



## **Experiential Learning Theory Bibliography--Annotated**

**Volume 3  
2011-2012**

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The bibliography contains 548 references with abstracts on experiential learning theory from 2011-2012. The bibliography is in PDF and formatted in APA style. Many research studies listed in the bibliography can be accessed through research databases such as: Web of Science Citation Index, MEDLINE, Education Abstract, Dissertation Abstract, ERIC Document, Google Scholar and others. For online access to the bibliography, the Learning Style Inventory and other experiential learning resources go to [www.learningfromexperience.com](http://www.learningfromexperience.com) Please send any additions and corrections to [dak5@msn.com](mailto:dak5@msn.com) Revised 1/15.

## A

Abdul, B., Van Wie, B. J., Babauta, J. T., Golter, P. B., Brown, G. R., Bako, R. B., . . . Olaofe, O. O. (2011). Addressing Student Learning Barriers in Developing Nations with a Novel Hands-on Active Pedagogy and Miniaturized Industrial Process Equipment: The Case of Nigeria. *International Journal of Engineering Education*, 27(2), 458-476.

There is a global need to implement modern educational pedagogies. For developing nations, class size, utilities infrastructure, and a deeply entrenched lecture-based teaching paradigm are additional challenges. Our fundamental hypotheses are that classroom logistics in a transport class can be modified to use a novel pedagogy incorporating a Desktop Learning Module (DLM) for effective Hands-on Active Learning (HAL) in a developing nation and that enhanced learning will take place. HAL was compared to Lecture in a 127-student, 300-level Chemical Engineering (CHEN) class and assessed through multiple-choice quizzes and survey questions based on the Seven Principles for Good Practice. Follow-up faculty interviews were conducted to explore additional impact related to the introduction of HAL. For side-by-side comparison of the two pedagogies the class was split into two groups. These studies revealed there was significant but equal improvement in conceptual understanding for both the HAL (n = 59) and Lecture (n = 68) groups. However, surveys reveal HAL is in better alignment with Principles for Good Practice in undergraduate education. Faculty interviews add supportive evidence that students who experience the new pedagogy do better than those who do not. There is also an apparent spread effect suggesting that the introduction of cooperative learning strategies influenced faculty teaching and student learning behaviors. Also, the DLM device has features that encourage its adoption such as fast response, portability, and suitability for interfacing with a student group. The introduction of HAL pedagogy has important implications and holds strong promise in challenged learning environments as found in Nigeria. The DLM is found to be well suited for this environment.

Abdullah, N. A. G., Beh, S. C., Tahir, M. M., Ani, A. I. C. & Tawil, N. M. (2011). Architecture design studio culture and learning spaces: a holistic approach to the design and planning of learning facilities. *3rd World Conference on Educational Sciences. Procedia Social and Behavioral Sciences* ISBN 1877-0428

Defining a culture is never an easy task, more so to define the culture of a design studio make out of individualistic and dynamic mind. It is through the students, that each architecture school and architecture program developed their distinct culture. In Malaysia, like other country, the discipline of architecture takes great pride in the diversity of its program and teaching pedagogies. The studio model has its own culture and values that are as influential in a student's education as the actual projects they complete. In many cases, the habits and patterns exhibited in this culture are not the intentional product, but a by-product. These by-products can be very positive, but they can also produce harmful results. Many scholars, like Thomas Dutton and Kathryn Anthony, have called the consequences of this culture the "hidden curriculum" of studio learning. In simple terms, the hidden curriculum refers to those unstated values, attitudes, and norms that stem from the

social relations of the school and classroom as well as the content of the course (Dutton, 1991). Academically, architecture is in fact itself pedagogy and each building have their own embedded hidden curriculum that can greatly influence and affect learning process. However, the problem is teaching has been wrongly assumed to take place in buildings and neglected the other experience in which learning can be experienced. The built environment and the landscape can be a powerful tool of learning, in this regard the campus as a whole should be regarded as a place where learning occurs. This paper reviewed the studies of the possible design approach in planning and design architecture design studio learning spaces.

Abdulwahed, M., & Nagy, Z. K. (2011a). The TriLab and ilough-Lab portal - Systematic evaluation of the use of remote and virtual laboratories in engineering education. In E. N. Pistikopoulos, M. C. Georgiadis & A. C. Kokossis (Eds.), *21st European Symposium on Computer Aided Process Engineering* (Vol. 29, pp. 1110-1114).

This paper reports on our experience in the last three years of enhancing laboratory education at the Chemical Engineering Department of Loughborough University. Computer aided tools (virtual and remote labs) have been designed to support the hands-on teaching and learning of process engineering. Furthermore, pedagogically informed utilization has been investigated and novel models were developed, namely the TriLab and Abdulwahed-Nagy Constructivist Laboratory models. A dedicated website called the iLough-Lab has been set up.

Abdulwahed, M., & Nagy, Z. K. (2011b). The TriLab, a novel ICT based triple access mode laboratory education model. *Computers & Education*, 56(1), 262-274. doi: 10.1016/j.compedu.2010.07.023

This paper introduces a novel model of laboratory education, namely the TriLab. The model is based on recent advances in ICT and implements a three access modes to the laboratory experience (virtual, hands-on and remote) in one software package. A review of the three modes is provided with highlights of advantages and disadvantages of each mode. It is shown that recent literature on laboratory education recommends hybrid structures. Some literature has reported on the use of two modes hybrid structures, however, it is seldom reported to have triple access mode laboratory. This paper is probably the first to report empirical findings of using the three components together. The virtual component of the TriLab has been mainly used in a preparation session for undergraduate students, while the remote component has been mainly used for demonstrating theory applicability in postgraduate courses. The empirical findings shows clearly the positive impact of the hybrid approach on students learning and motivation, these are discussed in light of pedagogical and cognitive psychology theories. (C) 2010 Elsevier Ltd. All rights reserved.

Abedi, M. & Badragheh, A. (2011). Andragogy implications and differences with children education *Life Science Journal-Acta Zhengzhou University Overseas Edition* 8(2): 421-425

Teaching adults can be very challenging, but also very rewarding. Most teachers would agree that the benefits from a successful adult education program in agriculture far outweigh the costs. In addition to the direct benefits to adult participants, the teacher, the school, the community, and the secondary program also benefit from a quality adult education program in agriculture. Adults in agriculture use a number of sources to gain new information that can be used to help them solve problems. Persons employed in agriculture utilize newspapers, magazines, newsletters, radio, television, government publications, internet, and meetings to gather information which can be directly utilized in their business activities. In many communities, the agriculture teacher is the primary sources of agricultural information.

Abedi, M. & Badragheh, A. (2011). Adult Learning and the related requirements  
*Life Science Journal-Acta Zhengzhou University Overseas Edition* 8(2): 507-513

Adults learn most effectively when they have an inner motivation to develop a new skill or gain new knowledge. They resist learning material if it is forced on them, or if the only reason given is that the material will, in some vague way, be "good for them to know." Adults need to know why they are being asked to learn something; and they definitely will want to know what the benefits will be before they begin learning. This means the best motivators for adult learners are explicit interest and self benefit. If they can be shown that the program will benefit them pragmatically and practically, they will learn better, and the benefits will be much longer lasting. Typical motivations include a desire for better handling of personal money matters, say in retirement, wanting a new or first job, promotion, job enrichment, a need to reinforce old skills in say, handling credit or learn new ones, a need to adapt to community changes such as on-line banking and so on. Remember the tone of the program should be motivating. Your program should employ methodologies so that your trainers establish a friendly, open atmosphere that shows the participants they will help them learn rather than present as 'experts' imparting knowledge. .

Abedi, M. & Badragheh, A. (2011). Different aspects of adult learning principles. *Life Science Journal*. 2011; 8(2): 540-546] (ISSN: 1097-8135). [ttp://www.lifesciencesite.com](http://www.lifesciencesite.com).

Learners must retain what the program delivers to them in order to benefit from the learning. In order for participants to retain the information taught, they must see a meaning or purpose for that information. They must also understand and be able to interpret and apply the information in their own real life contexts. Understanding includes their ability to assign the correct degree of importance to the material and its application in the future. The amount of retention is always directly affected by the degree of original learning. In other words if the learners did not learn the material well initially, they will not retain it well either. Retention by the participants is directly affected by their amount of practice during the learning. After the students demonstrate they can apply new financial skills, they should be urged to practice in their own time and for their own personal needs to retain and maintain the desired performance.

Ackermann, F., Andersen, D. F., Eden, C., & Richardson, G. P. (2011). ScriptsMap: A tool for designing multi-method policy-making workshops. *Omega-International Journal of Management Science*, 39(4), 427-434. doi: 10.1016/j.omega.2010.09.008

This paper reports on the development and structure of a framework - ScriptsMap - intended to facilitate the design of mixed method policy-making workshops. The ScriptsMap framework aims to provide a means of articulating and combining activities (which a script specifies) from two or more methods so that a facilitator or group facilitation team can construct, with the framework's aid, a thoughtful and careful design for a workshop. To provide an example of the framework, the combination of system dynamics group model building and group problem structuring incorporating causal mapping with the use of a Group Support System is used. The paper will illustrate ScriptsMap's structure through an example of the use of the framework in practice. (C) 2010 Elsevier Ltd. All rights reserved.

Ahmadov, A. (2011). When Great Minds Don't Think Alike: Using Mock Trials in Teaching Political Thought. *Ps-Political Science & Politics*, 44(3), 625-628. doi: 10.1017/s1049096511000722\*

This article examines a mock trial I have developed and used in teaching the history of political thought. Mock trials have been underused but have great potential to become an effective and exciting tool for student learning in this area. In this mock trial, the plaintiff, defendant, attorneys, and witnesses are eminent political or economic thinkers or political leaders of the past. Active engagement in this mock trial helped my students immensely in gaining deeper insight into and a more nuanced understanding of the ideas of the thinker they represented, as well as enhancing their critical and analytical abilities and improving their research skills. As a teaching tool that is amenable to creative adaptation, a mock trial can be an engaging and effective exercise for delving into the history of political thought and making it more relevant.

