, masters, and baccalaureate degrees in liberal arts, professional fields, and sciences. Of the participants, 25 were male and 68 were female. Traditionally, students were placed in groups of no more than five or six students each. Synchronous chats were held in the Blackboard chat room. Drawback to this method was that every word had to be typed. Slow typists were often left out of the conversation and the instructor had to hold up the conversations so that everyone could catch up. The Blackboard Discussion Forum which is an asynchronous form of communication was used to try to establish a sense of social presence. Discussions were posted with a given deadline. Responses to each post had to be made by a given deadline. The responses were usually very brief and many times not of higher order skill quality. The instructor had to encourage students to provide more in-depth feedback. For introductions, participants used an asynchronous method to post a picture of themselves on their Home Page within the Blackboard system and typed an introduction for the rest of the class to access. However, in order to access this information, students had to go into the communication link, select roster, select list all twice, and finally click on each student’s name in order to obtain the information that had been posted. Additionally, this feature became unusable because of a defect that caused home pages to disappear once they had been completed. This problem eventually could not be corrected. While the Blackboard system serves its purpose, it was evident that new and more innovative methods of communication between students and teachers in online courses needed to be found. In response to personal needs for developing more effective ways of producing social presence in online courses along with recommendations from researchers, synchronous technology, Centra, was adopted as a means for fulfilling both the learning needs and the social psychological needs of online learners. Centra is a Web-based software application that enables real-time synchronous communication, collaboration, and learning. Participants were able to see each other and talk to each other simultaneously. They were able to work, learn, and communicate together online



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through use of content creation tools to develop interactive presentations and learning content. The interfaces were easy to use, very user-friendly for the live virtual classes; and a content library was available to access previously recorded sessions. Participants were able to share apps from their own personal computers for everyone to see.

All participants were required to have a video camera and a microphone. Chat sessions were mandatory and accounted for 30% of the final course grade. Participants were provided with a tentative course calendar for the semester that identified due dates and assignment information to be covered for the semester as well as the weeks in which chat sessions would occur. Participants were divided into groups of no more than six students. Each individual group was then responsible for collaborating to schedule chat times convenient for everyone in the group. Since the teacher participated in every session, preference time choices were assigned on a first-come-first-serve basis. This approach allowed participants to work around work schedules, family responsibilities, and other courses they were enrolled in for the semester. The teacher was available to meet seven days a week from 8 a.m. until 11 p.m. Sessions generally lasted from one to one and a half hours in length. As a rule, chat sessions could not be made up so if a participant missed a session, a grade of zero was given (except for extenuating circumstances). If there were an extenuating circumstance, no grade was given and that missed session was not averaged into the final grade.

For the beginning of the chat sessions, participants created an introduction of themselves that revealed their name, major, department, and year/level of school. Also provided was information about their family, job, interests and hobbies, tentative career plans, most memorable success, details of what they considered to be their perfect vacation, three links to their favorite websites; and finally, they identified their favorite animal and used three adjectives to describe this animal. Later in the semester, they were required to remember the three adjectives to describe the animal and translate these adjectives to how well they worked together with their group members. As introductions were made, group members were allowed to ask each other questions about information that had been provided.

Course content was used to engage participants in critical reflection and discourse. Discussions were case-based, research-based, and debate oriented in nature. Participants were expected to demonstrate higher order skills during these assignments. Responses focused on discussion of content itself, as well as on reflections of how the topic could relate to the world, to the participant personally, and to the participant professionally. Each group member provided feedback to each discussion presented. In addition to verbal feedback, Centra's emoticon features were frequently used that showed laughter, applause, to raise hands for a turn to speak, and to interject 'yes' and 'no' if the need arose. During the course of the chat sessions students were allowed to briefly go off course and discuss personal information about themselves if they desired.

Students were asked to tell the instructor what they liked about the class, what they disliked about the class, and what they would change about the class without fear of retribution while communicating through Centra. Students were also required to complete a written survey on Centra. Ten questions focused on the technology aspect of Centra, eight questions focused on the instructor, and 34 questions focused on the student. To ascertain whether students perceived the online course as having social presence through use of Centra, seven questions from the Centra



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survey were correlated with seven questions from the social presence section of Garrison's et. al 2000 COI instrument.

COI Instrument	Centra Survey
A.10 Instructor actions reinforced development of a sense of community	12. Instructor promoted an atmosphere of an online community
A.17 I felt comfortable conversing through the online medium	22. I felt comfortable communicating through Centra with my classmates
A.16 Online or web-based communication is an excellent medium for social interaction	33. Centra made me feel more comfortable using technology for both audio and video interaction with others
COI Instrument	Centra Survey
A.18 I felt comfortable participating in the course discussions	43. I like using audio and video to communicate with other students/teacher
A.14 Getting to know other course participants gave me a sense of belonging to the course	41. I felt like a member of the class in this online course
A.22 Online discussions help me to develop a sense of collaboration	40. Use of Centra helped provide a sense of community within the class.
A.15 I was able to form distinct impressions of some course participants.	42. I felt I came to know the other students in this online course.

### Findings

SPSS was used to analyze the quantitative data from the Centra surveys. Descriptive statistics revealed that the mean for the participants ranged between agree (3) and strongly agree (4) for this model as shown in the Descriptive Statistics table below. The participants felt there was a sense of social presence within the class through the use of Centra.

### Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
q12 instructor promoted community	93	3	4	3.77	.420
q22 comfortable chat w/classmates	92	1	4	3.54	.619
Q33 more comfortable w/audio-video	73	1	4	3.32	.664
Q40 Centra helped form sense of community	93	1	4	3.47	.618
Q41 felt like member of class	92	2	4	3.55	.562
Q42 came to know other students	93	1	4	3.39	.660
Q43 like using audio/video to communicate	93	1	4	3.35	.670
Valid N (listwise)	72				

The Anova table below revealed that this model is significant. The six independent variables jointly predicted the dependent variable, that the instructor promoted a sense of community.

In addition, correlation is significant at the 0.01 level (2-tailed) among all of the questions (22 , 33, 40, 42, 12, 43, 41). However, there is no significant correlation between question 33: feel more



comfortable with audio-video technology and question 12: instructor promoted community (.156).

Anova<sup>b</sup>

Model	Sum of Squares	df	Mean Square	F	Sig.
1      Regression	2.564	6	.427	4.112	.001 <sup>a</sup>
Residual	6.755	65	.104		
Total	9.319	71			

a. Predictors: (Constant), q43 Like using audio/video to communicate, q33 more comfortable audio-video tech, q42 came to know other students, q41 felt like member of class, q22 comfortable chat w/classmates, q40 Centra helped form sense of community

b. Dependent Variable: q12 instructor promoted community

Pedagogy was designed to incorporate suggestions from Stodel et. al (2006), having students work in small groups; developing an introduction assignment that encompassed discussing hobbies, family life, professional interests; incorporating the use of emoticons such as the smiley face for laughter, the applause for kudos, raising of hand for an opportunity to speak. Stodel identified a student who simply wanted to talk with a real person. A student in this study noted that they had actually dropped out of school for two years because they felt isolated and alone. They received failing grades. However, they stated they were so happy to come back to school and be involved in a course where they could actually interact with classmates, see them, talk with them at the same time. They stated it made a world of difference; they no longer felt alone. The student received all (A's) for the semester.

Students were asked what they liked about the class. A majority responded that they liked working in small groups, getting to know each other. This coincides with Stodel's et. al (2006) suggestion that social presence appears to be greater within small groups. Stodel also noted that learners remained faceless and did not have an opportunity to steer the conversation. Both of these obstacles were overcome through use of Centra as learners could both see everyone and all had an opportunity to steer the conversation. This study supports the stance of Haythornthwaite, Kazmer, Robbins and Shoemaker (2004 in Stodel et. al 2006) in that synchronous communication does indeed promote a sense of community which helps alleviate the feeling of isolation. Also, the synchronous communication through Centra enhances social presence in ways that asynchronous communication can not as noted by Wang and Hewlin (2001 in Stodel et. al 2006).

### Implications

Incorporating synchronous technology such as Centra can have a positive effect on retention rates and should be explored further. Use of the community of inquiry framework should be utilized in assessing social presence, teaching presence, and cognitive presence in a way that demonstrates how all three elements are interrelated. Students noted that they perceived the use of Centra as providing an environment conducive to learning. While all students received good grades, ranging in the A and B category, further study needs to be done to determine if the use of Centra actually had an affect upon grades. A rating of the instructor by students was extremely high on end-of-semester student evaluations. Instructor ratings were above the department mean and the university mean. Further study needs to be done to determine what elements lead to such a high rating?



## Conclusion

And, as Garrison, et. al 2000 revealed, teaching presence does have an impact on establishing and maintaining social presence. It was evident that use of Centra had a positive effect on enhancing social presence in online learning. It also had a positive effect on student participation. This was evident because without fail, students asked for additional chat sessions using Centra for the class; and, they scheduled additional sessions among themselves without the instructor to discuss projects, assignments, and other classes. They were taught how to schedule their own group sessions. Many commented that they were going to miss the Centra sessions.

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**COLLABORATIVE, EXPERIENTIAL AND TECHNOLOGY APPROACHES FOR MILLENNIAL GENERATION LEARNERS**

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**ABSTRACT**

**Purpose:** This paper investigates the dynamics of the Millennial and Post-Millennial Generations, born after 1982, along with the pedagogical changes commanded by those dynamics. It describes various learning modalities that satisfy learners' expectations and adaptations necessitated by the exponential speed of technological changes impacting learners' attitudes. **Approach:** Relying on extensive research of earlier studies that describe changing attitudes, values, and characteristics of the Millennial Generation, this study matches those elements with pedagogical considerations. Research on use of various learning modalities, student satisfaction and learning outcomes are referenced to ascertain the most successful approaches to facilitate learning. **Findings:** The Millennial Generation, defined as those born between 1982 and 2002, has never known a world where information was not readily available at the click of a mouse. While the Millennial learners operate on short attention spans, demand immediate gratification, and process information in short spurts, they are also keen on multi-tasking and likely to dive into a project with fairly successful outcomes rather than spend time reading instructions. Traditional lecture formats cannot hold their attention and instructors must integrate more interactive exercises in order to achieve satisfactory learning outcomes. **Value:** This paper matches innovative uses of technology, collaborative assignments and experiential exercises with important learning outcomes expected of post-secondary education that include critical thinking, problem solving and communication skills. Measures for outcomes assessment embedded in assignments are included in the various learning modalities described.

**Keywords:** Collaborative, Experiential, Learners, Outcomes, Assessment, Technology

**Introduction**

Classroom dynamics began to change dramatically by the end of the twentieth century as enhanced technologies became part of everyday life. As we embark on the second decade of the twenty-first century we find even more evidence of a cultural change affecting the classroom as the second wave of the Millennial Generation joins the ranks of college learners. Amid increasing pressures for assurance of learning outcomes, instructors face the challenge of adapting pedagogy to address both a more global economy and a new kind of student.

Conversely, expected learning outcomes must include values long identified as essential leadership qualities for tomorrow's business, government, and world leaders: critical thinking, problem solving,



both verbal and written communication skills, and lifelong learning attitudes. Moreover, recent events around the globe have emphasized a growing need for emphasizing ethics and personal integrity as ingredients inculcated across curriculum.

### **Literature Review**

Technology has irrevocably altered the accessibility of information and the socialization of young people in all but the most remote and primitive cultures. Along with nearly unfettered access to the Internet and social networks, learners now streaming through the halls of higher education have a different set of ethics, values, and expectations than their predecessors. Ultimately, classroom dynamics must integrate new cultural attributes in order to facilitate effective learning (Provenzo, 2002). Today's college learners are more comfortable with the new technologies and the use of social networking than their professors. Their reliance on technology for information puts a demand on instructors to integrate its use into coursework to facilitate successful learning outcomes (Duderstadt, Atkins, & Van Houweling, 2002).

As the globe "shrinks" and the worldwide economy reflects the decisions of individual governments and business leaders in diverse and wide-ranging cultures, this young generation faces ever greater complexities in their world. The skills needed to master the current environment and be successful leaders in the future are not new ones, but helping them to master critical thinking, problem solving, and communication skills requires new approaches given the advances in technology and their growing reliance on it. These skills take on a more compelling urgency as the components of both collective and individual success in dealing with a rapidly changing global economy that relies increasingly on innovations in the realm of technology (Rotherham & Willingham, 2010).

The peak birth rate of the Millennial Generation in 1990 puts the largest number of these learners in their junior and senior years in the next academic year (Howe & Strauss, 2003). Moreover, the Post-Millennial Generation coming behind them clearly demonstrates the same core traits with greater intensity, increasing the challenge of keeping them engaged and satisfied with their academic experiences. Compounding the challenge of preparing these learners for their roles in society is the increasingly global nature of the economy. The latest financial crisis clearly reflects this phenomenon, with the U.S. housing/mortgage crisis and the European Union debt crisis having ripple effects in economies around the world.

With the cultural changes brought on by the new life experiences of the Millennial Generation, instructors find they must adapt their pedagogy to include more engaging approaches that incorporate the values and skills that learners bring to their classes (Provenzo, 2002). Traditional lecture formats and semester long case studies have little appeal to learners whose attention span lasts as long as it takes to read and reply to a text message. Multitasking Millennials expect more interactive and engaging study, with less reliance on textbook absorption and more on group exercises and short cases. Today's higher education learners respond best to experiential exercises, particularly those that allow them to develop their own solutions without preset boundaries (Lancaster & Stillman, 2002).



The technological environment of the twenty-first century embodies the age of knowledge first described by Erich Bloch of the National Science Foundation in testimony before Congress in 1988. Knowledge has become the contemporary commodity that predestines success or failure of whole economies, the strategic resource essential for both personal and global prosperity. Moreover, unlike other commodities, knowledge is expandable without limits; the more knowledge is used, the more it expands exponentially (Duderstadt, Atkins, & Van Houweling, 2002). According to a YouTube video produced by GeoEnable, we can expect a supercomputer to be produced by 2013 that will contain more knowledge than the average human brain, and by 2049 we should be able to purchase a supercomputer for less than \$1,000 that contains more knowledge than the collective human race. Those claims might seem highly unlikely, but based on the speed at which technology continues to advance annually, they are predictably possible.

### **Methodology**

Development of new approaches that satisfy expectations and demands of the Millennials requires a general understanding of what those expectations and demands entail. Since many previous studies had described the characteristics and dynamics of this burgeoning generation, all that remains is to create learning models that address the core traits generally exhibited by the Millennials, and then to test those models for acceptance and levels of satisfaction. Howe and Strauss identified seven core traits of the Millennials, presented in table 1 below, with implications for planning successful pedagogical responses.