Akbulut, Y., & Cardak, C. S. (2012). Adaptive educational hypermedia accommodating learning styles: A content analysis of publications from 2000 to 2011. *Computers & Education*, 58(2), 835-842. doi: 10.1016/j.compedu.2011.10.008\*

Implementing instructional interventions to accommodate learner differences has received considerable attention. Among these individual difference variables, the empirical evidence regarding the pedagogical value of learning styles has been questioned, but the research on the issue continues. Recent developments in Web-based implementations have led scholars to reconsider the learning style research in adaptive systems. The current study involved a content analysis of recent studies on adaptive educational hypermedia (AEH) which addressed learning styles. After an extensive search on electronic databases, seventy studies were selected and exposed to a document analysis. Study features were classified under several themes such as the research purposes, methodology, features of adaptive interventions and student modeling, and findings. The analysis revealed that the majority of studies proposed a framework or model for adaptivity whereas few studies addressed the effectiveness of learning style-based AEH. Scales were used for learning style identification more than automatic student modeling. One third

of the studies provided a framework without empirical evaluation with students. Findings on concrete learning outcomes were not strong enough: however, several studies revealed that suggested models influenced student satisfaction and success. Current trends, potential research gaps and implications were discussed.

Akcan, S. (2011). Analysis of Teacher Candidates' Learning Experiences in an "English Teaching Methods" Course. *Egitim Ve Bilim-Education and Science*, 36(162), 247-260.

This study examines the learning experiences of non-native pre-service teachers in an English language teaching methods course. The study investigates the effect of the learning experiences used in the course on the teacher candidates' opinions about language teaching methodology. The course employed various modes of learning, including peer teaching, video recordings that exemplify language teaching methodologies, discussions, written reflections, and a paper in which the teacher candidates explained their philosophy of teaching. The data were collected from the responses of teacher candidates who took the course in the fall semester of 2008-2009 at an English-medium university in Istanbul. The findings reveal the ways in which the teacher candidates engaged in various learning experiences and developed a perspective of second language teaching methodologies. The article describes various learning experiences and includes some written responses of teacher candidates who took the course.

Akili, W. (2011). On Implementation of Problem-Based Learning in Engineering Education: Thoughts, Strategies and Working Models. 2011 Frontiers in Education Conference ISBN 0190-5848 978-1-61284-469-5

This paper focuses on problem-based learning (PBL) in engineering programs, and argues that implementation of problem-based learning needs to be placed in a context and developed with careful consideration of the social, economic, and ethnic diversity of the student population and the university academic culture and prevailing norms. It includes a brief history, selected PBL models, strategies to infuse PBL in an engineering program, and suggestions for redesigning classes and courses to catalyze change in the classroom through student engagement. The paper examines and selects most suitable versions of PBL for potential adoption at the start, identifies essential elements of a well-structured learning strategy, and illustrates faculty role in implementing PBL. Proven methodologies and knowledge generated elsewhere, if and when properly adapted, should make it possible for institutions to devise their own PBL models that meet their classroom setting, objectives, and aspirations. The paper also addresses the potential difficulties that could arise during implementation of PBL, particularly when instructors are new to this instructional method.

Akrivou, K., Bourantas, D. & Mo Shenjiang, M. (2011). The Sound of Silence – A Space for Morality? The Role of Solitude for Ethical Decision Making. *Journal of Business Ethics*.\*

Building on research and measures on solitude, ethical leadership theories, and decision making literatures, we propose a conceptual model to better understand processes enabling ethical leadership neglected in the literature. The role of

solitude as antecedent is explored in this model, whereby its selective utilization focuses inner directionality toward growing authentic executive awareness as a moral person and a moral manager and allows an integration between inner and outer directionality toward ethical leadership and resulting decision-making processes that will have an impact on others' perceptions of leader authentic ethical leadership. Thus it is proposed that utilization of solitude positively predicts executive-level authentic ethical leadership action and in turn, ethical decision making perceived fairness and integrity. We also propose two moderators, strengthening the hypothesized (positive) association between solitude and ethical leadership; these are the executive's ability for moral reasoning and a motivation for socialized (as opposed to personalized) power.

Akrivou, K. & Bradbury-Huang, H. (2011 In Press) Executive Catalysts: Predicting Sustainable Organizational Performance amid Complex Demands. *Leadership Quarterly*. \*

We propose a conceptual model to better understand core capacities that equip some executives to be effective catalysts of organizational performance over time. Drawing on constructivist theory of ego development, we suggest that the combined effects of self differentiation/complexity and self-integration are individual level predictors of being an effective catalyst. We assert that capacity for meaning making at the individual level is a prerequisite for the type of sense giving that coordinates stakeholder actions. From coordinated action outstanding leadership performance becomes possible. We link our contribution with leadership theory on the importance of vision and complexity. We offer measures and propositions to support empirical testing. We also address directions and implications for further research with emphasis on how executives may develop these capacities

Aktas, N., de Bodt, E., & Roll, R. (2011). Serial acquirer bidding: An empirical test of the learning hypothesis. *Journal of Corporate Finance*, 17(1), 18-32. doi: 10.1016/j.jcorpfin.2010.07.002

Recent academic studies indicate that acquirers' cumulative abnormal returns (CAR) decline from deal to deal in acquisition programs. Does this pattern suggest hubristic CEO behaviors are significant enough to influence average CAR patterns during acquisition programs? An alternative explanation is CEO learning. This study therefore tests for learning using successive acquisitions of large U.S. public targets undertaken by U.S. acquirers. A dynamic framework reveals that both rational and hubristic CEOs take on average investor reactions to their previous deals into account and adjust their bidding behavior accordingly. These results are consistent with a learning hypothesis. (C) 2010 Elsevier B.V. All rights reserved.

Alaoutinen, S., Heikkinen, K., & Porras, J. (2012). Experiences of learning styles in an intensive collaborative course. *International Journal of Technology and Design Education*, 22(1), 25-49. doi: 10.1007/s10798-010-9135-3\*

Computer science as a field requires curricular guidance, as new innovations are filtered into teaching its knowledge areas at a rapid pace. Furthermore, another trend is the growing number of students with different cultural backgrounds. These developments require taking into account both the differences in learning styles and teaching methods in practice in the development of curricular knowledge areas. In this paper, an intensive collaborative teaching concept, Code Camp, is utilized to illustrate the effect of learning styles on the success of a course. Code Camp teaching concept promotes collaborative learning and multiple skills and knowledge in a single course context. The results indicate that Code Camp as a concept is well liked, increases motivation to learn and is suitable for both intuitive and reflective learners. Furthermore, it appears to provide interesting creative challenges and pushes students to collaborate and work as a team. In particular, the concept also promotes intuition.

Alci, B. & Canca, D. (2011). Change of students' problem-solving appraisal in higher education according to gender. 3rd World Conference on Educational Sciences 15:3179-3184 ISBN 1877-0428

The purpose of this study is determining the effect of university education on students' problem-solving appraisal, including its difference according to gender. For this aim, 130 students were tested in the beginning and at the end of their undergraduate years. Findings reveal that while there is no significant difference in students' problem-solving appraisal points between their 1(st) and 4(th) years for the whole group and for the females, there is a significant positive difference for the males. This may be a result of the theory based instruction, variation of experiences, and differences in cognitive, physical, and social development. (C) 2011 Published by Elsevier Ltd.

Alcota, M., Munoz, A., & Gonzalez, F. E. (2011). Diverse and Participative Learning Methodologies: A Remedial Teaching Intervention for Low Marks Dental Students in Chile. *Journal of Dental Education*, 75(10), 1390-1395.

The purpose of this educational intervention was to diagnose the learning style of a group of low marks (i.e., grades) dental students in Chile and improve their academic achievement by means of remedial teaching. The intervention group was composed of ten students in endodontics and eleven in pedodontics with low marks. These two groups were mutually exclusive. The Kolb test of learning styles was applied to the low mark students group and to the rest of the class (n=72). Diverse methodologies were applied to the low marks students, such as seminars, case-based learning and problem-based learning, directed study, plenary discussions and debate, integration and questions, and web-based learning in an effort to cover all learning styles. Students' perceptions of the educational intervention were assessed by means of a questionnaire. The learning styles of the low marks group were mainly divergent (52.4 percent) and convergent (19 percent). Accommodators and assimilators were 14.3 percent each. The rest of the class showed a very distinct frequencies distribution: divergent 18 percent, convergent 20 percent, accommodators 28 percent, and assimilators 34 percent. After the educational intervention, the mean of the scores obtained by the



intervention group in formal evaluations was higher than the average scores obtained before the intervention for both courses. Students' perceptions of the activities were that they were effective for their learning process (76 percent) and that the teaching methodologies were useful mainly to clarify concepts and contents from both courses (82 percent). We can conclude that the use of diverse and participative teaching methodologies in a remedial teaching intervention, to cover all the different learning styles of the students, contributes to improve their marks in formal evaluations.

Alejos, A. V., Fernandez, J. A. G., Sanchez, M. G., & Cuinas, I. (2011). Innovative Experimental Approach of Learning-Through-Play Theory in Electrical Engineering. *International Journal of Engineering Education*, 27(3), 535-549.

In this paper we introduce an approach of play-based learning within electrical engineering. The proposed methodology tries to develop a play-based experience by two stages: firstly, the learning by doing theory will teach the 'rules of the game' and then, it is completed with a final practice that implements the rhetoric of the learning-through-play theory. Both techniques have resulted in positive learning outcomes by enhancing the student role in the learning process through increasing the motivation. An experimental play-based Wireless Sensor Network (WSN) platform is introduced as an aid in teaching location techniques based on RSSI (Received Signal Strength Indicator) in the frame of a radiolocation course at graduate level. The platform is implemented using low-cost commercial modules and one easy-to-use software program. We deepen in the layout challenges facing instructors in the frame of a play-based learning experience. So, we outline critical points as the teacher's role, the time constraint and the trade-off between actual advantages and efficiency. We propose also one method to correctly evaluate the cognitive and affective dimensions of the play-based settings by the development of a smart learning route chart that represents a study guidance indicating the flow expected for the objectives and its evaluation.

Alfes, C. M. (2011). Evaluating the Use of Simulation with Beginning Nursing Students. *Journal of Nursing Education*, 50(2), 89-93. doi: 10.3928/01484834-20101230-03

The purpose of this quasi-experimental study was to evaluate and compare the effectiveness of simulation versus a traditional skills laboratory method in promoting self-confidence and satisfaction with learning among beginning nursing students. A single convenience sample of 63 first-semester baccalaureate nursing students learning effective comfort care measures were recruited to compare the two teaching methods. Students participating in the simulation experience were statistically more confident than students participating in the traditional group. There was a slight, nonsignificant difference in satisfaction with learning between the two groups. Bivariate analysis revealed a significant positive relationship between self-confidence and satisfaction. Students in both groups reported higher levels of self-confidence following the learning experiences. Findings may influence the development of simulation experiences for beginning nursing students and encourage the implementation of simulation as a strand from beginning to end in nursing curricula.

Ali Badragheh and Mohammed Abedi. Application of distance learning in adult education. *Life Science Journal*. 2011;8(2):426-432] (ISSN:1097-8135).  
<http://www.lifesciencesite.com>.

There are two types of programs offered by distance education schools: synchronous learning programs and asynchronous learning programs. With synchronous learning, distance education students must log on to the school's website at a set time. Often, they interact with their peers and professors via group chats, web seminars, video conferencing, and phone call-ins. With asynchronous learning, distance education students complete all coursework on their own time. They often learn via assignment sheets, message boards, email, pre-recorded video lectures, mp3s, and traditional mail correspondence. Many students find that distance education courses give them the freedom to complete distance education degrees in a fraction of the time often required. Distance education courses also allow students to network with participants from all over nation. On the downside, distance education courses do not offer the face-to-face interaction found in traditional classrooms. Some students find that they struggle to stay motivated and meet deadlines due to the independent nature of distance education courses.

Ali Badragheh, Mohammad Abedi. Assessing of Ways to Strengthen Adult Education. *Life Science Journal*. 2011; 8(2): 514-519] (ISSN: 1097-8135).  
<http://www.lifesciencesite.com>.

Adult learners have a different approach to learning. By the time you reach adulthood, you're most likely responsible for your own success and you're perfectly capable of making your own decisions once you have the information you need. Adults learn best when learning is focused on them, not the teacher. This is called andragogy, the process of helping adults learn. Types of content and educational resources in various parts of adult curriculum materials motivational book, course materials, supplementary materials, track materials (continued) participatory form and materials. Incentives aimed at providing content that audiences are produced primarily to attract different groups of adults interested in design, so that their participation in learning programs are encouraged. Motivational training materials for learners and have great importance even in support of successful applications over learners, planners and executors for educational programs is important.

Ali Badragheh, Mohammad Abedi. Strengthen Adult Education: Methods and Procedures. *Life Science Journal*. 2011; 8(2): 547-552] (ISSN: 1097-8135).  
<http://www.lifesciencesite.com>.

Learning activities such as activities outside the classroom, dialogue, role playing and ... Another type of content is presented. duties are placed on the learner, a resource for developing knowledge, skills and insights he considered. Curriculum content only from the training provided to learners or not, but put together their learning through activities that can inform or does, skills and attitude to achieve. In this case, apart from learning that the essays taught learners directly to

sustainable and effective learning occurs in his. another way of providing content that is educational activities outside the learning environment possible for learning more and better enables adult learners. For example, hits, field trip experiences for learners or transfer is provided, develop knowledge, insight and skills they will. to ensure that science curriculum and educational aspects, according to community needs and audiences, application form is provided or not, the content selection criteria should be considered. These criteria is being include knowledge, effectiveness, flexibility, diversity, relevance and practical learning [

Alias, N. & Siraj, S. (2012). DESIGN AND DEVELOPMENT OF PHYSICS MODULE BASED ON LEARNING STYLE AND APPROPRIATE TECHNOLOGY BY EMPLOYING ISMAN INSTRUCTIONAL DESIGN MODEL. *Turkish Online Journal of Educational Technology* 11(4): 84-93

The study was aimed at designing and developing a Physics module based on learning style and appropriate technology in secondary educational setting by employing Isman Instructional Design Model and to test the effectiveness of the module. The paper draws attention to the design principles which employs Isman Instructional Design Model. The prototype module was tested among two teachers and 14 participants. The findings from interviews with the teachers and students show a positive response in Physics when their learning styles are matched with appropriate technology. In the evaluation phase, two instruments were used to collect data for this study. The pre-posttest designed to identify students' achievement score and Felder Silverman's Learning Style Inventory to measure students' learning style. Findings from evaluation of the module conducted among 120 participants involving 30 participants of each learning style (visual/verbal, active/reflective) suggested that the module is effective for visual, active, reflective and not for verbal learners. The researchers also compared the effectiveness of the module according to gender. The verbal and reflective modules were effective for female learners and not for male learners. The findings from this study suggest that Isman Instructional Design Model which pays attention to instruction from the learner perspective than from content perspective is suitable in designing and developing Physics module based on learning style and appropriate technology in secondary educational setting in Malaysia. The findings of this study is also hoped to provide insights to promote teaching and learning of Physics based on learning style and appropriate technology.

Aljojo, N., Adams, C., Saifuddin, H. & Alsehaimi, Z. (2011). Evaluating the Impact of an Arabic Version of an Adaptive Learning System Based on the Felder-Silverman's Learning Style Instrument. *Proceedings of the 10th European Conference on E-Learning*, Vols 1 and 2. 897-908 ISBN 978-1-908272-22-5

This paper presents an approach to integrate learning styles into adaptive e-learning hypermedia system and an approach to evaluate the impact of such a learning system. The main objective was to develop an adaptive e-learning system based on individual student's learning style, then to try and assess the effectiveness of the system on the students' learning. From a technical perspective, the system development involved the combination of SQL server

2005, SQL database and Active Server Pages were used to implement the system based on learning styles to present the appropriate subject matter, including the content, Teaching strategies and Electronic Media. The system was organized into 3 models; domain model, learner model and adaptation model. The 3 models interact together to perform adaptively. From an experiment design perspective, experiments involved applying using the system on two cohorts of students and evaluating the impact on learning achievement. Inferential statistics were applied to make inferences from the sample data to more general conditions. Descriptive statistics were applied simply to describe what's going on in the sample data. Results showed that students taught using learning style adaptive system performed significantly better in academic achievement ( $p < 0.05$ ) than students taught the same material without adaptation to learning style. Measuring the effect of providing educational experiences individualized to the learning style of the students is an open research issue: There are many potential influences on any learning achieved other than the adaptive learning system. This paper hopes to make contribution by presenting a case study of a dedicated adaptive educational system and providing guidance and discussion on both development issues and how to evaluate the effectiveness of an adaptive learning system. First, the adaptation logic, methods and techniques employed in the system, the Teacher Assisting and Subject Adaptive Material (TASAM), are briefly presented. Next, the validity and effectiveness of the system are assessed by means of an empirical evaluation approach, involving experiment with 53 undergraduate students of The 'Arts and Humanities' faculty at the King Abdul-Aziz University in Saudi Arabia. The results obtained (in terms of discusses the Final of the system using two different Arabic speaking groups with different use profiles of the system, performance, efficiency and satisfaction) are analyzed and discussed. This paper covers Test-Retest Reliability of student's first evaluation survey, Result of Student's First evaluation Survey and the final evaluation and assessment of the adaptive learning system by students. The findings support the use of learning styles as guideline for adaptation into the adaptive e-learning hypermedia systems. This paper provides discussion and guidance on how to evaluate the impact of adaptive learning systems. The overall results of the experimental study indicate a positive effect of adaptation to learning styles on the learning process.

Allen, E. S., Connelly, E. N., Morris, C. D., Elmer, P. J., & Zwickey, H. (2011). A TRAIN THE TRAINER MODEL FOR INTEGRATING EVIDENCE-BASED MEDICINE INTO A COMPLEMENTARY AND ALTERNATIVE MEDICINE TRAINING PROGRAM. *Explore-the Journal of Science and Healing*, 7(2), 88-93. doi: 10.1016/j.explore.2010.12.001

Background: Public interest in complementary and alternative medicine (CAM) has grown over the past decade, accompanied by increased demand for evidence-based approaches to CAM practice. In order to define the role evidence-based decision making has in CAM practice, CAM professionals must have a full understanding of evidence-based medicine (EBM) concepts. Objective: This paper describes the design, implementation, and evaluation of a week-long intensive EBM short course for CAM faculty at a naturopathic and classical

Chinese medicine institution. Intervention: This 20-hour course, entitled Principles of EBM for CAM Professionals, teaches participants how to access and appraise biomedical literature, apply it to their work, and teach these concepts to their students. Results: Results from precourse and postcourse evaluations suggest that, in a small group of participants, there were significant changes in EBM practice attitudes, self-appraised skills, and objectively assessed skills as a result of this course. Participants indicated they were committed to increasing their use of EBM in practice, enhancing EBM skills, using EBM in teaching, and working to change the culture at their institution to support use of EBM. At six months, 80% of participants had fully or partially followed through on their commitment to change plans.

Altinkurt, Y. & Yilmaz, K. (2012). Prospective science and mathematics teachers' computer anxiety and learning styles. *Energy Education Science and Technology Part B-Social and Educational Studies* 4(2):933-942

The purpose of this research is to investigate the impact of prospective teachers' computer anxiety and learning styles on computer anxiety. Survey model is used as the research method. The total number of participants consists of 195 prospective teachers who attend formation courses. Data is collected by "Computer Anxiety Scale" and "Kolb's Learning Style Inventory". The research findings show that prospective teachers with "accommodating" and "converging" learning style have lower anxiety levels, based on experiential learning, a component of "active Experimentation". The participants' views vary according to gender, major and personal computer ownership.

Alaoutinen, S., Heikkinen, K. & Porras, J. (2012). Experiences of learning styles in an intensive collaborative course. *International Journal of Technology and Design Education* 01/2012; 20(3).

**ABSTRACT:** Computer science as a field requires curricular guidance, as new innovations are filtered into teaching its knowledge areas at a rapid pace. Furthermore, another trend is the growing number of students with different cultural backgrounds. These developments require taking into account both the differences in learning styles and teaching methods in practice in the development of curricular knowledge areas. In this paper, an intensive collaborative teaching concept, Code Camp, is utilized to illustrate the effect of learning styles on the success of a course. Code Camp teaching concept promotes collaborative learning and multiple skills and knowledge in a single course context. The results indicate that Code Camp as a concept is well liked, increases motivation to learn and is suitable for both intuitive and reflective learners. Furthermore, it appears to provide interesting creative challenges and pushes students to collaborate and work as a team. In particular, the concept also promotes intuition.

Amend, E., Kay, L. & Reilly, R. C. (2012). Journalism on the Spot: Ethical Dilemmas When Covering Trauma and the Implications for Journalism Education. *Journal of Mass Media Ethics* 27(4): 235-247

When covering traumatic events, novice journalists frequently face situations they are rarely prepared to resolve. This paper highlights ethical dilemmas faced by journalists who participated in a focus group exploring the news media's trauma coverage. Major themes included professional obligations versus ethical responsibilities, journalists' perceived status and roles, permissible harms, and inexperience. Instructional classroom simulations based on experiential learning theory can bridge the gap between the theory of ethical trauma reporting and realities journalists face when covering events that are often chaotic and unpredictable by their very nature. A simulation outline that can be used by journalism instructors is provided.