Table 1

<b>Core Traits of Millennials</b>	<b>Implications for Pedagogy Planning</b>
Special – 86% believe they have the greatest impact of any generation for the global environment of the future.	They expect to be rewarded for efforts and expect special accommodations to allow them to achieve their potential.
Sheltered – “Helicopter parenting” raised expectations of being protected. They expect a safe and stress-free environment.	Complaints of “unfair grades” abound, with increasing intrusions by parents. They will challenge every deviation from the syllabus as a violation of their written contract.
Confident – There is a collective confidence in their futures, with emphasis on safety in numbers.	There is a distinct difficulty in developing creative thinking and problem solving by individuals and few will be first to proffer a new idea.
Team Oriented – 95% believe that it is important to be trusted by peers.	Combining teamwork and technology works well, but debates or critiques of others’ work does not.
Conventional – A willingness to adhere to rules and standards to make life easier and stress free sets them apart from earlier generations who were anxious to challenge the establishment.	With so much information available on the Internet or their cell phones, they are reluctant to develop original ideas and find it difficult to synthesize their research into their own arguments.



Core Traits of Millennials	Implications for Pedagogy Planning
Pressured – “Trophy kids” expect planning and effort to be rewarded. They look for the easy successes rather than seeking new challenges.	Cheating is a growing problem, with increasing acceptance of imitation as the way to succeed. Copying from online sources has become their primary research tool and plagiarism is readily accepted.
Achieving – These are the smartest, best-educated learners in U.S. history, with detailed plans for their futures. They expect their academic pursuits to pay big dividends in professional success with accompanying high standards of living.	Demands for higher academic standards, smaller classes and more personalized attention, highly quantified grading policies, and cutting edge technology require precision in constructing course syllabi. Changes that add to their workload are not well received.

(Howe & Strauss, 2003)

Some suggestions for adapting pedagogy to address these traits and incorporate desirable learning approaches are presented in table 2 below. The suggested adaptations were tested over several years in a number of accounting and related business and computer courses with positive outcomes.

Table 2

Implications for Pedagogy Planning	Learning Paradigms to Consider
They expect to be rewarded for efforts and expect special accommodations to allow them to achieve their potential.	Assign grade points for <i>every</i> effort. Consider allowing <i>extra credit points</i> that count only if learners are otherwise passing the course.
Complaints of “unfair grades” abound, with increasing intrusions by parents. They will challenge every deviation from the syllabus as a violation of their written contract.	Publish the syllabus on course management system, link assignments to <i>goals</i> established in the assignment, and <i>score</i> them in the same point system as described in the syllabus.
There is a distinct difficulty in developing creative thinking and problem solving by individuals and few will be first to proffer a new idea.	Assign <i>mix and match</i> problems that must be solved individually or in groups and then shared with classmates.
Combining teamwork and technology works well, but debates or critiques of others’ work does not.	Invite class discussion on problems and solutions, rather than critiques. Use in-class group exercises with team competitions.
With so much information available on the Internet or their cell phones, they are reluctant to develop original ideas and find it difficult to synthesize their research into their own arguments.	Design study/research assignments that allow/encourage copy and paste from Internet/database sources, but also require individual interpretation of the material.



Implications for Pedagogy Planning	Learning Paradigms to Consider
Cheating is a growing problem, with increasing acceptance of imitation as the way to succeed. Copying from online sources has become their primary research tool and plagiarism is readily accepted.	Use tools like <i>turnitin.com</i> and <i>Google Search</i> to identify sources from which material may have been copied. Search for online access to solutions manuals and test banks.
Demands for higher academic standards, smaller classes and more personalized attention, highly quantified grading policies, and cutting edge technology require precision in constructing course syllabi. Changes that add to their workload are not well received.	Design course syllabi with extra assignments that can be eliminated without sacrificing critical learning elements in the course goals. Offer <i>extra credit</i> for any assignments that are added once the syllabus has been adopted for the course.

Based on these findings and others described in the literature review, learning paradigms for experiential learning, collaborative efforts, and technological approaches were investigated and tested for efficacy over several semesters. Techniques and outcomes are described below.

### Experiential Learning to Develop Critical Thinking Skills

Experiential learning is the earliest documented teaching/learning technique and its effectiveness as a practical pedagogy is well documented in research literature, making it foremost in learning styles popular in Western culture. Experiential education need not be a lengthy construct in order to be an effective learning mode, however any experiential learning exercise should incorporate reflective analysis along with an interactive encounter with new knowledge (Breunig, 2005). Experiential learning can best be described as a continuous cycle of experience, observation and reflection, forming abstract concepts, and testing new applications. Assignments that build on prior experiences to reinforce knowledge provide maximum benefits from experiential learning exercises (Kolb & Kolb, 2005). Moreover, offering unstructured problems that depend on effective use of prior knowledge applied to new situations helps each learner master problem solving skills rather than merely searching for familiar solutions. Such exercises force them to first frame the question and then identify alternative solutions with limited structure and incomplete data - an essential exercise for tomorrow's business leaders (Zlotkowski, 1996).

**Sample Experiential Learning Assignments:** One common feature employed in each variation of tested experiential assignments included the use of a business publication recognized as the most commonly read daily media source for business information. Each variation involved some form of reflection and analysis that required identifying the relationship of print media to material covered in the course. Learners worked independently or in groups and had a specified deliverable that required a combination of oral or written communication skills.

**Infusing Collaborative Learning and Technology:** In two sections of Intermediate Accounting, considered the gateway course for accounting majors, learners worked in groups of three or more to prepare a slide show presentation based on their collective research on a selected news article. A list



of articles was provided by the professor and each group selected one article for presentation. The presentation required: (1) the salient points of the article summarized in bullet points identifying relevant transactions or events requiring some accounting treatment, (2) the authoritative literature providing guidance on the proper accounting and reporting for the transactions and/or events described in the article, copied and properly cited, and (3) a discussion and analysis linking the salient points of the article to the cited accounting literature and summarizing the implications for proper recording, reporting and full disclosure of the economic impact. The completed slide show was submitted to an online course system for grading, which considered the appropriateness of the content and the presentation style, including proper spelling, grammar, and citations.

**Written Communications:** Learners in the Upper Level Accounting Course (Auditing) completed individual writing assignments incorporating the experiential learning research projects. Converting the assignment to an individual format permitted a greater emphasis on development of professional writing skills, with an enhanced focus on proper citation of accounting and auditing authoritative literature. The use of news media reinforces the importance of staying abreast of contemporary developments in clients' industries, while encouraging learners to read news items with a discriminating eye. Each paper focused on one or two salient points in a selected article relevant to planning audits, then described research on pertinent accounting and/or auditing standards. This was followed by a discussion of how they might need to consider those implications as an auditor engaged in auditing clients in similar situations. All written assignments were delivered electronically to the course management system by a specified deadline. Papers were graded equally for content and style, with particular attention to how well learners integrated their understanding of auditing standards with actual financial reporting situations. Best papers were published for sharing with other learners so that their subsequent efforts might be improved.

**Collaborative Learning:** One successful exercise employed in all the classes involved a version of popular TV game shows with learners collaborating on answering review questions. In the *Jeopardy* version of the review exercise, slides were presented to each group with a definition/answer to the question they would need to ask. Another version called *Who Wants To Be A CPA?* gives multiple choice responses to a question presented on each slide. Groups are given thirty seconds to agree on a response and points are awarded for correct answers. The "games" are presented as reviews prior to examinations and student responses are overwhelmingly positive. Moreover, student examination scores improved more than 30% after introducing the games for review prior to the exams, eliminating the need for curving exam grades. Clicker technology enhances these games and allows individual responses.

## Findings

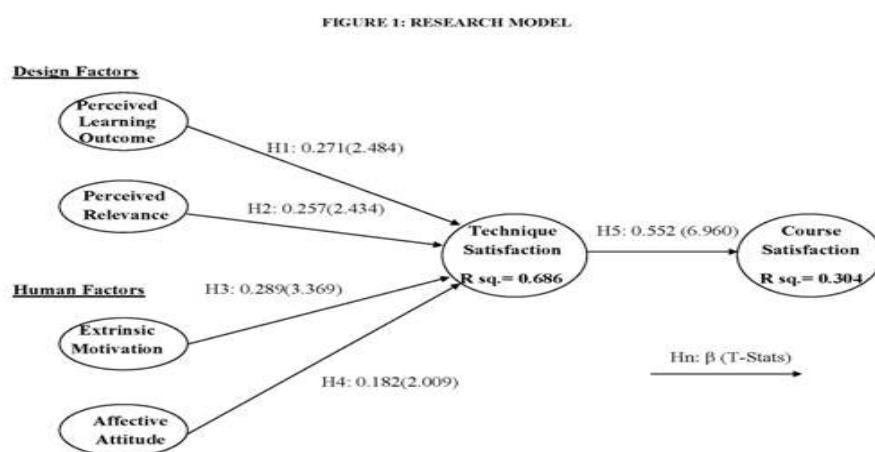
**Experiential Learning Exercises:** In a study conducted between 2005 and 2009, evidence was gathered to document the relevance of learners' satisfaction when assigned short form experiential learning assignments associated with contemporary events relevant to their studies. Assessment of the learning outcomes was measurable by improved performance as experiences increased throughout the semesters. Early feedback from students engaged in the exercises, though mostly anecdotal, was predominantly positive. In 2009, a more formal study was conducted involving multiple instructors, courses of varying academic levels, and several variations of the experiential



assignments. Learners were invited to respond anonymously to a detailed survey designed to measure the drivers behind learners' satisfaction with various projects. We also sought to determine the extent to which the use of these projects may lead to their satisfaction with the courses involved, on the basis of five hypotheses:

- H1: Perceived learning outcome is directly related to technique satisfaction.
- H2: Perceived relevance is directly related to technique satisfaction.
- H3: Extrinsic Motivation is directly related to technique satisfaction.
- H4: Affective attitude is directly related to technique satisfaction.
- H5: Technique satisfaction is directly related to course satisfaction.

Figure 1 – Results of Research Study on Short Form Experiential Learning Exercises



(Chhatwal, Taneja, & Vito, 2010)

The results support the hypothesis that the learners who perceive short research experiential education projects to be relevant are satisfied with the technique. The study found that learners enjoyed their experience of working on experiential education based research projects. Even though the learners were required to put in extra efforts on these projects as compared to the traditional lecture based classes, they found the experience to be desirable.

## Discussion

Experiential education has relevance at the earliest stages of the academic program, with increasing relevance as the student nears graduation. Accelerated curricular programs, pressure for assurance of learning, and the changing dynamics introduced by the Millennial Generation all make finding new ways to integrate interactive practical application of theoretical study imperative. While this is certainly true for accounting majors, it is also true for majors in related fields as well, and can generally be extended to all fields of study associated with professional careers.



The study also established the particular importance of developing assignments that have relevance to real world events, which require learners to spend time and effort understanding the events and the relevance to their chosen profession. Assignments should be appropriate to the skill levels associated with the respective courses, and instructors should provide detailed guidelines and examples for learners to follow in completing their assignments. Completed assignments should be evaluated with prompt detailed feedback provided to learners. Rewarding stellar work with opportunities to share with classmates can also develop learners' positive attitude and hence the satisfaction with the assignments.

Finally, it was shown that satisfaction with the technique was a significant factor in influencing the learners' satisfaction with the course. In today's world, an increasing proportion of learners are working to help pay their way through college, while also accelerating their degree completion by increasing course loads. Short experiential learning projects can achieve relevant learning outcomes, resulting in satisfaction with the amount of learning taking place in the courses without increasing time constraints.

### **Recommendation and Conclusion**

The purpose of this paper was first to identify the cultural influences on the Millennial and Post-Millennial generations that must be addressed with innovative pedagogical approaches to assure desired learning outcomes. The second issue addressed in the paper is the development of learning experiences that result in satisfaction for Millennials with the technique and the courses, and relating it to the transitional learning modes of Post-Millennials. These short form research projects are not presented as the exemplar models for experiential education for current or future learners of business. Rather, it is hoped that this study encourages instructors to further explore the use of short research projects as a technique to enhance learning in their courses, by developing new tools employing the concepts outlined here. Documenting student satisfaction with the technique validates its use as a substitute approach to providing real world experience when learners cannot undertake internships, engage in comprehensive simulations, or dedicate many hours to semester long case studies. Moreover, satisfaction results measured across the spectrum of student levels and using a variety of short exercises provides support for faculty to innovate with short experiential learning projects, particularly those involving technology and collaborative learning. Hopefully the results of this study will contribute to a better understanding of the application of experiential learning and its usefulness as a pedagogy that enhances learning outcomes and course satisfaction.

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**UTILIZING SELF-DETERMINATION SKILLS IN GRADES K-12 TO PROMOTE ACADEMIC ACHIEVEMENT  
AMONG AFRICAN-AMERICAN GIRLS IN GENERAL EDUCATION**

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The poet, Maya Angelou (1994), wrote in her poem, Still I Rise, "You may write me down in history, with your bitter, twisted lies. You may trod me in the very dirt, but still like dust, I rise (p. 163)." The famous poet brings to bare the plight of African-Americans in United States history, while unveiling glaring emotions of the monolithic voice of African-American women and girls (Angelou, 1994). Here, Angelou (1994) introduces, via poetic license, the systemic pain and brutality African-American women and girls have experienced over time, the cultural dilemma of not fully understanding the truth regarding their lineage, as well as implying the internal perseverance demonstrated as a result of the savage hardships of slavery and the struggle for equality in the United States (Angelou; Hooks, 1981). Reflectively, the history of African-American women and girls has been tumultuous, empowering, and triumphant (Hooks, 1981). There have been many strides gained in order for this pioneering group of people to conquer the disparaging demons or values, beliefs, and systems that have been placed upon their lives, hopes, dreams, and future in America (Woodson, 1933; Traore and Lukens, 2006; Freire, 1970; Hooks, 1981; Kunjufu, 2002). As a result, lyricists, such as Maya Angelou, paint the verbal picture of African-American women and girls rising or coming out of these very hardships triumphantly. Indeed, rising out of the dust of historical rape and shame, rising out of the dust of stolen legacies in the application of name changes to that of slave masters, rising out of the dust of oppression, the right to vote, and the identification that the life of an African-American is sub-human, as well as, rising out of the dust of the civil rights beatings and canine attacks sheds light, minutely, on the orchestration and the resilient journey that African-American women and girls have treaded (Hooks, 1981).

The historical effects of systemic bondage have undoubtedly been significant in the overall emancipation and suffrage of African-American women and girls' rights. According to Hooks (1981), African-American women are the most devalued in American society, and that the stereotypes formed from slavery remain in operation, currently. Thus, Hooks (1981) argues that these stereotypes were utilized to illustrate African-American women as promiscuous and/or debauched to suppress their voices. Inherent in this suppressed voice has been a dissemination of a historically construction of the servitude mentality of African-American girls. The damaged psyche for African-American women and girls to, therefore, build upon identifies not only a fundamental desire to survive, but a resounding resiliency demonstrated throughout American history. Therefore, the argument becomes clear, that by withstanding the beguiling doctrine of inequality and systemic rebuke, African-American women and girls have been able to strengthen their coalition throughout American systems to reconcile and establish fundamental civil liberties and the abolition of degenerative treatment.