Anderson, T. R., & Rogan, J. M. (2011). Bridging the Educational Research-Teaching Practice Gap CURRICULUM DEVELOPMENT, PART 1: COMPONENTS OF THE CURRICULUM AND INFLUENCES ON THE PROCESS OF CURRICULUM DESIGN. *Biochemistry and Molecular Biology Education*, 39(1), 68-76. doi: 10.1002/bmb.20470

This article summarizes the major components of curriculum design: vision, operationalization of the vision, design, and evaluation. It stresses that the relationship between these components is dynamic, and that the process of curriculum design does not proceed via a linear application of these components. The article then summarizes some of the major influences on curriculum design: policy, local context, societal expectations, research trends, and technology. Then, it provides examples of how these influences affect the design of a curriculum and ends with a comprehensive set of questions that instructors could use to guide their curriculum development process.

Andreu-Andres, M. A., & Garcia-Casas, M. (2011). Perceptions of Gaming as Experiential Learning by Engineering Students. *International Journal of Engineering Education*, 27(4), 795-804.

After defining the term game and its characteristics, this paper refers to the origins of games, and supports the idea of gaming as one of the techniques included in the simulation and gaming methodology endorsed by associations such as ISAGA, NASAGA, JASAG, ABSEL or SAGSET. Considering gaming as experiential learning this study offers the perceptions of forty seven engineering students in their third year of studies at the Universitat Politècnica de Valencia (Spain) regarding the use of games in different supports as part of their activities to gain knowledge in subjects of their degree program throughout a semester, to reinforce previously covered material, and to help learners develop problem-solving skills, communication and teamwork skills. A review of the advantages and drawbacks of using games leads us to carry out the statistical analysis of the answers to a survey concerning the use of gaming as a teaching-learning technique with these engineering students, the students' experience with games in different subjects attended before and during their university studies, and the students' perceptions on using games to learn or just for fun. The study of the relation among the variables analysed allows us to perceive the students' feelings regarding gaming as opposed to more conventional strategies. As a whole, engineering students

participating in the experiment back experiential learning and confirm that they learn and have fun when there is gaming in class activities.

Antle, A. N., Bevans, A., Tanenbaum, J., Seaborn, K., Wang, S., & Acm. (2011). *Futura: Design for Collaborative Learning and Game Play on a Multi-touch Digital Tabletop*.

This paper introduces a collaborative learning game called Futura: The Sustainable Futures Game, which is implemented on a custom multi-touch digital tabletop platform. The goal of the game is to work with other players to support a growing population as time passes while minimizing negative impact on the environment. The design-oriented research goal of the project is to explore the novel design space of collaborative, multi-touch tabletop games for learning. Our focus is on identifying and understanding key design factors of importance in creating opportunities for learning. We use four theoretical perspectives as lenses through which we conceptualize our design intentions and inform our analysis. These perspectives are: experiential learning, constructivist learning, collaborative learning, and game theory. In this paper we discuss design features that enable collaborative learning, present the results from two observational studies, and compare our findings to other guidelines in order to contribute to the growing body of empirically derived design guidelines for tangible, embodied and embedded interaction.

Aronson, L. (2011). Twelve tips for teaching reflection at all levels of medical education. *Medical Teacher*, 33(3), 200-205. doi: 10.3109/0142159x.2010.507714\*

Background: Review of studies published in medical education journals over the last decade reveals a diversity of pedagogical approaches and educational goals related to teaching reflection. Aim: The following tips outline an approach to the design, implementation, and evaluation of reflection in medical education. Method: The method is based on the available literature and the author's experience. They are organized in the sequence that an educator might use in developing a reflective activity. Results: The 12 tips provide guidance from conceptualization and structure of the reflective exercise to implementation and feedback and assessment. The final tip relates to the development of the faculty member's own reflective ability. Conclusion: With a better understanding of the conceptual frameworks underlying critical reflection and greater advance planning, medical educators will be able to create exercises and longitudinal curricula that not only enable greater learning from the experience being reflected upon but also develop reflective skills for life-long learning.

Aronson, L., Niehaus, B. Lindow, J., Robertson, P. A. & O'Sullivan, P. S. (2011). Development and pilot testing of a reflective learning guide for medical education. *Medical Teacher*. ISSN 0142-159X print/ISSN 1466-187X online/11/100515-7 \_ 2011 Informa UK Ltd. e515DOI: 10.3109/0142159X.2011.599894\*

Background: Reflection is increasingly incorporated into all levels of medical education but little is known about best practices for teaching and learning reflection. Aims: To develop a literature-based reflective learning guide for medical education and conduct a pilot study to determine whether (1) guide use

enhances medical students' reflective writing skills and (2) reflective scores correlate with participant demographics and satisfaction. Methods: Guide development consisted of literature review, needs assessment, single institution survey, and educational leader consensus. The pilot cohort study compared professionalism reflections written with and without the guide by third-year medical students on their core obstetrics and gynecology rotation. Reflections were scored using a previously validated rubric. A demographics and satisfaction survey examined effects of gender and satisfaction, as well as qualitative analysis of optional written comments. Analyses used independent t-tests and Pearson's correlations. Results: We developed a two-page, literature-based guide in clinical Subjective-Objective-Assessment-Plan (SOAP) note format. There was a statistically significant difference,  $p=0.001$ , in the reflection scores between groups, but no effects of gender or satisfaction. Student satisfaction with the guide varied widely. Conclusions: A single exposure to a literature-based guide to reflective learning improved written reflections by third-year medical students.

Arora, S., Ahmed, M., Paige, J., Nestel, D., Runnacles, J., Hull, L., Darzi, A. & Sevdalis, N. (2012). Objective Structured Assessment of Debriefing Bringing Science to the Art of Debriefing in Surgery. *Annals of Surgery* 256(6): 982-988

Objective: To identify the features of effective debriefing and to use this to develop and validate a tool for assessing such debriefings. Introduction: Simulation-based training has become an accepted means of surgical skill acquisition. A key component of this is debriefing-yet there is a paucity of research to guide best practice. Methods: Phase 1-Identification of best practice and tool development. A search of the Medline, Embase, PsycINFO, and ERIC databases identified current evidence on debriefing. End-user input was obtained through 33 semistructured interviews conducted with surgeons ( $n = 18$ ) and other operating room personnel ( $n = 15$ ) from 3 continents (UK, USA, Australia) using standardized qualitative methodology. An expert panel ( $n = 7$ ) combined the data to create the Objective Structured Assessment of Debriefing (OSAD) tool. Phase 2-Psychometric testing. OSAD was tested for feasibility, reliability, and validity by 2 independent assessors who rated 20 debriefings following high-fidelity simulations. Results: Phase 1: 28 reports on debriefing were retrieved from the literature. Key components of an effective debriefing identified from these reports and the 33 interviews included: approach to debriefing, learning environment, learner engagement, reaction, reflection, analysis, diagnosis of strengths and areas for improvement, and application to clinical practice. Phase 2: OSAD was feasible, reliable [inter-rater ICC (intraclass correlation coefficient) = 0.88, test-retest ICC = 0.90], and face and content valid (content validity index = 0.94). Conclusions: OSAD provides an evidence-based, end-user informed approach to debriefing in surgery. By quantifying the quality of a debriefing, OSAD has the potential to identify areas for improving practice and to optimize learning during simulation-based training.



Asadoorian, J., Schonwetter, D. J., & Lavigne, S. E. (2011). Developing Reflective Health Care Practitioners: Learning from Experience in Dental Hygiene Education. *Journal of Dental Education*, 75(4), 472-484.

Maintaining competence requires health care practitioners to remain current with research and implement practice changes. Having the capacity to reflect on practice experiences is a key skill, but reflective skills need to be taught and developed. This exploratory qualitative study examined the outcomes of a dental hygiene program requirement for developing reflective practitioners. Using a purposive convenience sample, students were solicited to participate in the study and submit reflective journals at the end of two terms. Eleven of twenty-six students participated in the study, providing sixty-four reflective entries that underwent qualitative thematic analysis. Using a reflective model, we identified themes, developed codes, and negotiated among ourselves to reach consensus. Results showed approximately two-thirds of the participants reached the central range as "reflectors" and most of the remaining fell within the lower range as "non-reflectors." We concluded that dental hygiene students reached similar levels of reflection to other groups and the triggers were varied, appropriate for early learners, and divided between positive and negative cues. However, the small sample represented less than one-half of the class, yielding a potentially biased sample. Therefore, we conclude that the findings provide a departure point for further research with a more cross-cutting sample in order to substantiate reflective educational requirements and validate these findings.

Ashford, S. J. & DeRue, D. S. (2012). Developing as a leader: The power of mindful engagement *Organizational Dynamics* 41(2): 146-154\*

Ashleigh, M., Ojiako, U., Chipulu, M., & Wang, J. K. (2012). Critical learning themes in project management education: Implications for blended learning. *International Journal of Project Management*, 30(2), 153-161. doi: 10.1016/j.ijproman.2011.05.002

This research examines the underlying reasons why students taking project management courses emphasise skills that are transferable and the utilisation of e-learning environments as critical to their learning experiences. Students' opinions are expressed through a series of focus groups. We found that the underlying reasons for students' emphasis on these two factors as crucial to learning and teaching project management could be classed under five higher-order themes. The implications of our findings are that in order to develop desired human, conceptual and technical skills, a teaching approach based on a blend of learning that resides at the intersection of the 'transferable skills' and 'e-learning environments' construct is required for the effective teaching of project management. For effectiveness, this blended form of andragogy (learning :Focused on adults) must be flexible enough to cater for the vast variations in the profiles of students, and their individual learning preferences. (C) 2011 Elsevier Ltd. PMA and IPMA. All rights reserved.