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Over the course of American history, African-American women and girls have catapulted themselves out of the dire constraints of equality platitudes, and have begun to provoke systemic changes that support their upward mobility in American society. Indicative of their upward mobility lay in the accomplishment of Sojourner Truth leading slaves to freedom, Madame C. J. Walker becoming a millionaire business woman and inspiring other women to follow, Rosa Parks refusal to move to the back of the bus and providing the civil rights movement with the momentum to progress, Condoleezza Rice becoming the first African-American women to become Secretary of State, to currently having the first African-American woman to reside in the White House as the First Lady. Indeed, African-American women and girls are making positive steps towards reconstruction of their view of self and building a valuable place in America. Understanding and building a better sense of self is the key to the continuation of African-American women and girls becoming even more triumphant and powerful in America's future.

Thus, as Woodson (1933) argumentatively implies that when you strip away the identity of African-Americans, in this instance, women and girls, the identity of your oppressor replaces the original identity. Both, Woodson (1933), as well as, Traore and Lukens (2006), discuss the importance of African-Americans learning from the Afro-centric perspective to combat the mental degradation or loss of identity. Woodson (1933) further contends that in order to progress forward, African-Americans must be equally as much learned about their history. Therefore, the connotation of African-Americans being mis-educated, bring to light the quandary inherent throughout the historical corridor of women and girls (Woodson, 1933). Restructuring systemic inequities throughout education to become more inclusive of the history of, both, African-American women and girls proves critical to the upward mobility of past, present, and future. Thus, Woodson (1933) believes that this will ultimately allow the accomplishing of equitable changes throughout American systems.

Unfortunately, the effects of slavery wounds are ingrained in the fabric of American systems; politically, socially (class, race, gender), and educationally. African-American women and girls have felt the brunt end of these effects throughout history. Although, there can be an applauding of some African-American girls becoming great African-American women prototypes of success in America, more needs to be done to repair their collective identity from girls to women. The construction of systemic changes can begin with the imbedding of African-American curriculum throughout educational systems, to balance out the exclusionary history of African-Americans impacting and edifying American history (Woodson, 1933; Traore and Lukens 2006). Hence, supporting educational improvements for African-American girls outline a plan to restore the effects of identity loss, which can assist in closing the academic achievement gap. Critical in the success of African-American women is the academic achievement of African-American girls'. How can the current pedagogy contribute to such a dilemma? Outside of bridging the curriculum to reflect the inclusion of the Afro-centric perspective, the tenets of self-determination skills provide a supplementary link to securing the academic success of African-American girls. Therefore, the purpose of this critical paper is to analyze, pro, the application of self-determination skills to promote academic achievement among African-American girls, in kindergarten through twelfth grades.



## Literature Review

According to Martin et al. (2003), self determination learning theory deems that learning takes place from the making of adjustments throughout academic tenure to attain the desired educational goal; learning. Thus, Martin et al. (2003) set up the notion that “people learn by adjusting, and adjust in order to learn” (p. 3), therefore, supporting the findings that there is a correlation or functional relationship between making a choice, acting on that choice, and learning from the choice that has been made. Self determination theory is the catalyst in which self determination skills have derived.

Karvonen, Test, Wood, Browder, and Algozzine (2004) further delve into trying to understand what self determination looks like in practice. Building off of Wehmeyer’s definition and components of self determination, Karvonen et al. (2004) examined six programs that utilized self determination throughout their school. Thus the self determination components were identified as, “(a) choice making; (b) decision making; (c) problem solving; (d) goal setting and attainment; (e) self advocacy; (f) self efficacy; (g) self knowledge and understanding; (h) self observation, evaluation, and reinforcement; (i) independence, risk taking, and safety; (j) self instruction; and (k) internal locus of control (Karvonen et al., 2004, p. 23).” Karvonen et al. find that participants and parents were positive towards the utilization of the latter self determination skills to attain goals. Additionally, the study revealed that multiple strategies were used across the curriculum by teachers and assistants to assist participants with learning self determination, as well as each program having personnel (administrators, teachers, assistants, and parents) that was receptive to self determination skills being utilized in their school (Karvonen et al., 2004). Thus, the results, according to Karvonen et al., are consistent with other studies that points toward self determination being a positive tool to assisting students with attaining educational goals.

The preceding authors have researched and applied self determination to students with disabilities. Therefore, Konrad, Walker, Fowler, Test, and Wood (2008) look at integrating self determination with the general curriculum. These authors construct a model to assist general education teachers with the implementation of self determination skills congruent with content areas. Thus, the model requires the general education teacher to identify the content area, the student’s area of academic need, and the self determination skill(s) that will be necessary to accomplish the desired educational goal (Konrad et al., 2008). The self determination skills that Konrad et al. utilizes are outlined as: “choice making, decision making, problem solving, goal setting, self awareness, self recruiting/self advocacy, and self regulation/self management (p. 59).” Hence, general education teachers are provided with additional steps upon identifying the self determination skills to decide what to teach (Konrad et al.). Teachers must thereby decide the manner in which to deliver instruction, to make effective use of time (Konrad et al., 2008). Upon the delivery of instruction, Konrad et al. requires teachers to assess and alter instruction, as well as strategies to assist students in attaining their educational goals. According to the authors, the teachers involved in integrating self determination skills parallel to providing general curriculum instruction are better prepared to deliver proficient instruction to increase students’ academic achievement (Konrad et al., 2008).

Consequently, Stang, Carter, Lane, and Pierson (2009) researched both elementary and middle school teachers using self determination with instruction in the classroom. The authors wanted to determine the level to which opportunities were available to teach self determination in special



education and general education classrooms (Stang et al., 2009). As stated by Stang et al., they wanted to delve into whether or not teachers found it cumbersome to teach self determination in conjunction with their primary instructional duties. As a result, it was reported by Stang et al. that, both, elementary and middle school teachers find teaching self determination significant. However, middle school teachers reportedly found the time to teach self determination, more so than elementary school teachers (Stang et al., 2009). Thus, Stang et al. discusses the need for elementary school teachers to incorporate and uphold self determination in their classrooms to establish the exposure of self determination upon entering high school, thus, helping to address the increasing demands of instruction and educational needs.

Eisenman (2007) examined self determination concurrently with the completion of high school to determine whether or not there is a correlation. Although Eisenman investigates self determination and school completion, the application of self determination is extended to those with or without disabilities as well (Eisenman, 2007). Moreover, Eisenman (2007) further discusses that students who have high levels of self-determination and receive positive support have higher intentions of staying in school, and more likely, not only remain, but complete school. In the process, self determination is not bound to culture, but adaptable to culture (Eisenman, 2007). However, family and other student-centered factors continue to be important in the prediction of the completion of high school, whereas, Eisenman (2007) further recommends that schools endorse self determination, as this will support students with the completion of school by, “teaching the skills associated with self determined behavior through the general curriculum and through specialized curricula; assisting students to apply self determination skills to self identified and personally meaningful short and long term goals; and providing autonomy-supportive school environments and adult guidance, especially during critical transition periods (Eisenman, 2007, p. 6).”

## **Discussion**

Self determination has primarily been a tool used by special educators to help orchestrate academic achievement among students' with disabilities (Martin et al., 2003; Karvonen et al., 2004; Konrad et al., 2008; Stang et al., 2009; Eisenman, 2007). Utilizing the components or skills of self determination (choice making, decision making, problem solving, goal setting, self awareness, self recruiting/self advocacy, and self regulation/self management), researchers report favorably the need for teaching self determination to students, acknowledging the positive outcomes of goal attainment among students that appropriately received educational support, as well as students applying the tenets of self determination to achieve their academic goals (Martin et al., 2003; Karvonen et al., 2004; Konrad et al., 2008; Stang et al., 2009; Eisenman, 2007). Progressively, educators began to understand the gainful academic strides students were making from the employ of self determination, thus, sequencing additional inclusive research (Martin et al., 2003; Karvonen et al., 2004; Konrad et al., 2008; Stang et al., 2009; Eisenman, 2007). Therefore, researchers continue to advance their research by examining the extension of self determination to include students without disabilities and the general education curriculum, and like previous results, self determination continues to assist students with academic achievement, such as the completion of high school, assignments, and staying on task (Karvonen et al., 2004; Konrad et al., 2008; Stang et al., 2009; Eisenman, 2007).



Hence, the dilemma prove apparent when, according to Kunjufu (2002), "sixty-three percent of African-American fourth grade students is below grade level in reading," "sixty-one percent of eighth grade African-American students is below grade level in math (p. vii)." Inherent in these statistics, the academic voice of African-American girls beckons to be heard. Traore and Lukens (2006) provide such a voice by uncovering the myths that expose the internal transference of misconceptions that impeded African-American girls from reaching their full potential. Consequently, Traore and Lukens (2006) revealed the importance stereotypes, and falsehoods, or distortions, of African-American history that took place in barring interaction and cohesion, fundamentally, from the cultural next of kin; Africans. Changing the mindset of African-American girls, psychologically and educationally, proves vital in restructuring a new academic direction; a direction filled with achievement (Woodson, 1933; Traore and Lukens, 2006; Freire, 1970; Hooks, 1981; Kunjufu, 2002).

Thus, self determination presents as the solution to assist African-American girls with developing and attaining a greater sense of self and academic achievement. Self determination, in essence, requires the adjustment to academic difficulties while forcing the student to remain psychologically aware of finding a solution (Martin et al., 2003; Karvonen et al., 2004; Konrad et al., 2008; Stang et al., 2009; Eisenman, 2007). As stated earlier, self determination assisted students with cognitive, academic disabilities. However, African-American girls have been cognitively affected by slavery, systemically oppressed throughout American history, and collectively behind the dominant culture in education (Woodson, 1933; Traore and Lukens, 2006; Freire, 1970; Hooks, 1981; Kunjufu, 2002). The success exhibiting in the teaching of self determination to students with disabilities establishes the argument that African-American girls can benefit from learning self determination as they too, have had a cognitive disability imposed on them from, and by, the effects of American history (Woodson, 1933; Traore and Lukens, 2006; Freire, 1970; Hooks, 1981; Kunjufu, 2002). Although, much can be stated regarding girding the curriculum with an Afro-centric perspective, understanding the culture and student throughout pedagogy, as well as educators being sensitive of the power and privilege inherit to teaching, which lends to silencing of the dialogue (Woodson, 1933; Traore and Lukens, 2006; Freire, 1970; Hooks, 1981; Kunjufu, 2002). However, the model of self determination, outlined by Konrad, Walker, Fowler, Test, and Wood (2008), demonstrates the comprehensive application of self determination across the curriculum. Therefore, the current body of research shows that self determination has not prevented the inclusion of content instruction, nor strategies of utilized for pedagogy (Karvonen et al., 2004; Konrad et al., 2008; Stang et al., 2009; Eisenman, 2007). Students with disabilities were able to attain academic goal, and increased learning transpired (Karvonen et al., 2004; Konrad et al., 2008; Stang et al., 2009; Eisenman, 2007). Therefore, it is reasonable to parallel the notion that African-American girls will increase their learning and achieve academic success.

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**THE APPLICATION OF SELF-DETERMINATION SKILLS IN SECONDARY GRADES TO PREVENT THE DROPPING OUT OF SCHOOL AMONG AFRICAN-AMERICAN GIRLS IDENTIFIED AS AT RISK**

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The evolution of African-American girls continues to progress throughout American history. In some instances, primarily in urban areas, the glimpse is heart-wrenching to capture; viewing the self destructive behaviors that African-American girls are openly displaying. Hence, urban areas have seen a heightened increase in aggressive behaviors that has contributed to the reconstitution of how we historically have viewed normative girl behavior (McKnight and Loper, 2002). Historically, girls have been stereotyped as non-aggressive in nature, whereas, according to McKnight and Loper (2002), there had been a thirteen percent increase in the arrest of girls in 1994. Therefore, this data leads to the argument that girls are transitioning from previous stereotypes and roles or normative behaviors placed upon them.

Generally, aggressive behaviors has been expected and tolerated as the norm for boys, but girls are frequently joining the ranks as demonstrating more and more atypical behaviors (McKnight and Loper, 2002). Historically, girls were given duties such as cleaning, cooking, washing the laundry, and other duties associated with maintaining the household chores (Hooks, 1981). What is perceived as aggressive behaviors had yet to transpire. However, in America, the Industrial Revolution, World War I, and the Feminist Movement contributed to the redefining roles of women and girls in America, largely due to the absence of males in the home, as they were fighting in the war, and women were working in the labor market (Hooks, 1981). So, naturally, African-American girls' roles would be affected, as too, the mandate on what is normative girl behavior.

Consequently, women were taken out of the home to work, thus, leaving girls to serve as a surrogate care-giver (Hooks, 1981). Hence, when World War I was over, America's attempt to reset the normative roles were moot. Women had been given a taste of independence that proved difficult in the agreement to return to the previous roles (Hooks, 1981). Conversely, Freire (1970) discusses that it is when the oppressed learned the systems of the oppressors, and revolt, that liberation takes place. Synonymously, women (the metaphorically oppressed) began to learn how to work and financially support the household, that the reluctance to return to what some may deem as a submissive role, deemed ill-fitting (Hooks, 1981; Freire, 1970; Barak, Leighton, & Flavin, 2007). Urban areas or cities began to industrialize; people migrated to these large cities in hopes of a better life, whereas the demands and the role of women and girls progressively changed. No longer were women working primarily in the home, but they were full, commissioned partners of the work force. Thus, urban areas had begun to see a shift in the mindset of the people that lead to the trickledown effect to African-Americans, and obviously, African-American girls (Hooks, 1981; Barak et al., 2007). Therefore, the proposed facts by McKnight and Loper (2002) accounting for the increase in female arrests arguably traces back to systemic changes throughout history.



Moreover, McKnight and Loper (2002) ascertain that poverty, sexual abuse, and academic difficulties are among the reasons leading to girls' arrests or delinquency. The authors offer that the latter reasons were not predictive in female arrests or behaviors, but commonalities seen in female arrests, thereby lending the argument that socio-economic status can place girls', at risk of potentially becoming arrested (McKnight & Loper, 2002). Thus, accordingly, McKnight and Loper (2002) provide the definition for conceptually framing at risk; "the processes that predispose individuals to specific negative or unwanted outcomes (p. 188)."

African-American girls, according to Pearson (2008), "often encounter different standards applied to the same behavior, and it is the African-American woman who orients her daughter to know her place in the dominant world (p. 84)." Thus, Hooks (1981) argues that African-American women have been consistently suppressed throughout mainstream America, since slavery. Therefore, the tenement for African-American girls to construct or parallel normative behavior derives from that of the African-American women. Breaking the cyclical chains of past behaviors proves cumbersome when combating against the oppressive practices of the macro-society (Hooks, 1981; Freire, 1970; Barak et al., 2007). Thus, African-American women were stripped of a cultural identity, and the identity of the white oppressor replaced the powerful ethos that resided for centuries, thereby giving credence to Woodson's (1933) argument that "if you can control a man's thinking, you can control his action. When you determine what a man will think, you don't have to worry about what he will do (p. 84)." In the doing, African-American women are transferring the damaged legacy that was reconstructed by the oppressive tactics displayed throughout American history, and as a result, African-American girls are predisposed and subjugated to generations of being viewed negatively; at risk (Woodson, 1933; Freire, 1970; Hooks, 1981; McKnight and Loper, 2002). Systemically, internalization of negativity, damages the psyche or mind repeatedly.