Auerbach, M., Kessler, D., & Foltin, J. C. (2011). Repetitive Pediatric Simulation Resuscitation Training. *Pediatric Emergency Care*, 27(1), 29-31. doi: 10.1097/PEC.0b013e3182043f3b

Objective: The objective of the study was to compare the effectiveness of repetitive pediatric simulation (RPS) training (scenario-debriefing-scenario) to standard pediatric simulation (STN) training (scenario-debriefing). Methods: Pediatric and emergency medicine residents prospectively participated in simulated pediatric resuscitation training sessions in an in situ simulation room. Residents anonymously reported their knowledge, skills, and confidence after each session. Four learners and 2 faculty preceptors (1 pediatric emergency medicine attending physician and 1 pediatric emergency medicine fellow) participated in each session. Scenarios were performed on a high-fidelity simulator (SimBaby; Laerdal Medical, Stavanger, Norway), and video debriefing was used for all training sessions. Standard pediatric simulation was used in the initial 6 months of the study, whereas RPS was used in the second 6 months of the study. Results: One hundred fifteen subjects completed simulation sessions during the study period. The RPS group reported higher overall debriefing quality and were more likely to report that the simulation session was an excellent method of teaching. The RPS group reported greater improvement in knowledge and skills than did the STN group. Similar scores were reported for confidence, overall performance, stress levels, and realism of the simulator in both the STN and RPS groups. Conclusions: Feedback is a key feature of effective medical simulation. Repetitive pediatric simulation provides learners with a discrete opportunity to apply the knowledge and skills discussed during debriefing in an immediate second simulation session and thereby complete Kolb's experiential learning cycle. In this study, the RPS debriefing format was associated with higher self-reported knowledge and skills. The RPS group reported more positive attitudes toward simulation than the STN group.

Avis, K. T., Lozano, D. J., White, M. L., Youngblood, A. Q., Zinkan, L., Niebauer, J. M., & Tofil, N. M. (2012). High-Fidelity Simulation Training for Sleep Technologists in a pediatric Sleep Disorders Center. *Journal of Clinical Sleep Medicine*, 8(1), 97-U115. doi: 10.5664/jcsm.1672

Study Objectives: Severe events of respiratory distress can be life threatening. Although rare in some outpatient settings, effective recognition and management are essential to improving outcomes. The value of high-fidelity simulation has not been assessed for sleep technologists (STs). We hypothesized that knowledge of and comfort level in managing emergent pediatric respiratory events would improve with this innovative method. Methods: We designed a course that utilized high-fidelity human patient simulators (HPS) and that focused on rapid pediatric assessment of young children in the first 5 minutes of an emergency. We assessed knowledge of and comfort with critical emergencies that STs may encounter in a pediatric sleep center utilizing a pre/post-test study design. Results: Ten STs enrolled in the study, and scores from the pre- and posttest were compared utilizing a paired samples t-test. Mean participant age was 42 +/- 11 years, with average of 9.3 +/- 3.3 years of ST experience but minimal experience

in managing an actual emergency. Average pretest score was 54% +/- 17% correct and improved to 69% +/- 16% after the educational intervention ( $p < 0.05$ ). Participant ratings indicated the course was a well-received, innovative educational methodology. Conclusions: A simulation course focusing on respiratory emergencies requiring basic life support skills during the first 5 min of distress can significantly improve the knowledge of STs. Simulation may provide a highly useful methodology for training STs in the management of rare life-threatening events.

Ayob, A., Hussain, A, Mustafa, M. M. & Shaarani, Mfas (2011). Nurturing Creativity and Innovative Thinking through Experiential Learning. In Rahmat, Raaok Osman, K. & Basri, H. *Kongres Pengajaran Dan Pembelajaran Ukm, 2010 18* ISBN 1877-0428

Engineering education in higher institutions as a whole continues to face many challenges despite the implementation of many teaching and learning approaches. The engineering profession requires both 'hands-on' experience and conceptual knowledge and therefore, experiential learning can be suitably used as a foundation for teaching and learning of engineering (Lynch and Russell 2009). Engineering study programmes involving certain skills and attributes that are not generally achieved in traditional delivery methods have been proven to be successfully implemented through experiential learning activities (Harrisberger 1976). This study is conducted to explore whether creativity and innovative thinking can be nurtured through experiential learning environment at university level. Creative approaches to solving problems lead to innovation in technology which is essential to fuel the economy (Roberts 2010). The study investigated how construct-based creativity models reflect creative behaviour through an experiential-based learning environment. The construct-based model used is by Torrance and Safter (Torrance and Safter 1999) by measuring students against a list of creativity attributes. The framework of the research involves five components namely field observations, focus group interviews, student questionnaires, creativity test and student portfolio assessments. Participants were students and instructors from the Faculty of Engineering and Built Environment and the Faculty of Information Science and Technology who participated in the Malaysian ROBOCON 2010. The ROBOCON 2010 is an annual international robot contest for undergraduate students of higher institutions. Initial findings suggest that students' creativity dimensions have been nurtured and enhanced as a result of the problem solving process involved in the experiential learning activities. The findings of this preliminary work will be used in future for more detailed study on nurturing creativity and innovation among students. This will be in line with the generic skill requirements among students of higher education institution in Malaysia.

## B

Backlund, P., Taylor, A. S. A., Carlen, U., Engstrom, H., Johannesson, M., Lebram, M. &

Toftedahl, M. (2011). Tactical Incident Commander - an Online Training Game for Incident Commander Training. In Gouscos, D. & Meimaris, M. (Eds.) *Proceedings of the 5th European Conference on Games Based Learning* 9-17 ISBN 978-1-908272-18-8

This paper presents an online training game for incident commanders to enact and create incident scenarios. The incident commander is the person in command on site when a rescue team is dispatched to a fire emergency. The challenge we are addressing in this work is to design a game and a game-based training process which can be used to support the change of work practice of fire fighters to become incident commanders (i.e. taking on a new professional role). The incident commander training game consists of two integrated parts: the IT artifact and the usage process. The two are integrated to provide necessary support for incident commander training via distance learning. The game is online and comprises three modules: The scenario player; the scenario creator, and; the log tool. The game and its pedagogical usage procedure are based on the theories of communities of practice and experiential learning. The novelty of this application lies in the combination of pedagogical theory and a specifically designed game. In comparison to other games for accident management training, the possibility for domain experts lacking of game design skills to create scenarios is an essential feature. Furthermore, the underlying fire simulation renders better "replayability" than a strictly branched scenario as the scenario creation is actually more of a process of setting conditions for the scenario than predicting each action of the player.

Bager, T. (2011). The camp model for entrepreneurship teaching. *International Entrepreneurship and Management Journal*. 7(2):279-296

Moving people from their normal work place or school environment to a camp site can be an efficient means for team building, creativity training and innovation boosting purposes. The camp model is increasingly used in the entrepreneurship education field as a supplement to classroom teaching. Some camps focus at the generation of ideas while others focus at the turning of ideas into concepts and rudimentary plans. By means of in-depth studies of three quite different camps, all demonstrating convincing results, the learning outcomes, pedagogies and principles for camps are identified and discussed.

Baillie, A. J., Proudfoot, H., Knight, R., Peters, L., Sweller, J., Schwartz, S., & Pachana, N. A. (2011). Teaching Methods to Complement Competencies in Reducing the "Junkyard" Curriculum in Clinical Psychology. *Australian Psychologist*, 46(2), 90-100. doi: 10.1111/j.1742-9544.2011.00036.x

This article aims to identify the most efficient ways to teach and learn the professional competencies required in clinical psychology. There are a wide variety of influences on clinical psychology curricula that leads to a lack of coherence in aims and methods. When clinical psychology trainees come face-to-face with their first client, they are challenged to integrate their existing declarative knowledge and apply nascent procedural skills. How can clinical programmes better prepare students for these challenges? Because problem-based learning has been widely applied in medical education it is the starting point in

answering this question. Systematic literature searches and a narrative literature review were undertaken to identify teaching methods. Little published research reports randomised controlled evaluations of teaching methods in health professions. Much literature presented opinions about teaching methods. Whole-of-programme evaluations of problem-based learning in medical education were retrieved and directed learning or direct instruction techniques were examined in teaching more specific knowledge. Little research was of direct relevance to clinical psychology training. More research is needed into both the efficacy of clinical psychology training and into the specific barriers that trainee clinical psychologists face. In the absence of good quality research, suggestions for teaching methods are provided.

Balan, C. & Ionita, D. (2011). EXPLORATORY RESEARCH ON THE ORGANIZATIONAL LEARNING IN SMALL ENTERPRISES AND IMPLICATIONS FOR THE ECONOMIC HIGHER EDUCATION. *Amfiteatru Economic* 13(30): 464-481

Learning is an issue of critical importance for small enterprises. The aim of this article is to explore the organizational learning processes of such enterprises, in order to identify the potential implications for the economic higher education. The topic is approached from a multi-fold perspective, at the interface among entrepreneurship, management and marketing. The article contributes to better understanding the processes, factors of influence and results of the organizational learning, by means of direct research based on the method of semi-structured interview. The research universe consisted in small enterprises within the services sector, from Bucharest. According to the research results, organizational learning is rudimentary, substantiated on the individual learning of the entrepreneur. Learning is experiential and the main outcomes are skills and concepts. Knowledge dissemination is deficient, the main flow being oriented only from entrepreneur to employees. The entrepreneur cannot control knowledge absorption but can evaluate and encourage it. The research revealed a relationship between learning and entrepreneurial orientation, according to which learning enhancement leads to innovation and opportunity identification. Following the research results, suggestions for future research and conclusions relative to the implications on economic higher education were formulated.

Baker, M. A. (2012). *The effect of Kolb's experiential learning model on successful secondary student intelligence and student motivation*. Ph. D. Dissertation. Oklahoma State University\*

Baker, M. A., Robinson, J. S. & Kolb D. A. (2012). Practical implications for the experiential learning theory in agricultural education: A conversation with Dr. David A. Kolb. Paper presented at the 2011 Southern Region AAAE conference and submitted to *Journal of Agricultural Education*\*

Experiential learning has been a foundational tenant of agricultural education since its inception. However, the theory of experiential education has received limited attention in the permanent agricultural education literature base. As such, this philosophical manuscript examined Kolb's experiential learning process

further, and considered the implications for experiential learning theory (ELT) in secondary agricultural education. Specifically, the researchers outlined Kolb's ELT and conducted a telephone interview with Dr. David A. Kolb. Analysis of the interview indicated that experiential learning is a critical component of a comprehensive agricultural education model (i.e., three-circle model). It was explained that experiential learning builds meta-cognitive skills and can be goal-oriented and assessed. However, agricultural educators must be present and purposeful when providing experiences for students. Additionally, they must ask reflection questions (e.g., "What happened?" "Now what?" "So what?") during each phase of ELT throughout the comprehensive agricultural education model (i.e., classroom and laboratory, Supervised Agricultural Experience [SAE], and FFA). Based on these conclusions, an enriched model of agricultural education was proposed to include the role of experiential learning more intentionally.

Baker, M. A., Robinson, J. S. & Kolb D. A. (2012). Aligning Kolb's Experiential Learning Theory with a Comprehensive Agricultural Education Model *Journal of Agricultural Education* Volume 53, Number 4, pp 1–16 DOI: 10.5032/jae.2012.04001\*

Experiential learning has been a foundational tenant of agricultural education since its inception. However, the theory of experiential education has received limited attention in the permanent agricultural education literature base. As such, this philosophical manuscript examined Kolb's experiential learning process further, and considered the implications for experiential learning theory (ELT) in secondary agricultural education. Specifically, the researchers outlined Kolb's ELT and conducted a telephone interview with Dr. David A. Kolb. Analysis of the interview indicated that experiential learning is a critical component of a comprehensive agricultural education model (i.e., three-circle model). It was explained that experiential learning builds meta-cognitive skills and can be goal-oriented and assessed. However, agricultural educators must be present and purposeful when providing experiences for students. Additionally, they must ask reflection questions (e.g., "What happened?" "Now what?" "So what?") during each phase of ELT throughout the comprehensive agricultural education model (i.e., classroom and laboratory, Supervised Agricultural Experience [SAE], and FFA). Based on these conclusions, a Comprehensive Model for Secondary Agricultural Education was proposed to include the role of experiential learning more intentionally.

Baker, M. A., Brown, N. R., Blackburn, J. J. & Robinson, J. S. (2011). Effects of the Order of Abstraction and Type of Reflection on Content Knowledge When Teaching Experientially: An Exploratory Experiment Unpublished paper Oklahoma State University.

The purpose of this experimental study was to determine the effects of order of abstraction and type of reflection on student knowledge acquisition. Students were assigned randomly to one of four treatment combinations in the completely randomized 2x2 design which included either abstraction prior to, or after an experience, and either reflection-in-action or reflection-on-action. A Lab-Aids® inquiry-based kit centered on the principles of biofuels served as the content for

the treatment. The findings of this study indicate that order of abstraction does not have a statistically significant effect on knowledge acquisition scores, but that reflection-in-action did have a statistically significant effect on the increasing students' knowledge of the selected biofuel concepts. It is recommended that teachers, at both the secondary and university level, focus on effective strategies of reflection-in-action to draw deeper, more enduring learning from students' experiences in agricultural education. The study was exploratory in nature, and recommendations were given in regards to full-scale replications of the study.

Baker, M. A. & Robinson, J. S. (2011). Should This Rightfully Be Called Education? – The Application of Kolb's Experiential Learning Model in Agricultural Education. *The Agriculture Education Magazine*. Jan/Feb 2011: 9-11\*

Ballantyne, R., & Packer, J. (2011). Using tourism free-choice learning experiences to promote environmentally sustainable behaviour: the role of post-visit 'action resources'. *Environmental Education Research*, 17(2), 201-215. doi: 10.1080/13504622.2010.530645

This paper argues the need for the providers of ecotourism and other free-choice environmental learning experiences to promote the adoption of environmentally sustainable actions beyond their own sites, when visitors return to their home environments. Previous research indicates that although visitors often leave such experiences with a heightened awareness of conservation issues and intentions to adopt environmentally responsible behaviours, only a minority translate these intentions into real actions. Building on research and theory in relation to visitor experiences in free-choice learning environments, the paper identifies three different stages in the educational process and proposes a strategy for facilitating the translation of visitors' behavioural intentions into the adoption of sustainable actions through the provision of post-visit action resources.

Ballantyne, R., Packer, J., & Sutherland, L. A. (2011). Visitors' memories of wildlife tourism: Implications for the design of powerful interpretive experiences. *Tourism Management*, 32(4), 770-779. doi: 10.1016/j.tourman.2010.06.012

One of the aims of wildlife tourism is to educate visitors about the threats facing wildlife in general, and the actions needed to protect the environment and maintain biodiversity. To identify effective strategies to achieve this aim, this paper examines participants' memories of their wildlife tourism experiences and explores processes through which such experiences can lead to long-term changes in conservation behaviour. Findings are based on 240 visitors' extended open-ended responses to a follow-up web survey administered approximately four months after a visit to one of four marine-based wildlife tourism venues in Southeast Queensland. Qualitative analysis revealed four levels of visitor response to the experience, implying a process involving what visitors actually saw and heard (sensory impressions), what they felt (emotional affinity), thought (reflective response), and finally what they did about it (behavioural response). Recommendations are provided for ways tourism managers and wildlife interpreters can maintain and strengthen these dimensions of memorable

experiences in order to enhance visitor satisfaction and encourage visitors' long-term adoption of environmentally sustainable practices.

Barber, J. P. (2012). Integration of Learning: A Grounded Theory Analysis of College Students' Learning *American Educational Research Journal* 49(3): 590-617

This article presents a grounded theory of "integration of learning" among traditional aged college students, which is characterized by the demonstrated ability to link various skills and knowledge learned in a variety of contexts. The author analyzed 194 interviews with students at liberal arts colleges to investigate empirically the ways undergraduates bring knowledge and experiences together so that educators might be able to more intentionally promote the integration of learning. Three distinct types of integration of learning emerged during analysis: (a) connection, the discovery of a similarity between ideas that themselves remain distinctive; (b) application, the use of knowledge from one context in another; and (c) synthesis, the creation of new knowledge by combining insights.

Barrutia, J. M & Echebarria, C. (2011). An Evolutionary View of Policy Network Management. *European Planning Studies* 19(3):379-401

This paper examines successful policy network (henceforth PN) practices in the Basque Country over an 18-year period, in relation to Cluster Associations, Quality Promotion and Local Agenda 21 Promotion. Basing our work on the Basque experience and on previous multi-disciplinary knowledge regarding learning processes, networking management and marketing, we contribute new insights that help to understand how PN management evolves. The need to analyse PN from an evolutionary perspective has been pinpointed by the various traditions of network research as one of the main gaps in the study of networking. Our research shows that expertise in PN management is generated through a long, performance-oriented dilemma-solving process that takes place in time and space. The first experiences provide initial knowledge and absorptive capacity, both of which improve through new and diverse experiences of increasing complexity. Step by step, a quantity of tacit and codified knowledge is created and shared, mainly through face-to-face contact, within the territory. Finally, the knowledge achieved is substantially similar to the normative knowledge that, though sparse, can be found in various networking literatures and needs to be brought together. But we also suggest that more emphasis on PN marketing is needed.

Barth, M., & Rieckmann, M. (2012). Academic staff development as a catalyst for curriculum change towards education for sustainable development: an output perspective. *Journal of Cleaner Production*, 26, 28-36. doi: 10.1016/j.jclepro.2011.12.011

Implementing education for sustainable development (ESD) in university curricula poses a new challenge to the academic system. In recent years many universities have undertaken activities towards its implementation and numerous case studies of such processes have been documented. However, it remains a great challenge to change university curricula in such a way that they are transformed into 'built-in' sustainability. How then can deep-rooted implementation be facilitated? It has been argued that learning processes which can enable transformative changes largely depend on academic staff and their capabilities



and willingness to support such processes. Although there are only few examples that focus on academic staff in higher education as a starting point to bring about change, research indicates promising opportunities to do so. In this context this article describes the case of an academic staff development programme which was implemented at the Universidad Tecnica del Norte (Ecuador) and analyses the extent to which such a programme has positive effects on transformative changes towards a sustainable university. The analysis of the programme shows that it not only facilitated the personal competence development of the participating academic staff and changed their teaching practice, but also that it influenced the general organisational development of the university. The results of this case study thus highlight the potential benefits of ESD academic staff development programmes in terms of their relevance for initiating individual learning processes as well as for facilitating social learning and, in this respect, confirm the idea that the competence development of academic staff is an essential prerequisite for a sustainability paradigm shift in higher education. (C) 2011 Elsevier Ltd. All rights reserved.

Bather, M. (2011). Students' views on their education and the future. *Proceedings of the Institution of Civil Engineers-Municipal Engineer* 164(4):209-219

Today's students are tomorrow's civil engineers. If today's pace of change continues then they will face many new challenges. How do they prepare for an uncertain future? Along with industry, the professional bodies and academia, students are important stakeholders in the provision of civil engineering degree courses. It is right that their views should be known. Research was undertaken with civil engineering students from the final and penultimate years of the University of Bolton BSc(Hons) degree course using small discussion groups and mini focus groups. The results of this small-scale research are interesting and raise questions about, firstly, the immense benefits of practical experience for students undertaking degree courses and, secondly, the direction and management of the lifelong learning of all professional engineers (particularly in support of younger engineers). The key benefit of this work is the chance for policy makers to briefly see the world of civil engineering education through the eyes of undergraduate students from a modern university in a northern working town.

Bauerle, T. L. & Park, T. D. (2012). Experiential Learning Enhances Student Knowledge Retention in the Plant Sciences *Horttechnology* 22(5): 715-718

Experiential learning can be an important part of an undergraduate curriculum in the sciences. A new course, The Nature of Plants, was developed to provide students across a broad range of majors with an in-depth study of plant science both basic and applied. The course was enriched by using a local natural area as an informal learning environment. We examined whether experiential learning improved homework scores among students who participated in a field trip by asking if simply attending the field trip increased the homework score or if participation in the tree climbing exercise had any additional benefit. Our results show participating in a field trip experience when coupled with a homework assignment increased student homework scores. Moreover, the tree climbing

portion of the field trip increased homework scores particularly for students not in a science major. This research supports experiential learning and the value of field trips within science courses focused on a comprehensive exploration of plants.

Baum, J. R., Bird, B. J. & Singh, S. (2011). THE PRACTICAL INTELLIGENCE OF ENTREPRENEURS: ANTECEDENTS AND A LINK WITH NEW VENTURE GROWTH. *PERSONNEL PSYCHOLOGY*. 64: 397–425\*

We draw upon cognitive psychology and social cognition theories to develop a model of practical intelligence, its antecedents, and its role in the early growth phase of entrepreneurship. The model was tested through interviews with 22 printing industry CEOs and responses from 283 founders of early-stage printing and graphics businesses. Related venture and industry experience and 2 learning orientations interacted to predict practical intelligence. In turn, practical intelligence interacted with growth goals to predict higher venture growth across 4 years.