Consequently, the inflated crime rates, systemic rise in poverty, decline in academic achievement in urban areas present a concern for the future of our country, with great concern being that of African-Americans, primarily African-American girls (Woodson, 1933; Hooks, 1981; McKnight and Loper, 2002; Barak et al., 2007). Where does the application of reparations begin to a people that have historically received the brunt end of social injustices and inequalities? Unquestionably, it would be difficult to place monetary value on repairing the effects of slavery, towards African-Americans (Woodson, 1933; Hooks, 1981). However, there can be a systemic rallying within the educational arena to provide academic support to aid in the future efforts of African-American children, primarily the African-American girl. In fact, teaching self determination to rebuild the psyche of African-American girls that are at risk, while assisting in academic achievement lends the opportunity for us to impede further occurrences of them dropping out of high school (Konrad, Walker, Fowler, Test, and Wood, 2008; Eisenman, 2007). Hence the purpose of this critical paper is to argue for the application of self determination skills (components) to prevent at risk, African-American girls from dropping out of high school.

### **Literature Review**

Thus, the need for African-American girls to be able to self-regulate their learning parallels the research of Martin, et al. (2003), and makes gainful strides towards academic achievement, thereby decreasing the probability of dropping out of high school. The research dictated that favorable



outcomes transpired when secondary students received self determination contracts to support and monitors their progress academically. Fundamentally, Martin et al. (2003) established their research from self determination learning theory to conduct the research. Thus, self determination learning theory proposes that changes will occur in the process of learning, and that alterations throughout the learning process is what allows the learner the ability to reach the place of learned; the goal. Martin et al. (2003) captures, in this study, students with disabilities self determination contracts to successfully propel these participants with the completion of academic tasks that aided in their academic growth.

Consequently, Konrad et al. (2008), further builds on the research of Martin et al. (2003) to provide educators with a model to amalgamate self determination skills with the application of content areas such as math, language arts, sciences, social studies, and the like. Konrad et al. (2003) incorporate and highlight self determination skills (components) to provide detail instruction as to how and what the application of self determination look like effectively implemented in the classroom. The authors streamlined self determination skills to be inclusive of choice making; students being given the preference to choose between a consortium of assignments, decision making; students analyzing a situation that may cause distress behaviorally or academically, and being able to decide the correct method to produce a favorable outcome, problem solving; students synthesizing the necessary steps to the orchestrating of a plan for academic and behavioral productivity, goal setting; students utilizing the aforementioned skills to conceptualize their needs and project this need in a goal to be attained, self awareness; students ability to evaluate where they are academically and behaviorally to make adjustments, self recruiting/advocacy; students effectively asking for assistance and support from those in position to provide it, and self regulation/management; students monitoring the progress and/or completion of academic or behavioral goals or plans (Konrad et al., 2003). The modeling that Konrad et al. (2003) provides establishes a more comprehensive outline to teaching self determination skills to African-Americans than those identified in previous research.

Additionally, Eisenman (2007) extends self determination research to gain insight on secondary students' matriculation throughout high school. Eisenman (2007) discovers that student learning should be centered on the goals of the students, thereby lending to the fact that self determination allows for the interspersal of a student-centered education, but also, hones the argument that self determination complements pedagogy. Hence, the relevance of self determination in high school proves beneficial to students, according to Eisenman (2007), laying the foundational argument that African-American girls, can not only benefit, but are inclusive of the findings of this study. In stronger support, Eisenman (2007) reviews programs that target at risk youth to ascertain the effectiveness of supporting these youth to meet personal goals of completing high school, as well as examining if the tenets of self determination were underlying the success of these programs. The relationship between the two (self determination and completion of high school) were found to be favorable (Eisenman, 2007).

Furthermore, Rodriguez and Conchas (2009) examine dropout prevention among urban youth through an intervention program. The program, according to Rodriguez and Conchas (2009) provided “a space to (a) feel safe, (b) to be treated as citizens in the community, and (c) be given the opportunity to empower themselves through community-building and critical thinking activities (p.



217)" However, prior to examining this program, Rodriguez and Conchas (2009) discusses the fact that urban cities around the United States have a significant dropout rate, and argues for a shift of establishing a solution to the who is dropping out of school, to the why are students dropping out of school; conditions and factors contributing to school dropout. Indicative of dropping out of school, Rodriguez and Conchas (2009) identifies poverty and issues surrounding poverty in these conditions and factors contributing to school dropout. Thus, providing students with individualized attention, as well as socio-economic and instructional support was an underlining theme in the discussion and projection of successful dropout intervention programs. Accordingly, Rodriguez and Conchas (2009), discussion reveals that "the student voices within the program demonstrate how institutional bridging and the beliefs and practices driving the work of the program provided various opportunities to transform participants' perceptions and actions in the quest to reengage in school and provide hope for a more promising future (p. 243)." Therefore, the study demonstrates the necessary movements needed to activate empowerment in at risk, urban youth that should fundamentally be awarded to become academically and socially successful, barring the probability of dropping out of school (Rodriguez and Conchas, 2009). Likewise, self determination parallels methods utilized in this study to capture similar results, as Eisenman's study has shown (Eisenman, 2007).

## **Discussion**

Kozol (2005) evaluate culture through the voice of African-American children victimized by the educational systems. Thus, the evaluation denoted a humanistic approach in which Kozol (2005) exposes the harsh reality or shame on the nation, pun intended, that provide schools in privilege areas with additional financial support, while inequitably giving schools in areas of high poverty a lower, unsubstantial amount of financial support to provide students with the necessary and basic tools to achieve academic success. The sound of the alarm, unleashed by Kozol (2005) lifts the veil of inequitable deception transpiring across the United States, and yet studies have shown that one of the causal factors for dropping out of school is poverty. Poverty is not a crime; it is a social status that is able to be changed by utilizing education to rise above the capitalistic systems in America (McKnight and Loper, 2002; Barak et al., 2007; Eisenman, 2007; Rodriguez and Conchas, 2009). By providing all children with the opportunity to receive an equitable education, especially African-American girls, Americans ensure that the level of educational attainment maximizes, and by default, the dropout rate minimizes.

Thus, Barak et al. (2007) further expose the inequity rampant in America, not only in the field of education, but along the lines of race, class and gender. Hence, the disclosure of victimizations and notion of privilege catapult the conversations into the twenty-first century, as the realities of injustice or systemic layers of inequity becomes a new depiction of America (Barak et al., 2007). Contesting years of systemic barriers proves to be a great and heavy struggle. History demonstrates this fact all too well. So, for African-American girls to, therefore, continue to, academically and systemically, travel in the same manner would be tragic.

There is a fundamental duty for educators to provide the best possible pedagogy to students. African-American girls that are at risk of dropping out of high school will, in fact, largely benefit from the teaching of self determination skills, to augment supportive dropout, intervention services.



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Consequently, this argument build upon the research of Eisenman (2007) and Rodriguez and Conchas (2009), lending to the argument that the application of self determination skills with pedagogy more than likely contribute towards decreasing the high school dropout rate among African-American girls.

Moreover, teaching self determination to African-American girls presents a clear opportunity for teachers to impact many lives academically, while assisting in the decline of the high school dropout rate. Thus, Haberman (1995) points out that teachers need to be prepared for the teaching profession upon entering. Indeed, teacher preparedness greatly impacts pedagogy of children in poverty (Haberman, 1995). Self determination taught with content areas shave off behaviors that allow for better pedagogy (Konrad et al., 2008). Hence, Rodriguez and Conchas (2009) discovered that support and empowering the student from a student-center perspective allowed for academic success. Self determination allows for student-centered pedagogy, while empowering the student to become actively involved in their education (Eisenman, 2007; Konrad, 2008; Rodriguez and Conchas, 2009). Therefore, self determination performs the task of both empower and instructor; clearly outlining the needs of at risk African-American girls (Eisenman, 2007; Konrad, 2008; Rodriguez and Conchas, 2009). Thus, by placing education back into the hands of many African-American girls, the residual effect of academic success and dropout prevention looms as a possibility (Eisenman, 2007; Konrad, 2008; Rodriguez and Conchas, 2009).

By no means does self determination explicitly abolishes African-American girls' dropping out of high school. However, self determination links pedagogy of content to the student, in essence, allowing for African-American girls to become influential in their own pedagogy. Thus, the ultimate goal is for African-American girls to achieve academic success and complete high school, as teachers supplement pedagogy with the teaching of self determination. Hence, Eisenman (2007) discovered positive residual effects among students even after the completion of high school.

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## GREEN PRODUCT CONSUMER BUYER BEHAVIOR IN CHINA

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### ABSTRACT

This study applied a structural equation model to investigate the impact of food safety concern, label, price-quality inference and consumers attitudes on consumers' purchase of green-labeled food in China. Data was collected from respondents who had purchased green-labeled food in Shanghai. A structural equation model was applied to analyze all hypotheses. The consumers' actual green purchase of green-labeled food was positively related with food safety concern ( $\beta=0.29$ ,  $p<0.001$ ), label ( $\beta=0.22$ ,  $p<0.001$ ) and attitude towards green-labeled products ( $\beta=0.16$ ,  $p<0.01$ ). In addition, food safety concern showed significant influence on label ( $\beta=0.45$ ,  $p<0.001$ ) and consumer attitudes ( $\beta=0.12$ ,  $p<0.05$ ). Price-quality inference was positively affected by label ( $\beta=0.11$ ,  $p<0.05$ ). Moreover, for consumers' attitudes variable, it is significantly affected by price-quality inference ( $\beta=0.19$ ,  $p<0.001$ ). However, a relationship between price-quality inference and consumers' actual green purchase of green-labeled food was not found. Recommendations are provided for improving the marketing of green labeled food products in China.

**Keywords:** China, Green Marketing, Food Safety, Price-Quality Inference, Consumer Attitudes

### Introduction

The ever-increasing concern with health and environmental issues among consumers has accelerated their anxieties about the food they have eaten, for which they have paid attention to the quality of the food, the usage of fertilizer, the level of nutrition and the supervision of chemical residues ( Beharrell and MacFie, 1991). Based on an estimation in which one out of three consumers in industrialized countries suffers from food-borne diseases every year (*Food safety- a worldwide public health issue* 2000), food-borne risks have prompted private and public sector to improve the production of inexpensive food with fewer or without food-borne risks to meet consumers' demand (Buzby and Roberts, 1996; Lutter, 1999; Unnevehr and Jensen, 1999; Shogren et al, 1999). In recent



years, whether the modern food system is able to provide safe food has been questioned by consumers.

To satisfy customers and to build a long-term profitable customer relationship are major tasks for the enterprises to sustain their business in or even survive from the fierce competition in the market (Tan and Lau, 2010), and to understand consumers' motivations to buy green products is vital to develop the green market. In developed countries, being-green is a strategy for organization to be successful in gaining market share, expanding market size and extending to international green marketing (Gurau & Ranchhod, 2005; Johri & Shasakmontri, 1998; Pugh & Fletcher, 2002). Green products become more acceptable only when the products are affordable, accessible, well-performed with high quality, and the products also are perceived to be able to eliminate environmental problems (Ottman, 1992). As natural resources have been over-consumed and utilized, environmental deterioration has forced both enterprises and consumers to rethink the consumption habit. As compared to western consumers who have been environmentally-concerned for a decade (Curlo, 1999), Asian consumers are just starting to explore possible paths for consuming green products due to the increasing awareness of environmental issues (Gurău and Ranchhod, 2005).

At present, Chinese consumers have attached high attention to food safety (Zhang, 2005) due to a series of food safety crisis. Therefore, green labeled food is in high demand. As an eco-certification scheme, "Green Food" certifies the food production methods and outcomes, in which CGFDC (China Green Food Development Center) exerts strict control over the use of pesticides and a testing system for pesticide residues (Paull, 2008). The "Green Food" certification consists of two grades: "Green Food" Grade A and "Green Food" Grade AA (Giovannucci, 2005). At level of Grade A, the use of pesticides or chemicals is controlled to a minimum degree (Sternfeld, 2008), but at level of Grade AA, chemicals, fertilizers or pesticides are excluded through the production process, which is equivalent to the international standards for organic food (Sternfeld, 2009; Paull, 2008). Thus, this study aims to identify as to what extent food safety concern, label, price and consumer attitude affect consumers' buying decision of green-labeled food. The modified conceptual framework and questionnaires are mainly adapted from Shaharudin *et al.* (2010), De Pelsmacker *et al.* (2005), D'Souza *et al.* (2006), De Magistris and Gracia (2008), Huang *et al.* (2004), and Fotopoulos and Krystallis (2003).

### Literature review

*Green Purchase Behavior:* Page and Lüding (2003) pointed out that behavioral intention occupies a vital role to actual behavior. The purchase of the products that are better for environment preservation and recyclable is defined as green purchase (Mostafa, 2007), and a positive relationship between green purchasing intention and green purchase behavior is proved (Schahn and Holzer, 1990; Lansana, 1992). An individual's purchase behavior can be measured through an investigation of his or her actual buying behavior of a particular product (Roozen and De Pelsmacker, 2002). Ajarn (2002) stated that four key elements: target, action, context and time should be included into a particular action, and if these four elements are excluded, the relationship between intention and behavior will be weak. Moreover, the prediction of intentions will not be accurate. In this study,



green purchase behavior refers to those consumers who have purchased green-labeled food from supermarkets where green-labeled foods are on the shelf.

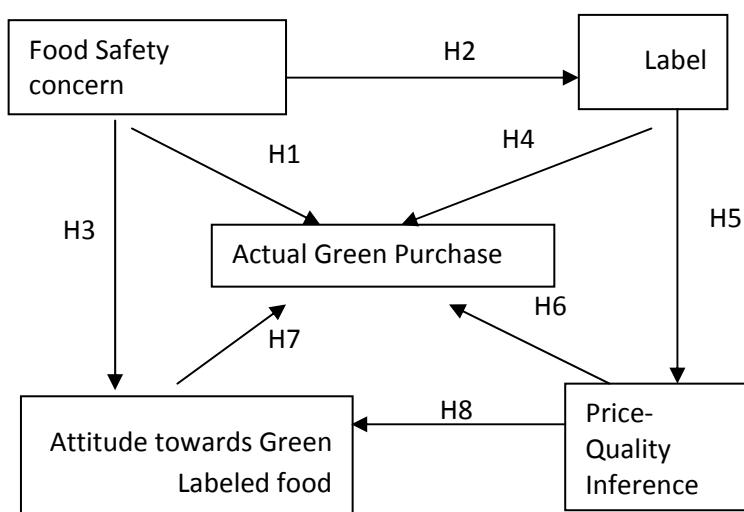
**Target:** green-labeled food

**Action:** purchase

**Context:** supermarkets where green-labeled foods are on the shelf.

**Time:** From the past until now

### Conceptual Framework



This study used sample random sampling, quota sampling and convenient sampling to obtain the data from 384 respondents who have experienced in buying green-labeled food in two random-selected branches of Carrefour supermarket in Shanghai. The main objectives of this research are to study the impact of food safety concern, label, price-quality inference and consumers' attitude on their purchase with respect to green-labeled food. In addition, the relationship between labeling and price-quality inference was tested. Five-point Likert scale ranging from strongly disagree (1) to strongly agree (5) was applied. Also, a confirmatory factor analysis and Cronbach's  $\alpha$ -test were used to ensure inter-item reliability.

For hypotheses testing, a structural equation model was tested by AMOS 17.0, and overall fit of the model was indicated by Chi-square ( $\chi^2$ ), Goodness-of-fit index (GFI), Root mean square error of approximation (RMSEA), Adjusted goodness-of-fit index (AGFI), TUCKER-Lewis index (TLI), Normed fit index (NFI), and Comparative fit index (CFI). Hence, based on the conceptual framework and the objectives of this research, the researchers developed eight hypotheses to support this research.

These eight hypotheses are listed below:

- H1: Food safety concern has a statistically significant positive relationship with consumers' actual purchase of green-labeled food
- H2: There is a statistically significant positive relationship between food safety concern and label
- H3: Food safety concern has a statistically significant positive relationship with consumer attitude towards green-labeled food



- H4: Label has a statistically significant positive relationship with consumers' actual purchase of green-labeled food
- H5: There is a statistically significant positive relationship between label and price-quality inference
- H6: Price-quality inference has a statistically significant positive relationship with consumer attitude towards green-labeled food
- H7: Consumer attitude towards green-labeled food has a statistically significant positive relationship with consumers' actual purchase of green-labeled food
- H8: Price-quality inference has no statistically significant positive relationship with consumers' actual purchase of green-labeled food

### Research findings and discussion

Based on the findings of inter-item correlation testing, the researchers could conclude that there is a positive inter-correlation among all variables in this study. The result of hypothesis testing and the analysis of the path coefficients for the structural equation modeling are shown in Table 1.

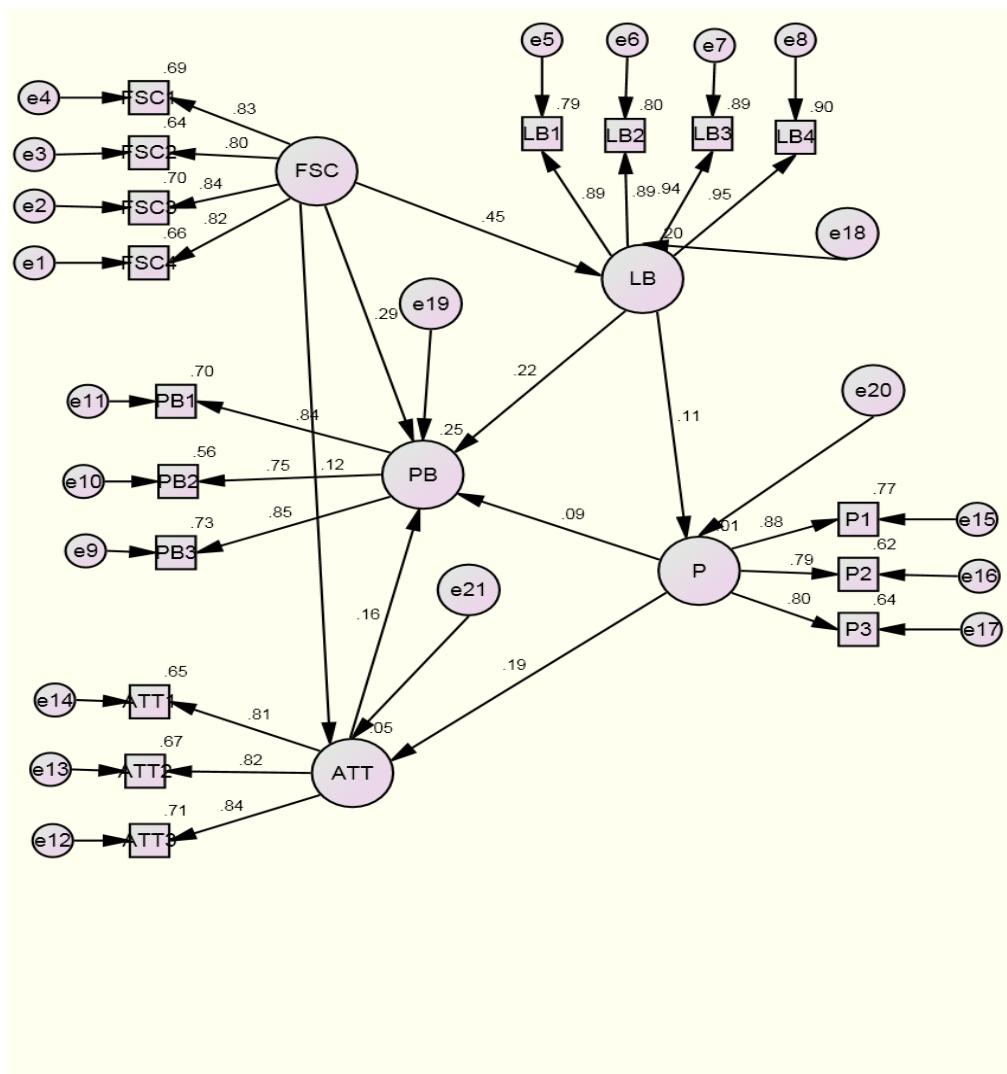
Figure 1 supports that all hypotheses are found at significant levels except hypothesis eight. Hypothesis one, hypothesis two, hypothesis four and hypothesis six are significant at .001 level ( $p<.001$ ), and hypothesis three and hypothesis five are significant at .05 level ( $p<.05$ ), and hypothesis seven is significant at .01 level ( $p<.01$ ).

Table 1  
Path analysis by Structural Equation Modeling (SEM)

Hypothesis	B	t-value	p-value	Supported
H1: FSC→PB	0.29	4.692	***	YES. ( $P<.001$ )
H2: FSC→LB	0.45	8.449	***	YES. ( $P<.001$ )
H3: FSC→ATT	0.12	2.081	0.037*	Yes ( $P<.05$ )
H4: LB→PB	0.22	3.740	***	YES. ( $P<.001$ )
H5: LB→P	0.11	1.978	0.048*	Yes ( $P<.05$ )
H6: P→ATT	0.19	3.986	***	YES. ( $P<.001$ )
H7: ATT→PB	0.16	2.856	0.004**	YES. ( $P<.01$ )
H8: P→PB	0.09	1.726	0.084	Not support

Notes: \* p-value at .05; \*\* p-value at .01; \*\*\* p-value at .001

Figure 1: Structural equation modeling results



Hypothesis	Result
H10: Food safety concern has no impact on consumers' actual purchase of green-labeled food	Reject (P<.001)
H20: There is no connection between food safety concern and label	Reject (P<.001)
H30: Food safety concern has no impact on consumer attitude towards green-labeled food	Reject (P<.05)
H40: Label has no impact on consumers' actual purchase of green-labeled food	Reject (P<.001)
H50: There is no connection between label and price-quality inference	Reject (P<.05)
H60: Price-quality inference has no impact on consumer attitude towards green-labeled food	Reject (P<.001)
H70: Consumer attitude towards green-labeled food has no impact on consumers' actual purchase of green-labeled food	Reject (P<.01)
H80: Price-quality inference has no impact on consumers' actual purchase of green-labeled food	Failed to reject



## Discussion

**Hypothesis 1, Hypothesis 2 and Hypothesis 3:** Consumers' concerns about food safety significantly influence their attitudes towards green labeled food and buying behaviors. Also, consumers' concerns about food safety are positively associated with green label. As the consumers keep a vigilant eye on food safety issue resulted from a series of food security crisis, they tend to purchase food products with green label in order to reduce health risks and environment deterioration. The results also reflect Chinese consumers' high expectations of an improvement of current food processing and production as their awareness of food quality and safety have risen.

**Hypothesis 4, Hypothesis 5:** Food products labeled as "Green Food" have been able to create a positive social and environmental image and deliver an informative message to consumers. Therefore, the green label, to a great extent, is able to give an impetus to consumers to make a buying decision of green labeled food. In addition, even though green labeled food gains 10 percent to 50 percent of price premium in China (Paull, 2008), Chinese consumers still accept food products labeled as green to be of high price as their confidence in conventional food has declined. In their mind, consumers believe that green-labeled food symbolizes a kind of product with superior quality deserving a premium price.

**Hypothesis 6, Hypothesis 7 and Hypothesis 8:** The findings firstly show that price-quality inference positively affect consumers' attitude towards green-labeled food in terms of taste, nutrition level, and reduction of health risk, which obviously indicated that quality becomes a main concern of consumers. Additionally, the findings also can be interpreted that once Chinese consumer generate positive attitude towards green-labeled food, they will transfer their attitude into real action—to purchase green-labeled food. However, the results also revealed that price-quality inference does not directly affect consumers' purchase of green-labeled food, which may be caused by the price discount campaign in different retail channels. Consumers in Shanghai are able to purchase green-labeled food from different supermarkets where discount campaigns have made price different. The supermarkets would benefit from offering low price through which they would get more customers.

## Recommendations

There are some recommendations that the researchers would like to make for the development of the green-labeled food industry. One of the motives for Chinese consumers to purchase green-labeled food is their concerns of food safety, which has caused them to seek more information on products in order to make sure that their purchase will reduce health risks. The enterprises and marketer of "green-labeled food" can put concise and accurate information about products on the label such as nutrition level, ingredient or some recommendations for having healthy lifestyle rather than only showing "Green Food" label, which will make label more informative and product more acceptable while helping consumers to gain more knowledge about green-labeled food. Also, price discount campaigns in retail channels are not the only means to increase sales volume and gain market share. Developing a green club for those consumers who have purchased green-labeled food from regular retail channels is also a way to retain existing customers and to attract more new



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customer. Green club may be able to make customers more loyal to a particular brand, a particular retail channel, or a particular brand so that they will not be hesitating to repurchase.

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## PROMOTING LIBERAL LEARNING IN A CAPSTONE ACCOUNTING COURSE

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### ABSTRACT

This paper describes our efforts to integrate liberal learning principles in a capstone course within the overwhelmingly career-focused discipline of accountancy. Our approach was based on the belief that business and liberal learning courses are complementary, rather than competitive, elements of a well-rounded education. The ability to deal with ambiguity, for example, or to integrate seemingly unrelated ideas and perspectives helps young people succeed in their chosen fields. We discuss the rationale for creating an accounting capstone course with an emphasis on incorporating a liberal learning philosophy, its implementation, our experience in the classroom, and suggestions for improvement. Overall, the course was a success; however, some modifications could be made that would make the experience a more positive one for both faculty and students.

**Keywords:** Liberal Learning, Accounting, Capstone, Writing intensive, Research emphasis

### Introduction

This paper describes our efforts to integrate liberal learning principles in a capstone course within a discipline that has an overwhelmingly career-focused curriculum. Our approach was based on the belief that accounting and liberal learning courses are complementary, rather than competitive, elements of a well-rounded education. Liberal education holds that the fulfillment of human potential depends upon disciplined learning. It involves acquiring foundational skills, which in turn leads to the development of transferable intellectual capacities. *Foundational skills* allow a person to do something; *intellectual capacities* enable a person to know when to do something, how to adapt it, and when to do it in a new way. In his popular book, *the World is Flat*, Tom Friedman (2006, 302) observed, “the first, and most important, ability you can develop in a flat world is the ability to ‘learn how to learn’- to constantly absorb, and teach yourself, new ways of doing old things or new ways of doing new things.” Such an approach is the basis of a liberal education.

### Liberal Learning Principles

As students prepare for twenty-first-century challenges, a report released by the Association of American Colleges and Universities outlines the following four broad essential learning outcomes (Association of American Colleges and University, hereafter AAC&U, 2007):

1. Knowledge of human cultures and the physical and natural world, which would include study of traditional arts and sciences disciplines.



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2. Intellectual and practical skills, such as critical and creative thinking, written and oral communication, and quantitative literacy.
3. Personal and social responsibility, such as civic knowledge and engagement, "intercultural knowledge and competence," the ability to reason about ethics, and understanding of lifelong learning.
4. Integrative learning, including the ability to synthesize information and engage in both general and specific study.

Liberal learning implies breadth and depth, i.e., basic knowledge in a range of disciplines, focused by more concentrated work in one. It teaches that knowledge is interconnected, and that learning proceeds from a base of assumptions and perspectives. It is unrealistic to imagine that any one course can capture all four outcomes listed above. Recognizing that it is not possible to aim for all four principles in this accounting course, our course limits focus on meeting points 2 and 4 quite well, and point 3 to a lesser degree.

### Rationale for incorporating liberal learning philosophy in an accounting course

The significance of liberal learning philosophy was underscored in a report as "in a world where communication occurs frequently and instantaneously, the well-educated person must express thoughts and ideas effectively through written and oral communication (Concordia, 2004). Being able to write well is a fundamental aspect of liberal education. Writing is not only a medium through which we communicate and persuade; it is also a means for expanding our capacities to think clearly. Echoing these views, another report describing the findings of a survey sponsored by the AAC&U noted that "communication skills—including writing and effective oral communication—are essential both as foundation skills for college and university learning and as lifelong skills for citizenship and the professions" (Meacham & Gaff, 2006).

Accountants in public practice conduct research, write memos, prepare reports, and often make presentations of solutions to client problems. Highlighting the importance of research skills for accountants, a recent study (Burke et. al., 2008) emphasized the profession's call to "educators to focus on teaching more critical-thinking skills rather than more content" and to help students acquire research skills as they prepare for the complex business environment.

In the digital age, information literacy is also becoming an essential component of a liberal education. Continued growth of both electronic and printed materials makes many sources of information readily available. This necessitates students to acquire new and critical knowledge of where to find sources and how to evaluate them. Competence in this area would require a liberally educated person to (1) locate appropriate research materials by identifying and searching a variety of information resources, (2) apply an effective and efficient research methodology, (3) evaluate information and its sources critically, and (4) use information and sources ethically (Concordia, 2004).

Recognizing the need for these competencies, the Accounting Education Change Commission, hereafter AECC, stressed the importance of research skills for accounting students in its "Position Statement Number One, Objectives of Education for Accountants." It recommended that as part of



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having the appropriate skills, accounting graduates should possess the “ability to present, discuss, and defend views effectively;” and “ability to locate, obtain, organize, report, and use information from human, print, and electronic sources,” p. 311 (AECC, 1990).

### **A Capstone Course**

A capstone course is a method of summative evaluation in which the student is given an opportunity to demonstrate integrated knowledge and growth in the major. These courses are important because they provide an opportunity to reflect on what has been learned, integrate both general education and major coursework, and help the transition to the professional world (Gardner & Van der Veer, 1998). According to Jervis and Hartley (2005) in order to effectively end a college career and begin a professional one, capstone courses should:

- Promote the coherence and relevance of general education.
- Promote connections between general education and the academic major.
- Foster integration and synthesis within the academic major.
- Explicitly and intentionally develop important student skills, competencies, and perspectives that are tacitly or incidentally developed in the college curriculum.
- Improve seniors’ career preparation and pre-professional development, that is, facilitate their transition from the academic to the professional world.