Bayraktar, G. (2012). Effect of the jigsaw technique on the students attitudes to the course of physical education and basics of sports and on their academic accomplishments *Energy Education Science and Technology Part B-Social and Educational Studies* 4(4): 2445-2456

The objective of this study is to determine the effect of two different teaching methods (the traditional and the jigsaw technique) on the students' academic accomplishments in the course of Physical Education and Basics of Sports, and to find out the views of the students in the group exposed to the Jigsaw technique. This study was applied to 60 first-year students who were trained in at the Department of Physical Education and Sports Teaching in 2010-2011 academic year. The experimental group was taught with the Jigsaw Technique while the control group received the teacher-centered traditional teaching method. Learning Styles Inventory (LSI), Cognitive Field Achievement Test (CATBS), Attitude Scale (ASBS) and Students' View Questionnaire (SVQ) were used as the tools of gathering data. It was found out that the cooperative learning technique had a more positive effect on the academic accomplishments of the students and their

Bazan, D. (2011). The Use of Student-Directed Instruction by Middle School Band Teachers *Bulletin of the Council for Research in Music Education* 189:23-56

The purpose of this study was to describe the teaching and learning strategies demonstrated by middle school band teachers who reported a student-directed teaching style. This study used a two-stage mixed methods design prioritizing quantitative data analysis, but also collecting qualitative data in the second stage to provide a deeper perspective. In the first stage, quantitative data were gathered using a researcher-designed demographic questionnaire and Gumm's Music Teaching Style Inventory (MTSI) (2004b). From a sample of 122 middle school band teachers, 49 surveys were returned (40.2%). Stage I data were analyzed to determine participant teaching styles and examine relationships and differences among selected demographics and MTSI scores. In the second stage, three of the most student-directed band teachers were observed and videotaped during five

rehearsals each and interviewed. Videotapes, fieldnotes, and interviews provided insight into student-directed philosophies of band teachers and teaching strategies used in band programs.

Behncke, F. G. H., King, M. & Lindemann, U. (2011). Educational Game Concept for the Transfer of Results from the Transdisciplinary Research to the New Scientific Generation. *2011 Ieee International Conference on Industrial Engineering and Engineering Management* 457-461 ISBN 978-1-4577-0739-1

Transfer of knowledge through educational games is emphasized within the last decades to support the knowledge construction process, irrespective of the declining attention of the new scientific generation. With the research driven nature of founded projects at university, the challenge of knowledge transfer is even intensified by its specific and abstract character. This paper concentrates on the design of an educational game, which features entertainment and educational value at the same time in contrast to other approaches. Based on the presentation of educational and game objective, the game concept illustrates how results of transdisciplinary research can be transferred to the new scientific generation. Passing through the innovation process of a product-service-system of a fictitious company, the player accomplishes tasks, gaining a profound understanding of the innovation process, cycles within that process and the underlying methods. Therewith, the Cycle Labyrinth illustrates how abstract knowledge is imparted to the new scientific generation.

Bearman, M., O'Brien, R., Anthony, A., Civil, I., Flanagan, B., Jolly, B., . . . Nestel, D. (2012). Learning Surgical Communication, Leadership and Teamwork Through Simulation. *Journal of Surgical Education*, 69(2), 201-207. doi: 10.1016/j.jsurg.2011.07.014

**BACKGROUND:** In Australia and New Zealand, surgical trainees are expected to develop competencies across 9 domains. Although structured training is provided in several domains, there is little or no formal program for professionalism, communication, collaboration, and management and leadership. The Australian federal Department of Health and Aging funded a pilot course in simulation-based education to address these competencies for surgical trainees. This article describes the course and evaluation. **METHODS:** Course development: Content and methods drew on best-evidence for teaching and learning these competencies from other disciplines. Course evaluation: Participants completed surveys using rating scales and free text comments to identify aspects of the course that worked well and those that needed improvement. **RESULTS:** Eleven of 12 participants completed evaluation forms immediately after the course. Participants reported largely meeting learning objectives and valuing the educational methods. High levels of realism in simulations contributed to the ease with which participants immersed themselves in scenarios. **CONCLUSIONS:** This study demonstrates that a course designed to teach competencies in communication, teamwork, leadership, and the encompassing professionalism to surgical trainees is feasible. Although participants valued the content and methods, they identified areas for development. Limitations of the evaluation are highlighted, and further areas for

research are identified.

Beckman, S. L. & Barry, M. (2012). Teaching Students Problem Framing Skills with a Storytelling Metaphor *International Journal of Engineering Education* 28 (2): 364-373

In 1973, Horst Rittel and Melvin Webber introduced the term 'wicked problems' to describe problems characterized as volatile, uncertain, complex and ambiguous. Although that description has been around for some time, it has seen resurgence in the literature in the past few years with the increased recognition that the problems with which we grapple globally are indeed wicked. Framing of the problem is often the most difficult and important element of dealing with wicked problems, and yet much of our education system focuses on solving rather than framing problems. Recent interest in 'design thinking' focuses on problem framing, and provides a framework for teaching students the skills they need to do problem framing. This paper reports on an approach used to teaching problem framing, and in particular the skills needed to effectively engage in framing: empathy, insight recognition, thinking divergently, and learning through failure.

Bell, S., & Morse, S. (2011). Being, Engaging, Contextualizing and Managing Matrix-a Means for Nonspecialists to Assess Group Dynamics? *Systems Research and Behavioral Science*, 28(4), 319-339. doi: 10.1002/sres.1088

In April 1999, academics from the Systems Department at the Open University in UK devised a matrix for assessing third-level systems students-the matrix was based upon systemic practitioner behaviours taught in the course. It was based upon earlier methods that sought to understand and assess student progress based upon evidence of changing behavioural traits rather than the expression of learned responses or 'right' answers. This was the beginning of the being, engaging, contextualizing and managing (BECM) matrix. The European Union-funded research project called Policy Influence of Indicators (POINT) made use of BECM as part of a process for exploring ways in which groups make use of indicators in several domains. This paper tells the story of how BECM was used in the POINT project to gain an understanding of group behaviour by observation of four segregated but linked qualities. Copyright (C) 2011 John Wiley & Son.

Bellotti, F., Ott, M., Arnab, S., Berta, R., de Freitas, S., Kiili, K. & De Gloria, A. (2011). Designing Serious Games for Education: From Pedagogical Principles to Game Mechanisms. In Gouscos, D. & Meimaris, M. (Eds.,) *Proceedings of the 5th European Conference on Games Based Learning* 26-34 ISBN 978-1-908272-18-8

Serious Games represent an important opportunity for improving education thanks to their ability to compel players and to present realistic simulations of real-life situations. The scientific community is aware that we are just at the beginning of a proper use of gaming technologies for education and training and, in particular, there is a need for scientific and engineering methods for building games not only as more realistic simulations of the physical world, but as means that provide effective learning experiences. This requires an ever closer cooperation among the various actors involved in the overall SG life-chain, putting pedagogy in a central role, given the educational target of the SGs. This

paper addresses the till-now inadequate integration of educational and game design principles and proposes techniques, methods and mechanisms that allow designers with different background to dialogue among each other and to define games that are able to integrate - by design - entertainment and educational features. In particular, the paper follows a design path that starts from the definition of reference frameworks and then analyses the typical categories of design patterns, before focusing on the user-interaction modalities - seen from a pedagogical point of view - given their relevance for the end-users. In the end, we discuss the sandbox serious game model that looks suited to implement joint pedagogical and entertainment features. We believe that the indications provided in this paper can be useful for researchers and stakeholders to understand the typical issues in SG design and to get inspiration about possible solutions that take into account the need to implement tools that are effective both as an entertainment medium and as an education tool.

Benitez, D., Perez, D., Questier, F. & Zhu, C. (2011). Experiential Knowledge Creation Processes in the Higher Education Teaching-Learning Process. In Lehner, F. & Bredl, K. (Eds) *Proceedings of the 12th European Conference on Knowledge Management, Vols 1 and 2* 88-96 ISBN 978-1-908272-09-6

Higher education institutions, as knowledge-intensive organizations, produce huge volumes of knowledge through direct teaching-learning experiences. However, considering that the application of knowledge management in the higher education teaching-learning process is a relatively new area for this context, much of the knowledge produced is lost when stakeholders decide to leave. In order to contribute to the effective management of knowledge in this particular area, this paper presents a theoretical model of experiential knowledge creation processes in the higher education teaching-learning process. Building on the foundational works of Kolb, Nonaka, Wenger, Eraut and others, the model describes individual and group processes that underlie the creation of experiential knowledge through the transformation of teaching-learning objects of attention, as well as the enabling conditions that promote a more favorable climate for experiential knowledge creation in the HE teaching-learning process. In addition to this, we describe how the proposed theoretical model can serve as a useful framework for three main activities connected to innovation in higher education: (1) the design and implementation of teaching-learning approaches; (2) the development of information and communication technologies and; (3) the design and implementation of assessment measures and methods for academic programs.

Bentley, D. C. & Pang, S. C. (2012). Yoga asanas as an effective form of experiential learning when teaching musculoskeletal anatomy of the lower limb. *Anatomical Sciences Education* 5(5): 281-286\*

Physical movement as a conduit for experiential learning within the academic context of anatomy is a strategy currently used in university dance education. This same approach can be applied to other movement-based practices, for example, yoga. The primary purpose of this study was to pilot a novel teaching curriculum to yoga practitioners, based on Bruner's Theory of Instruction, which incorporated

the four adaptive modes of Kolb's Theory of Experiential Learning. The secondary purpose was to assess the applicability of anatomical knowledge within the participants' yoga practice. Following the development of a curriculum appropriate for a spectrum of academic backgrounds, participants were recruited to attend a 2-hour learning session within the Department of Anatomy at Queen's University in Kingston, Ontario, Canada. The learning session guided participants through the bones and muscles of the lower limb pertaining to five specific yoga poses. Based on participant feedback, the sessions were positively received and consistent. In addition, learning session participants were able to apply the anatomical information they were taught to their yoga practice 1-month later. Bruner and Kolb's independent theories on curriculum design and effective learning practice were successfully incorporated to create a 2-hour learning session. The potential use of experiential learning to compliment and/or enhance traditional didactic teaching in the academic context of anatomy should be further explored.

Beraza, M. A. Z. (2011). Practicum in higher education: state of the art. *Revista De Educacion*(354), 21-43.