### **Importance of Research & Writing in Accounting Today**

Accounting curricula must prepare students for their professional careers. Our capstone course is designed to improve career preparation and pre-professional development of accounting seniors; i.e., facilitate their transition from the academic to the professional world. The course provides a more in-depth study of major accounting topics, building on the knowledge acquired from earlier courses in the program. Students work in pairs as well as individually, studying current and historical accounting issues stemming from the basic accounting paradigms (e.g., the information economics, and the decision usefulness paradigms).

### **Research and Writing**

This course was developed in response to changes in the accounting profession and the demand for improved research and writing skills in accounting graduates. Incorporating a liberal learning philosophy in the course was in response to these changes and to our college-wide curriculum reform. Accounting professionals responding to a survey reported that the ability to write with clarity is extremely important, and that misunderstanding and misinterpretation of accounting information can have detrimental effects (Stowers and White, 1999). Clearly, strong technical and communication skills are critical to career advancement in accounting.

Recognizing the value of written communication, the American Institute of Certified Public Accountants (AICPA) revised the Uniform Certified Public Accountant (CPA) Exam to include assessment of writing skills of prospective professionals (VanZante, 2004). As the former Securities



and Exchange Commission (SEC) Chairman Arthur Levitt noted, "the benefits of plain English abound." Zinsser (1988) argues that "writing contributes to an improvement in thinking skills because a person must mentally process ideas in order to write an explanation" (pg. 208). Besides critical thinking skills, writing facilitates understanding and memory (Bean 1996). Bean suggests that this is because "writing is both a process of doing critical thinking and a product of communicating the results of critical thinking" (Bean 1996, pg. 3).

Research on role of writing and its potential benefits has been established by the writing-across-the-curriculum (WAC) and writing-in-the-discipline (WID) models of learning. WAC and WID are often characterized as "*writing to learn*"—i.e., writing as a means of acquiring information, understanding concepts, and appreciating significance in any discipline . . . [versus] *learning to write*—i.e., acquiring the socially-mediated communication skills and genre knowledge appropriate to a specific discipline" (Broadhead, 1999, p. 19). As for including accounting research into the curriculum, Wright (1994) suggested two alternatives: incorporating topics as part of all courses, or devoting a course entirely to research. Simon and Alexander (1997) felt that "students can be lectured to and asked to write an essay on research design, but it is surely more appropriate to encourage students to develop this practical research skill directly. Only by 'doing' research can such skills be brought alive. p. 163.

Our capstone course requires students to complete a standalone research paper with standard sections: Purpose and Contribution, Literature Review, Hypothesis Development, References, Data Collection and Analysis, Results/Synthesis, and Conclusion. In essence, the capstone course makes students "learn how to learn" and goes beyond traditional accounting to further explore broader business issues.

### **Subject Area Selection**

In the wake of the economic and financial crunch and other major corporate scandals of recent past (e.g., Enron, WorldCom), the U.S Congress passed the Sarbanes-Oxley Act of 2002 (hereafter SOX). These scandals raise questions of fundamental importance to the future of the accounting profession. The tumultuous events of the past few years ought to "motivate us to move from a debits and credits approach to an accounting education that focuses not only on technical rules but also on producing competent individuals with a functioning moral compass" (Titard et. al., 2004). It is paramount that we incorporate subjects of current interest in the business world and provide proper context to ongoing coverage of the corporate accounting scandals, including the professional and regulatory response to them. Beyond acquiring technical skills, students must understand the state of a profession they are about to enter including challenges, opportunities, and how it has evolved to its current stage.

We selected SOX as the most appropriate, timely, and relevant subject area for the course as it presented several advantages: 1) the significance of the SOX legislation; 2) the fact that more than five years had passed since it was enacted and much had been written about it; 3) it is a controversial piece of legislation, as many have questioned whether the benefits exceed costs; and 4) knowledge of SOX is in demand by CPA firms and this knowledge would benefit graduating students in the job market.



### The Sarbanes-Oxley Act of 2002

SOX is considered by many to be the most significant legislation affecting accounting since the Securities Acts of 1933 and 1934 as it included far-reaching sections on corporate governance and financial disclosures. Students must understand what SOX entails, its consequences, its impact on accounting practice, and its impact on corporations and management decision making. SOX imposes additional disclosure requirements and considerable corporate governance mandates. It is quite unprecedented in the history of federal securities legislation (Romano, 2005).

There are eleven titles in SOX, each with several sections that describe specific mandates and requirements for financial reporting. They are: 1) *Establishment of the Public Company Accounting Oversight Board* to oversee public accounting firms, 2) *Auditor Independence* to limit conflicts of interest, 3) *Corporate Responsibility* – senior executives take individual responsibility for the accuracy and completeness of corporate financial reports, 4) *Enhanced Financial Disclosures* including off-balance-sheet transactions, pro-forma figures and stock transactions of corporate officers, 5) *Analysts Conflict of Interest* defines code of conduct and includes measures designed to help restore investor confidence, 6) *Commission Resources and Authority* defines the SEC's authority to censure or bar securities professionals from practice, 7) *Studies and reports* requires the SEC to perform various studies and report their findings, 8) *Corporate and Criminal Fraud Accountability* describes specific criminal penalties for manipulation, destruction or alteration of financial records, 9) *White Collar Crime Penalty Enhancement* increases the criminal penalties associated with white-collar crimes and conspiracies, 10) *Corporate Tax Returns* requires the CEO to sign the company tax return, and 11) *Corporate Fraud Accountability* identifies corporate fraud and records tampering as criminal offenses (SOX, 2002).

The main controversy arising from SOX is whether the benefits exceed the costs associated with implementation of this legislation. From the outset the business community expressed substantial concerns about cost of compliance (Zhang, 2007). Romano (2005) argued that SOX was hurriedly enacted after corporate scandals without giving consideration of its substantial costs compared to the corresponding benefits. The compliance costs are not only the 'incremental dollars' cost but also the opportunity cost of diverting executives' attention from day-to-day businesses (Solomon and Cassell, 2004). SOX is timely, controversial, and mandated. Students would benefit from acquiring an in-depth understanding of the law and its consequences, and the impact on accounting practice, corporations and management decision-making.

### Implementation Issues

This course is a four credit course, offered with a prerequisite that the student must be an accounting major with senior standing. Students take three writing intensive courses during their time at the college. The first of these is a freshman level seminar; the second is a mid-level writing intensive course designated for the major and taken during the sophomore or junior year, and the third is a writing intensive capstone course in the major. Writing intensive capstone courses must be reviewed by the college's Writing Program Committee and then approved by the Liberal Learning Program Council.



## Learning Goals

The course addresses three learning goals while fulfilling college wide liberal learning requirements for a writing-intensive course with a research emphasis. These are: (1) the use, interpretation, and integration of accounting information, (2) the ability to conduct research, and (3) the ability to think critically and communicate accounting information, both orally and in writing, to a target audience. These goals guided our class discussions and fostered a greater understanding of accounting issues that had arguably led to corporate failures such as Enron and WorldCom.

## Course Materials

The course materials consisted of a documentary and various readings (monograph, journal articles, cases, book chapters etc.). Articles appropriate for classroom presentation by the students were selected and scanned so that they could be posted on the college's online course management system. The articles came from scholarly and professional journals as well as newspapers such as the *Wall St. Journal* and the *New York Times*. Articles from foreign journals and newspapers were included to provide an international perspective. It is important to note here that many readings came from professional journals such as the *Journal of Accountancy* and the *CPA Journal*. Some may argue that these journals are not "scholarly" enough and that the articles perhaps lack rigor. Given that this was not a graduate seminar, we believe that the course achieved a good balance between scholarly and professional publications without sacrificing relevance. In fact, it was an opportunity to introduce students to journals they are more likely to read as professionals, not just academic publications. This course provided an excellent opportunity to contrast different types of research and rigor. The selection of our reading list followed an approach to teaching and learning that ensures that we prepare students for the actual "world of work" (Schneider 2005, 3). A broad range of topics were covered, including the background and events that led to the enactment of SOX, what the law entails, business ethics and conflict of interest, accountability and independence, corporate governance and internal controls, cost of compliance, international and small company perspective, challenges for non-profit organizations, and enforcement issues.

Understanding of various concepts learned in prior courses was crucial to fully appreciating the context and the content of assigned readings. The course materials were selected to promote knowledge integration and expansive learning. For example, the course began with three different items: 1) the documentary 'Enron - The Smartest Guys in the Room' (Elkind et al 2005), 2) the article 'The Rise and Fall of Enron' from *Journal of Accountancy* (Thomas, 2002) and, 3) the case study 'Behind Closed Doors at WorldCom' from *Issues in Accounting Education* (Zekany et al. 2004). The documentary painted a vivid picture of Enron's faulty and corrupt business practices that led to its demise; the JOA article tells a cautionary tale of when a company looks too good to be true, it usually is; and the WorldCom case provided students an opportunity to study the largest accounting scandal in history from an internal financial accounting perspective. Beyond the scandals, students needed to connect accounting dots in each instance. That is, what accounting issues were at stake? More specifically, what accounting principles were violated and how? To understand how companies "cooked the books," a thorough understanding of the revenue recognition principle was required. This principle is first introduced in an introductory accounting class and further applied in intermediate and advanced accounting courses. A broad range of discussions ensued encompassing



topics such as the role of special purpose entities and off-balance sheet financing. A good grounding in foundational concepts was required for students to appreciate how these concepts were used or misused.

In general, the capstone course called upon students to recall and review (if necessary) concepts and issues they had learned in various prior courses such as the concepts of cost (e.g., voluntary vs. mandatory), internal control (e.g., preventive, detective, and corrective), and corporate governance (e.g., role and composition of an audit committee). The reading list reinforced the liberal learning principle # 4 (discussed earlier) by including general topics (e.g., the importance of auditor accountability and independence) and specific issues (e.g., types of misleading financial reporting, specific loopholes exploited).

### **Tutorial on Research**

Conducting an efficient and effective search for material is crucial to a successful research project. Since most students had not written an academic research paper prior to this course, they were given a tutorial on how to navigate various library resources, perform a literature review and how to develop a hypothesis. The tutorial covered five important aspects, (1) getting started, generating ideas, selecting a topic, (2) finding data to support research (such as, U.S. and international statistics), (3) finding articles and performing scholarly research about a topic, (4) finding and analyzing company information (financial statements, SEC Reports, etc.), and (5) using guides to write well (citing resources correctly and avoiding plagiarism). A writing workshop was also held to describe the process of writing research papers and covered areas such as hypothesis development, data collection and analysis of data.

### **Student Research, Writing and Presentations**

Learning never happens in isolation, and the quality of student experience often depends on their ability to collaborate fully with others. As such, we decided that students would work in pairs and make three presentations during the semester. Students presenting articles were required to post discussion questions on our College's online course management system the day prior to the presentation. Students not presenting were graded on class participation and had to attend class in order to earn participation points.

Targeting liberal learning principle # 2, the writing component of the course required each student to submit three pieces of individual writing: 1) a one-half to one page proposal/outline describing the topic of the paper, due at the end of the seventh week of the semester; 2) a draft of the paper, including a statement of the purpose and contribution of the paper, a literature review, a statement of the hypothesis or research question, and references, due at the end of the eleventh week, and 3) the final paper consisting of those items included in the first draft as well as the data collection & analysis, results/synthesis, and conclusion, due at the end of the thirteenth week. The aim of these writing assignments was to foster critical (e.g., through literature review) and creative thinking (e.g., through hypotheses development), as well as written communication.



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The amount of ungraded, informal or draft writing was much higher than 20 pages. Students were encouraged, but not required to select a topic that was related to SOX. The flexible approach on topics was adopted to accommodate intellectual curiosity while meeting learning goals. All topics, whether related to SOX or not, had to be approved by the professors before students moved on with their research.

### **Assessment**

The grades were based on student presentation, class participation, and the research paper. Presentation points were awarded on the basis of quality of class presentation, handouts, and timely posting of online discussion questions/comments. Students not presenting were awarded points for class participation on the basis of quality and quantity of thoughtful response to questions or comments, as follows: 5 = very good (more than 2 constructive comments per class); 3 = average (2 comments per class) and 1 = minimal (1 general comment per class). Students received no points if they either did not participate or were absent. Points awarded for class participation motivated students to read the articles, review the discussion questions and participate in the discussions. Under this system, the quality of student presentations and overall class discussions improved over the course of the semester as students made more constructive and insightful comments. The research paper (proposal, draft and the final version) was graded using a common rubric. The rubric consisted of seven items 1) purpose and contribution; 2) literature review; 3) hypothesis development; 4) references; 5) data collection and analysis; 6) results/synthesis, and 7) conclusion.

### **Outcomes, Experiences and Conclusions**

While most students selected topics related to SOX, many tackled hot topics that have been in the news. Each topic was classified in one of the following four categories: 1) Sarbanes-Oxley, 2) IFRS/GAAP, 3) Auditing, and 4) Other. The quality of student papers improved significantly from the draft to the final stage. Based on all papers from the three sections, the average points earned on the final version were greater than points earned on draft for each category: Purpose and Contribution (3.86 vs. 3.29); Literature Review (4.02 vs. 3.51); Hypothesis Development (3.80 vs. 3.14); Data Collection and Analysis (4.08 vs. 3.61); Results and Synthesis (4.04 vs. 3.37); Conclusion (3.86 vs. 3.12); References (4.10 vs. 3.65). Using 2-tailed T-test, we found each of these differences to be statistically significant ( $p < .01$ ). These results indicate that pursuit of liberal learning principle # 2 was successful. Students' critical and creative thinking, based on their papers and writing skills, improved considerably. Student papers also showed a high level of knowledge integration and synthesis which underscores the realization of liberal learning principle # 4. Students were able to engage in general study of a topic as well as hone in on specific issues. For example, the paper '*the Effects of Sarbanes-Oxley on the IPO Market in the United States*' discussed SOX in general and how specific provisions of this law were seen as onerous, making initial public offering in the U. S. stock exchanges less attractive. Specific IPO data from London Stock Exchange versus New York Stock Exchange was compared to gauge the impact of SOX in the post-enactment period.

### **Feedback and Student Evaluation**

Students received feedback throughout the semester. Two class days during the semester were reserved for instructors to formally review the proposal and first draft with each student. As a result



of one-on-one discussions, we found that some students were having difficulty completing a literature review. As previously described, we addressed this problem with the help of our Business Librarian, who gave students a tutorial on available library resources and on conducting a literature review.

Student teaching evaluations are required for every course taught at our College. The evaluation form includes twenty-five questions, sixteen of which relate to the instructor's performance and seven which relate to the course itself. Average scores based on the seven key course specific items show encouraging results. On a five point scale (1 = strongly disagree to 5 = strongly agree), the average scores for the seven items are as follows:

- 1) the course materials were well prepared and carefully explained = 3.95
- 2) assignments added to my understanding of the course = 4.02
- 3) collaborative work with classmates added to my understanding of the course = 4.07
- 4) required readings were valuable and enriched my learning experience = 4.07
- 5) I acquired valuable skills and knowledge in this course = 4.00
- 6) I found the course intellectually challenging = 3.96
- 7) I increased my ability to analyze and critically evaluate ideas = 4.15

These results indicate that students felt that their analytical and critical thinking skills were enhanced in this course, validating our focus on liberal learning principle # 2.

### **Our Experience**

Several challenges surfaced during the course. First of all, we observed “senioritis and job effects” that made some students less motivated. That is, many of the seniors in the course had already accepted a full time position upon graduation and some seemed to feel that they did not really “need” the course. In addition, the group of seniors taking the course was the first class that had the capstone course as a graduation requirement. As a result, there was some resentment in having to complete a senior level course that included a significant amount of work during the last semester of college.

Secondly, in retrospect, too many journal articles were assigned for review. Each pair of students was required to make three presentations of assigned journal articles during the semester, including the preparation of and prior-day distribution of discussion questions. Many of the presentations included multiple journal or newspaper articles, and students presenting were responsible for leading the discussion of the articles. Our assessment at the completion of the course was that two presentations of journal articles would have been more appropriate, with the last third of the semester being devoted primarily to writing the paper.

Third, we assumed that students would be able to complete a literature review for their individual research paper. However, this was not so in some cases. We made arrangement to address this weakness. Anyone considering offering a writing capstone course with a major paper should ascertain that literature review was either covered in an earlier course or early in the semester of the capstone course.



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Finally, for some students, class participation was an issue. Students who were extroverts tended to accumulate more discussion points than those who tended not to talk as much, even though the quiet students may have been academically excellent. This was noteworthy especially because class participation counted for 12.5% of the final grade.

There were many rewarding aspects of this course as well. First of all, students obtained an in-depth knowledge of a subject that will help most of them on the job. One student commented that “learning information on SOX was very valuable.” Second, some excellent papers were produced by students. One paper was published in a peer reviewed journal, while another was presented at a national conference and published in the conference proceedings. Finally, as faculty members who taught this course for the first time, we gained valuable experience. We will be able to incorporate “lesson learned” from our experience in this course into other courses or improve on this course in the future.

### **Summary and Conclusions**

Implementing a capstone course is a challenging and evolving process of making trial-and-error adjustments. It is also a time-consuming endeavor. We wrote this paper with four objectives in mind: 1) to share our experiences in designing and teaching a writing intensive accounting capstone course with a major topic focus; 2) to illustrate how the course accomplished the specified learning goals and to discuss issues and challenges that arose during the course; 3) to share our list of selected readings and grading rubric, and 4) to identify the challenges and rewards of creating a capstone writing course.

Anyone considering developing a capstone writing course at the undergraduate level should be aware that most accounting students have little or no experience in the process of writing a *research* paper from selection of a topic to a final draft of the paper. At the same time, we found that with proper preparation and guidance, most students embraced the opportunity to learn about a timely and controversial topic by reading and presenting research papers and to improve their writing skills by preparing a quality research paper.

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**THE RESEARCH UNIVERSITY:  
ALLOCATING RESOURCES WITHIN SCHOOLS AND AMONG SCHOOLS**

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**ABSTRACT**

Today's research universities have the dual missions of research and teaching: of creating and disseminating knowledge. Each university has quasi-autonomous schools (e.g., Engineering, Law, Divinity). Each school has its own mission and its own priorities that lead to a particular emphasis on teaching and research. The university must allocate common resources among the schools that then allocate their allotment according to their own priorities. The decision as to the appropriate relative emphasis on teaching, research and other contributions to society will vary among schools of the university. The university's investment in each of the schools will vary depending upon the mission of the university and the contribution to the mission of each school. This paper will present two microeconomic models of the university. One will focus upon each school's investment in research and teaching, the other will focus on the university's investment in the schools.

*Keywords: Universities, Resource allocation*

**Introduction**

An important issue for each of a university's schools is to determine whether teaching and research are complements or substitutes in the production of their output. This issue can be addressed by developing a model of the school that depicts the relationship among the school's inputs and outputs; a production function. Any such model of one of the schools within the university will have elements in common with the microeconomic model of the firm, and will have at least as many disparate elements.

Each school must identify and quantify each input and the various outputs, or products, that it elects to produce. This microeconomic model of the production function of a school must be completely specified if it is to be used to measure the effectiveness of the university. It would also be used to identify areas in which value-enhancing investments can be made.

A great deal has been written on resource allocation decisions at universities. Studying several of the persistent observations suggested in the literature will give a basis for the formal modeling of the aforementioned relationship between a school's objectives and its productivity.

The allocation of resources among schools of a university requires a modification of the microeconomic model of the firm. We shall review the theory of the firm as a precursor to the development of the theory of the school and the theory of the university.



### Theory of the Firm

For a manufacturing firm it is reasonably straightforward to identify productive inputs: raw material, labor and investment in plant and equipment. The inputs are combined to create a well-defined output (or outputs) which can be unambiguously measured. The details of the technology that relate the inputs to the outputs are embodied in the production function.

We then identify two optimization problems [see Figure 1]. In the first we strive to ascertain the maximum output that can be produced with a limited budget for the inputs. In the second, we determine the minimal expenditures required to produce a fixed level of output. This latter optimization problem generates the variable cost function for the output. The minimal cost of producing a given level of output depends upon technology and input markets. Then the structure of the market for the firm's output is identified (number of firms, barriers to entry) and the shape of the demand curve for the output can be determined. The demand curve dictates the functional form of the total revenue function. The difference between the total revenue curve and the cost curve is the firm's profit. The short-run objective of the firm is to set an output level that will maximize this profit.

### Theory of the Firm: Joint Products

With joint products, the production processes are interdependent; a change in the production of one of the products produces a change in the cost function of the other.

For the two-product case a level of expenditures on inputs is specified. Then, a level of the first output is fixed, and the production of the second output is maximized for the fixed level of the first output. By varying the fixed level of the first output a locus of feasible joint output combinations for a fixed input budget is generated. An entire family of these joint product possibility loci can be generated – one such locus for every budget specified for the inputs [see Figure 2]. For any particular output combination, the quantity of the first product (arbitrarily selected) can be expanded in two alternative ways. One way is to maintain the current level of input expenditure and substitute between the two outputs. The alternative way to expand output of the first product is to move to a different joint product possibility locus – increase the budget and expand the output (possibly) of both products.

The joint production possibility loci identified above has the property of being concave to the origin. This shape results from the technological restriction on adapting the firm's inputs perfectly in the production of the two products.

An isorevenue curve is the locus of all quantity pairs of the two outputs that can generate the same total revenue. If the markets for both of the products are perfectly competitive, the isorevenue curve will be linear in the two-output space.

The solution for an optimal combination of outputs requires a tangency between a joint product possibility curve and an isorevenue curve [see Figure 3]. Since profits are maximized at a point of



tangency, the marginal cost of producing each output must be exactly equal to the marginal revenue each product generates.

### **The Firm vs. The University**

A primary difference between the microeconomic model of the firm and the microeconomic model of the university is the absence of a distinct, measurable objective for the university. In addition, the actual output of the university is not well defined. Even the identity of the inputs is vague - is the student an input or an output? Is the value added to the student over the multi-year curriculum the relevant measure of output? Is the initial student quality a measure of the university's previous success – i.e., is incoming student quality a measure of the university's reputation which has been established through previous successful additions to student competence? If so, a dynamic model of the university would be required. Ultimately, the measure of the university's success is some combination of its productivity in adding value to students and its creation of knowledge – i.e., its scholarship.

The inputs to this production process must include the students (with some measures of typical quality and class diversity, as well as a measure of student effort); the faculty (with effort and quality of effort measured as well as an indication of the allocation of faculty time between teaching and research); support staff quality, time, and effort; the level of library holdings (or equivalent electronic access); technical (including computer) support; supply and expense budgets; and physical plant (stock of investment and periodic maintenance). Reputation may be perceived as an input one period and the period's change in reputation may be an output that revises the reputation input for the subsequent period. The outputs of each school include education, research quantity and quality, and services provided to the academy and to the community.

### **Measuring Teaching**

The measure of the education function might be number of degrees, it could be intellectual value added, it could be graduate starting salary, it could be a measure of the graduate's lifetime earnings, it could be the graduates' ultimate contributions to mankind. The measure of student output may differentiate among the schools: e.g., undergraduates, law graduates, medical school graduates and divinity graduates. The measures of output may also distinguish between the effects of the teaching mission and the "stamp of approval" or "sorting effect." The latter may be, in fact, the reputation input as indicated above. Student enrollments are heterogeneous – students have different majors, students have different aspirations, aptitudes and levels of preparations (which is why value added may be the more appropriate output measure). A breakdown of students by school philosophy – professional, liberal arts, career preparation – would be instructive in measuring productivity. Both education (the result of teaching) and research must be specific to the school – the humanities, the social sciences, the sciences, engineering, teaching certification, nursing, etc.

### **Measuring Research**

A starting point for developing this definition/measurement of research is the paper by David Hopkins, "The Higher Education Production Function: Theoretical Foundations and Empirical



Findings" (1990). Hopkins presents the general form of a production function for instruction identifying and categorizing the inputs and the outputs of the production process and reviews the papers that have contributed to this literature. He observed: "In our rather extensive review of the literature, we were unable to locate any evidence (either theoretically or empirically based) concerning the production function for university research alone."

An operational conception of research will have to address the extent to which research is an activity versus a (sometimes) product of activity. Such a conception will have to identify the benefits of research and the beneficiaries. Is the measure of research the same in each of the following pairs of scenarios?

Pair 1:           X "researches" for n years and finds Z and publishes the finding  
                     Y "researches" for n years and finds Z – finding not published

Pair 2:           X discovers Q on day t and has finding accepted for publication  
                     Y discovers Q on t+1 (independently) - paper rejected - not new

A definition of research must be able to answer the question as to whether Y (in either pair) has done research and, if so, what quantity of research? What is the relative amount of research comparing each Y to its X? The utility derived from research and the individuals deriving the utility (perhaps just the researcher, but possibly all of society) must be identified.

The term "research" is sometimes used to refer to the time the scholar spends in contemplation. The scholar's time is an input to the production process, but contemplation may be seen as the research process itself. We also find the term "research" being used to refer to a paper written by a scholar. This is an output of the production process. It is appropriate to distinguish among: (a) spending time on research (an input), (b) conducting a study or organizing one's thoughts (the process), and (c) communicating the results of the study.

We will also need to identify the value of the research and identify the parties receiving the value. A scholar could devote months to an abstract thought, have a brilliant insight, and never write up the insight. In this case the research has been undertaken, the insight is the output, but only the scholar derives utility from the research because he has not shared it. The scholar may place separate value on both the output and the process itself (job satisfaction). In another case a scientist may experiment with a vaccine, publish the result, and ultimately thousands of people may have extended lives and drug company stockholders may profit. March (1991) provides us with a further distinction concerning research. He distinguishes between "the exploration of new possibilities and the exploitation of old certainties":

Adaptive systems that engage in exploration to the exclusion of exploitation are likely to find that they suffer the costs of experimentation without gaining many of its benefits. They exhibit too many undeveloped new ideas and too little distinctive competence. Conversely, systems that engage in exploitation to the exclusion of exploration are likely to find themselves trapped in suboptimal stable equilibria. (March, 1991, p. 71)



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Basic research results may be written up as an article. The majority of such articles may never impact more than the handful of scholars who read the article. But a few of these ideas may be able to be “exploited” and perhaps thousands of people will be dramatically affected.

### The Objectives of the University

Virtually all research universities have selected an organization design in which schools are quasi-autonomous units with subventions from the university. Each school must jointly determine the level of each input and the ideal combination of outputs. What criteria can they use to select the overall correct combination of inputs and outputs? With one choice of input/output the school might be construed as very productive, but tuition-paying parents (or “cost” paying governments) might have a different view of productivity. The school’s own view of the appropriate objective is only one such view that must be of concern. The university’s objective is a vague combination of the objectives of the schools. Society at large, students, alumni, faculty, staff and contributors are all stakeholders in the university and each stakeholder has a different perception of the appropriate objective of the various schools and the university.

From a standpoint of social policy, colleges and universities should strive to enhance welfare by producing an educated citizenry, a qualified and motivated workforce, and a continuing stream of creative ideas and conceptual breakthroughs in terms of medical technology, scientific advancement, reconsideration of the appropriate roles for social institutions, reinterpretations of literature and history, and potential methods of resolving differences peacefully. Universities, collectively, should provide upward mobility for the population, providing opportunities for the disadvantaged to share in the production and consumption of the nation’s wealth. Individually, universities must deliver on the promise to provide the basis for “the examined life” and, possibly, to enhance the student’s lifetime income by more than the cost of the education.

Those who play active roles within universities cannot agree upon the goals of the university. Many see institutional prestige as the primary goal of the university. The prestige increases the quality of the incoming students, the students get into better professional schools, they contribute more as alumni, the larger endowment allows more funded faculty chairs, better faculty can be hired, more research is produced, more prestige...

In a literature review, James (1990) presents the following university goals:

Goal 1. Research and low teaching loads: faculty tend to enjoy research more than teaching, and research contributes to the discipline and to individual visibility as well as to institutional prestige.

Goal 2. Quantity of undergraduate and graduate students: graduate students are valued because of their contribution to research and propagation of the discipline; undergraduates probably are positively valued at colleges that specialize in teaching but may be negatively valued (at the margin) in research universities.

Goal 3. Quality of students: better students are more fun to teach and do better at teaching each other; good students are better advertisements in public pronouncements of admissions statistics and tend to do better after graduation, thus contributing more to institutional prestige.

Goal 4. Class size and teaching support services: since independent assessments of educational outcomes are difficult, class size and teaching support services may be viewed as proxies for quality.



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Cost reductions are resisted on grounds of quality erosion. Thus, expenses become goals in and of themselves.

Goal 5. Teaching quality: anecdotal evidence suggests that teaching quality may be important for colleges, but that it is much less important than research in the case of universities; none of the models (of research universities) James surveyed includes any direct measure of teaching quality or outcomes from learning in its lists of objectives.

The view expressed in Goal 5 is not new. Lipset (1994) set forth specific evidence and support for the research university's primary focus. He points out that until recently, the American research university has been the only form of tertiary education that has combined the functions of innovative research with teaching. The former and present Communist countries concentrated scholarship in the academies of science, not the university. Academicians far outrank professors. Germany combines research with teaching, but it has major full-time, very prestigious research institutions, the Max Planck Institutes. In France much of academic investigation goes on in the National Centers for Scientific Research. Most other countries do not take the combination of university-based research and doctoral research training seriously.

Lipset (1994) also expresses the view that from World War II on, competition for faculty and grants turned major parts of the top universities into research institutes that also teach. As a result of the competition for grants, much of the actual instruction of undergraduate students has been done by adjunct faculty and teaching assistants. While almost all institutions have teaching awards, these have little effect on tenure decisions. Faculties understand the rules.

Much of the discussion of the consequences of the research emphasis focuses on its dysfunctional effects on teaching, on the lack of contact with faculty. Lipset (1994) argues that this focus is wrong. He claims: "Basically, students, particularly the good ones in the more elite institutions, do not learn from the faculty. The best thing about an education at Harvard and Stanford, two schools I know well, is the quality of the undergraduates. They teach one another, as John Henry Newman posited in 1852." (Lipset, 1994)

### **Microeconomic Theory of the University: The Schools**

While Hopkins (1990) lamented the dearth of literature on the production function of research, he "did, however, find several works dealing with joint production of instruction and research." He noted that "models that incorporate the major interactions between instructional and research activities of faculty and students obviously are necessary if we are accurately to describe the production function of the research university. Yet the current state of understanding of these interactions - at least in any quantitative sense - is quite rudimentary." (Hopkins, 1990). Nerlove (1972) noted that "basic research and graduate training and the provision of undergraduate educational services are carried on within the same institution and frequently by the same individuals suggests that the two are complementary in the sense that fewer scarce resources are needed to produce given amounts of the two goods if they are produced together rather than separately. Indeed, there is some doubt that certain kinds of basic research, for instance in the humanities, can be produced independently of undergraduate education at all." He demonstrates this relationship graphically: research and graduate education (quality adjusted) on the abscissa and



undergraduate educational services (quality adjusted) on the ordinate [see Figure 4]. He hypothesizes transformation curves with the property that there are two regions of output complementarity - the regions where either output is large relative to the other - i.e., "near" either axis (from a to b and from c to d). Between points b and c the outputs are substitutes. He notes that if universities behave optimally they will not produce in the interior of the regions of complementarity thereby giving up free output. "Nonetheless, the existence of such regions in the transformation curves explains why we will generally observe teaching and research being done together. Even if society pays nothing for basic research, some of it will be undertaken in connection with undergraduate education." (Nerlove, 1972)

Massey (1996) has used the Nerlove model to explain the gradual reallocation of faculty time to research and away from teaching. He notes that "In pursuit of prestige, some faculty have developed an independent, entrepreneurial spirit leading to increased emphasis on research and publication and on teaching in their specialty instead of general introductory courses, often at the expense of coherence in an academic curriculum. The increased outputs or primary gainers are research, publications, professional services (consulting), and curriculum specialization. Diminishing outputs include teaching quality, advising, mentoring, tutoring, and curriculum structure." (Massey, 1996). This reallocation of time is in response to professional and pecuniary incentives; this phenomenon is primarily witnessed at the research universities.

Referring again to Figure 4, there are three regions of this joint product production possibility curve. When research is first introduced in an institution that has specialized in teaching, teaching is actually enhanced by the faculty involvement in research. On the arc from a to b research is complementary to (augments the effectiveness of) teaching. If research is increased considerably (moving toward c and b), it is found that increases in research lead to decreases in teaching effectiveness. In Region 3, further reallocation of resources away from teaching and toward the research mission can actually decrease both outputs of the university. The arc from b to c is the efficient region and within that region the university makes a value choice between the two outputs – teaching and research are substitute outputs. Many research universities have pursued research to the point that it is constrained by teaching (moving from close to c). Massey and Wilger (1995) have described faculty choice as follows:

Faculty *satisfice* their teaching, whereas they maximize their research effort. By *satisfice* we mean doing enough to meet a quality standard – but once the threshold has been achieved, one turns one's attention elsewhere. They are anxious to return to their research, and they will do so once convinced that teaching duties are safely under control.

This interpretation of the Nerlove model helps us to understand the apparent contradiction that, while faculty time must be allocated between teaching and research (faculty time, as an input, can be perfectly substituted between research and teaching), at the same time the complementarity of research and teaching lies at the very heart of the existence of the research university. As the Nerlove concept demonstrates, when research is largely subordinate to teaching, a renewed emphasis on research will generate an enhanced teaching outcome. And when teaching is largely subordinate to research, a renewed emphasis on teaching will enhance the research output.



Each of the university's schools must select its own research/teaching joint production combination – but the university should not reward a school that has selected an inefficient combination.

### **Microeconomic Theory: The University**

We now consider the budget allocations among the schools by the university. Critics of educational institutions contend that increased expenditures do not lead to an increase in gross productivity; it is contended that universities will raise all the money they can and will spend all the money they raise. Recent research challenges the expenditure – quality linkage in higher education. The alternative posed is based upon the microeconomic theory developed for nonprofit organizations. In this latter view, the universities' altruistic purposes are emphasized. The theory of the nonprofit enterprise is based upon the premises that the nonprofit firm (the university):

- a) seeks to maximize contribution to society
- b) accepts applicable technology
- c) understands and accepts market conditions for inputs and outputs
- d) maintains a balance of revenues and expenses over time
- e) forbids private distribution of surplus to stakeholders

The nonprofit firm, therefore, seeks to maximize a subjectively determined utility instead of the objectively determined profit. The for-profit firm endeavors to maximize the difference between total revenue and total cost. The university attempts to maximize the collective utility of the output of the schools. The firm operates at a level of output where the marginal revenue is just equal to the marginal cost, for each of its outputs. The university will operate so that the marginal revenue plus the marginal utility of each school's output are just equal to the marginal cost of producing the output. This model is depicted in Figure 5. Rather than continuing to expand output of a school as long as the net contribution to profit (marginal revenue minus marginal cost) is positive, the university might stop expansion while contribution margin is still positive, or it might elect to expand beyond the point that the contribution margin becomes negative.

Suppose that the university had in place a free electron laser and felt that additional capacity for the current facility would have a positive marginal utility. Then the university would be willing to invest in further capacity even though the marginal revenue from the capacity was less than the marginal cost of that capacity as long as the net loss (marginal revenue – marginal cost) was less than the marginal utility for the capacity. It is also possible that the expansion of the undergraduate program in prehistory has a negative marginal utility. In this case, an expansion in prehistory might not take place even though MR exceeded MC. Expansion would only take place if MR exceeded MC by an amount that exceeded the disinterest in expansion ( $MR - MC >$  than the negative of the marginal utility for additional prehistory studies). A university might feel disdain for training accountants – it is at odds with its liberal arts orientation. If such a program could do slightly better than break even, it would not be implemented (on grounds of principle), whereas, if it would be extraordinarily profitable ( $MR - MC >$  negative of marginal utility), the program would be created (on practical grounds). The program would generate sufficient surplus funds to allow the creation of a masters program in renewable studies that could not possibly pay for itself, but would be highly valued on a non-pecuniary basis.



For the firm,  $MR - MC$  is used to guide the allocation of resources. When this contribution margin is positive, expand production of the output. For a product with a negative contribution margin, the firm's profit can be increased by reducing production. If the university is in a state of equilibrium – it is satisfied that it has the correct level of investment in each school - the sign and magnitude of the contribution margin for each school serve as an indication of the utility that the institution attributes to that school's output. Those with high contribution margins are not particularly esteemed by the university, they are tolerated for the surpluses which they generate. Those with large negative contribution margins are held in high esteem (high marginal utility). It is viewed that they merit the current level of production in spite of the fact that they must be significantly subsidized.

It would seem natural for the university to pursue programs only to the extent that the institution values (has positive marginal utility for) the product. In an earlier era when government and private funding existed more abundantly, universities did not have to pursue activities for which marginal utility was negative. Years ago scholars pursued their interests knowing that productive avenues of research would be funded by outside agencies. When the marginal utility for a project approached zero, scholars would move on to new positive marginal utility projects. Many faculty members are at odds with current conditions that require that they pursue projects with negative marginal utility (plebian topics, or practical applications of original research) merely to generate large positive contribution margins.

This nonprofit model, adapted for the university, can shed light on behavior within universities that is illogical from a theory of the firm perspective. Financial cross subsidies are a natural result of different units of the university creating products that have different intrinsic value to the university. Totally autonomous school budgeting would only make sense when the products of all schools were equally valued in terms of achieving the mission of the university. If the Divinity School operates at a loss year after year, it does not follow that we should expect it to be closed. The continuity of the School in the face of continuing losses is an expression of the utility generated by the School – the level of that utility is directly measured by the magnitude of the (negative) contribution margin. Without cross subsidies (or revenue generating endowment) the university would have no way to further its own values. Its output would be strictly dictated by the market. And the output of each university would be the same as that of all other universities (except to the extent that their endowments differ and their state funding differs). However, if different universities were more, or less, efficient in the production of outputs, we would expect to see output choices vary across universities. If one university can produce a particular output at a lower cost than others, that program will require less of a subsidy, or it will generate more of a subsidy, than in other universities, and, consequently the university's other programs can be funded at higher levels. This will lead to the creation of output differences that reflect the values of the particular university.

## **Conclusion**

Focusing on different levels of aggregation provides insight into the production function of the university. When we focus upon the micro-level input/output decisions, we consider the school-level joint production of research and teaching output. The university-level problem becomes the allocation of common resources when the university stakeholders have disparate perceptions of the various university outputs.



Perhaps a study of various specific faculty and their allocation of time (with which students they interact, how much time is devoted to classes and class preparation, what university service and community service is performed – as well as what time is allocated to research) would help to define individual production functions which could be aggregated to estimate the production function of the university. Archibald (1974) reports that extensive study of the allocation of faculty time has been conducted in the UK. Academics were asked to keep detailed diaries indicating their hour to hour and week to week activities. Archibald comments “The obstacle to proceeding in this manner is a familiar one: jointness. Thus suppose that a man spends h hours reading a paper in a learned journal that (a) stimulates or otherwise pleases him, (b) will contribute to his teaching, and (c) will contribute to his own research. To what category should he allocate his h hours?”(1974). Archibald demonstrates how misguided this approach is with the following analogy. “How do we allocate the grass eaten by a sheep between wool production and mutton production? ... one thing is certain: if sheep could talk, economists, if not farmers, would have more sense than to ask silly questions about the allocation of the grass.” (Archibald, 1974)

Suppose we restrict our studies to a level of aggregation of the university. We must not expect a better understanding of the university than these microeconomic models of joint production can give for the firm. Because of the ambiguities of the non-pecuniary objectives of the university – how it will choose to express its values - any empirical study will fail to completely specify the production function of the university. There are too many intangibles with respect to the many contributions to the process of education and research.

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Figure 1

$$\begin{aligned} \text{Max } Q(X_1, X_2) \\ \text{s.t. } P_1 X_1 + P_2 X_2 = B \\ \mathcal{L}(X_1, X_2, \lambda) = Q + \lambda(B - P_1 X_1 - P_2 X_2) \\ \frac{\partial \mathcal{L}}{\partial X_1} = \frac{\partial Q}{\partial X_1} - P_1 \lambda = 0 \quad MP_1 = P_1 \lambda \quad \left. \begin{array}{l} \frac{MP_1}{P_1} = \frac{MP_2}{P_2} \\ \frac{MP_1}{MP_2} = \frac{P_1}{P_2} \end{array} \right\} \\ \frac{\partial \mathcal{L}}{\partial X_2} = \frac{\partial Q}{\partial X_2} - P_2 \lambda = 0 \quad MP_2 = P_2 \lambda \end{aligned}$$

Maximum Output with a fixed Budget

$$\begin{aligned} \text{Min } P_1 X_1 + P_2 X_2 \\ \text{s.t. } Q = k \end{aligned}$$

$$\begin{aligned} \mathcal{L}(X_1, X_2, \lambda) &= P_1 X_1 + P_2 X_2 + \lambda(k - Q) \\ \frac{\partial \mathcal{L}}{\partial X_1} &= P_1 + \lambda(-\frac{\partial Q}{\partial X_1}) = 0 \quad \lambda = \frac{P_1}{MP_1} \quad \left. \begin{array}{l} \frac{MP_1}{P_1} = \frac{MP_2}{P_2} \\ \frac{MP_1}{MP_2} = \frac{P_1}{P_2} \end{array} \right\} \\ \frac{\partial \mathcal{L}}{\partial X_2} &= P_2 + \lambda(-\frac{\partial Q}{\partial X_2}) = 0 \quad \lambda = \frac{P_2}{MP_2} \end{aligned}$$

$$\frac{\partial \mathcal{L}}{\partial \lambda} \Rightarrow B = P_1 X_1 + P_2 X_2$$

Minimum Cost to produce specified Output

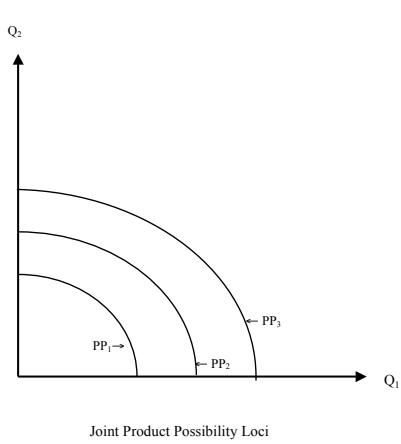


Figure 2

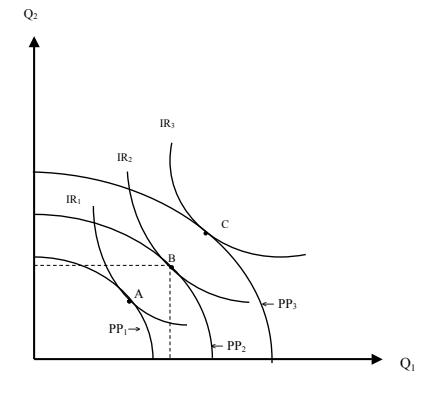
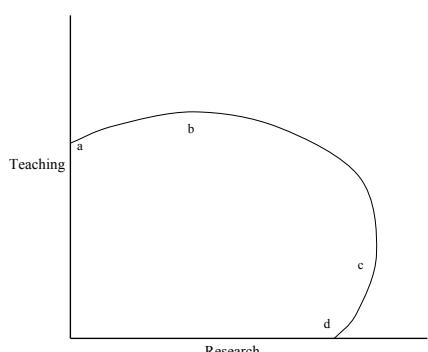


Figure 3



Joint Production Possibilities

Teaching and Research

Figure 4

$$\begin{aligned} \text{Max } U(Q_1, Q_2, \dots, Q_m) \\ \text{s.t. } TR_1 + TR_2 + \dots - TC_1 - TC_2 - \dots = 0 \\ \mathcal{L}(Q_1, Q_2, \dots, l) = U + l( TR_1 + TR_2 + \dots - TC_1 - TC_2 - \dots ) \\ \frac{\partial \mathcal{L}}{\partial Q_1} = \frac{\partial U}{\partial Q_1} + \lambda(MR - MC) = 0 \quad \frac{MU_1}{\lambda} + MR = MC \\ \frac{\partial \mathcal{L}}{\partial Q_2} = \frac{\partial U}{\partial Q_2} + \lambda(MR - MC) = 0 \quad \frac{MU_2}{\lambda} + MR = MC \\ \frac{\partial \mathcal{L}}{\partial Q_m} = \frac{\partial U}{\partial Q_m} + \lambda(MR - MC) = 0 \quad \frac{MU_n}{\lambda} + MR = MC \end{aligned}$$

$$\Sigma TR_i = \Sigma TC_i$$