As Practicum (post-graduate teacher education) is a central component of the new Higher Education curricula, the author analyses the state of the art, discussing seven focuses of concern in the development of experiential education in teacher training: a) the evolution of the name Practicum and its curricular implications; b) the base model of learning as a rationale for Practicum design and development; c) the prevalence of organizational over curricular considerations; d) the link between institutions and its impact on the Practicum syllabus; e) the need to go beyond the emotional component of Practicum; f) the need for learning networks and communities to share individual expertise; g) the need for further use of ICT in Practicum management, supervision and tutoring. The author concludes that the present challenge is to reach a deeper degree of integration between Practicum and the other components of the undergraduate curriculum.

Bergh, P., Thorgren, S. & Wincent, J. (2011). Entrepreneurs learning together: The importance of building trust for learning and exploiting business opportunities. *International Entrepreneurship and Management Journal* 7(1): 17-37

This longitudinal, qualitative case study examines trust-building processes and learning outcomes among entrepreneurs who participated in formal networks designed to develop competence and knowledge. This study is built on rich data collected through observation and video recordings made during network meetings and get-togethers. Additional data was gleaned from personal interviews with participating entrepreneurs. All data sources reveal on how trust develops and how entrepreneurs can use networks to learn and improve their capacity to exploit business opportunities. Studying how trust is built over time among entrepreneurs who demonstrate a low level of trust when they join the network, this study provides insights into micro-processes and important components of building trust. Findings suggest three processes that build commitment, companionship, and competence trust. Moreover, acknowledging the notion of

social learning, the findings suggest that when entrepreneurs build trust with one another they can experience cognitive, emotional, and social changes by participating in a network. This may bring potential consequences for their exploiting opportunities. Implications for academics and managers are discussed.

Bergero, C., Hargreaves, L., & Nichols, A. (2012). Collaborative Healthcare Immersive Learning Dynamic Transitioning to Simulation-Based Learning. *Clinical Nurse Specialist*, 26(1), 42-47. doi: 10.1097/NUR.0b013e31823bfacf

Purpose: This article describes an innovation representing a paradigm shift away from the traditional nursing skills fair passive method of learning toward a dynamic, immersive learning experience utilizing simulation. Background: There are many hospitals that review yearly competencies through a skills fair methodology. There is no evidence to support that this method of education and training has any direct correlation to better nursing care at the bedside, enhanced patient outcomes, or retained knowledge or skills. Description of the Innovation/Outcome: We describe the process of successfully transitioning from traditional skills fairs to simulation-based skills fairs called CHILD (Collaborative Healthcare Immersive Learning Dynamic). Implications: With this pioneering approach, institutions can reallocate funds and utilize simulation to more effectively provide education, training, and competency validation.

Bernard, A. W., Gorgas, D., Greenberger, S., Jacques, A. & Khandelwal, S. (2012) The Use of Reflection in Emergency Medicine Education. *Academic Emergency Medicine* 19(8): 978-982

Abstract Reflection is a cognitive process in which new information and experiences are integrated into existing knowledge structures and mental models, resulting in meaningful learning. Reflection often occurs after an experience is over, promoting professional development and lifelong learning. However, a reflective emergency physician (EP) is also able to apply reflection in real time: self-monitoring, coping with the unexpected, and quickly thinking on his or her feet to solve complicated, unique, and challenging clinical problems. Reflection is a skill that can be taught and developed in medical education. Evidence demonstrating the value of teaching reflection is emerging that substantiates longstanding educational theories. While a few educators have started to explore the use of reflection for emergency medicine (EM) learners, the potential for broader application exists. This review summarizes the literature regarding reflection in medical education and provides a basic primer for teaching reflection.

Bertacchini, F., Bilotta, E., Pantano, P. & Tavernise, A. (2012). Motivating the learning of science topics in secondary school: A constructivist edutainment setting for studying Chaos *Computers & Education* 59(4):1377-1386

In this paper, we present an Edutainment (education plus entertainment) secondary school setting based on the construction of artifacts and manipulation of virtual contents (images, sound, and music) connected to Chaos. This interactive learning environment also foresees the use of a virtual theatre, by

which students can manipulate 3D contents (parameterized models of expressive faces called "Talking Heads"), in order to realize a computer performance on the explanation of Chaos concepts. After an entry assessment of subjects' information on Chaos, 30 high school students aged between 16 and 18 have manipulated real and virtual objects related to Chua's circuit. Then they have written a script on Chaos topic, manipulated the Talking Heads for the realization of a virtual theatre performance, and filled a Chaos knowledge questionnaire and a motivation test. The control group (30 students) has attended traditional lessons on Chaos, and compiled the same tests. Results enhance the great potentiality of the realized setting for science education and motivation. In particular, very positive results in learning, as well as an increase of motivation linked to interest/enjoyment and competence, have been demonstrated.

Bertucci, A., Johnson, D. W., Johnson, R. T. & Conte, S. (2012). Influence of Group Processing on Achievement and Perception of Social and Academic Support in Elementary Inexperienced Cooperative Learning Groups *Journal of Educational Research* 105(5): 229-335

Sixty-one elementary school students who had never participated in cooperative learning lessons before were included in this study. Students were randomly assigned to the conditions of cooperative learning with and without group processing and participated to 5 instructional sessions during a period of approximately 15 instructional days. Results on achievement show that by the end of the study students assigned to group processing condition achieved higher than did students assigned to no processing condition. Results on perception of peer academic and personal support and teacher academic and personal support do not show significant differences between the experimental groups.

Bethell, S., & Morgan, K. (2011). Problem-based and experiential learning: Engaging students in an undergraduate physical education module. *Journal of Hospitality Leisure Sport & Tourism Education*, 10(1), 128-134. doi: 10.3794/johlste.101.365

The aim of this study was to employ a combined problem-based learning (PBL) and experiential learning theory (ELT) methodology as a means of engaging students on an undergraduate physical education (PE) and sport pedagogy module. Focus groups were conducted to investigate the students' and tutors' responses to the teaching approach. The results indicated that the method of teaching was associated with students feeling confident about their critical knowledge and understanding of contemporary issue in PE, their presentation and discussion skills, and a positive engagement with the module. Overall the approach was highly beneficial to the student learning experience.

Bethke-Langenegger, P., Mahler, P., & Staffelbach, B. (2011). Effectiveness of talent management strategies. *European Journal of International Management*, 5(5), 524-539.

This paper investigates the effects of different types of talent management strategies on organisational performance. We introduce four different strategies and show how they affect organisational performance. For this purpose, we use a particularly detailed dataset of 138 Swiss companies. We find that talent



management focusing on retaining and developing talents has a statistically significant positive impact on human resource outcomes such as job satisfaction, motivation, commitment and trust in leaders. Moreover, talent management practices with a strong focus on corporate strategy have a statistically higher significant impact on organisational outcomes such as company attractiveness, the achievement of business goals, customer satisfaction and, above all, corporate profit, more so than any other areas that talent management focuses upon.

Beyes, T., & Michels, C. (2011). The production of educational space: Heterotopia and the business university. *Management Learning*, 42(5), 521-536. doi: 10.1177/1350507611400001\*

This article responds to recent calls for rethinking management education and fostering a spatial understanding of educational practices. We propose to introduce Foucault's notion of heterotopic space and the spatial thought of Lefebvre into the debate about the current and future state of business schools. In particular, we conceptually and empirically discuss the potential for understanding space in a way that addresses its productive force, its multiplicity and its inherent contradictions. Using the example of an experimental teaching project dedicated to the conception and physical design of a city of the future, we reflect upon the possibility of the emergence of 'other', heterotopic spaces within an institution of management learning. Our findings suggest that spatial interventions facilitate critically affirmative engagement with the business school by offering an imaginative approach to management education.

Bhanji, F., Gottesman, R., de Grave, W., Steinert, Y., & Winer, L. R. (2012). The Retrospective Pre-Post: A Practical Method to Evaluate Learning from an Educational Program. *Academic Emergency Medicine*, 19(2), 189-194. doi: 10.1111/j.1553-2712.2011.01270.x

Objectives: Program evaluation remains a critical but underutilized step in medical education. This study compared traditional and retrospective prepost self-assessment methods to objective learning measures to assess which correlated better to actual learning. Methods: Forty-seven medical students participated in a 4-hour pediatric resuscitation course. They completed pre and post self-assessments on pediatric resuscitation and two distracter topics. Postcourse, students also retrospectively rated their understanding as it was precourse (the retrospective pre instrument). Changes in traditional and retrospective pre- to postcourse self-assessment measures were compared to an objectives-based multiple-choice exam. Results: The traditional pre to post self-assessment means showed an increase from 1.9 of 5 to 3.7 of 5 ( $p < 0.001$ ); the retrospective pre to post scores also increased from 1.9 of 5 to 3.7 of 5 ( $p < 0.001$ ). Although the group means were the same, individual participants demonstrated a response shift by either increasing or decreasing their traditional pre to retrospective pre scores. Scores on the 22-item objective multiple choice test also increased, from a median score of 13.0 to 18.0 ( $p < 0.001$ ). There was no correlation between the change in self-assessments and objective measures as demonstrated by a Spearman correlation of -0.02 and -0.13 for the traditional and retrospective prepost

methods, respectively. Students reported fewer changes on the two distracters using the retrospective prepost versus the traditional method (11 vs. 29).  
 Conclusions: Students were able to accurately identify, but not quantify, learning using either traditional or retrospective prepost self-assessment measures.  
 Retrospective prepost self-assessment was more accurate in excluding perceived change in understanding of subject matter that was not taught.

Bielefeldt, A. R., Dewoolkar, M. M., Caves, K. M., Berdanier, B. W., & Paterson, K. G. (2011). Diverse Models for Incorporating Service Projects into Engineering Capstone Design Courses. *International Journal of Engineering Education*, 27(6), 1206-1220.

There are a variety of ways in which service projects have been incorporated into senior engineering capstone design courses. Some of these experiences fulfill the rigorous definition of service-learning (SL) and others meet some but not all of the true SL requirements. Many students and faculty find service projects particularly motivating, and educational theory indicates that motivation is a crucial ingredient for higher-order learning. Different course models from civil, environmental, and biomedical engineering, ranging from a single semester to a full calendar year, are compared and contrasted. Most of these courses and/or service projects are optional capstone projects for students, but in other cases all students are required to complete service projects for the capstone design course. Reflection exercises are an important component of SL projects, and a variety of structured and semi-structured reflection exercises have been incorporated into these capstone design courses. Data indicate that service projects are effective at teaching students both a depth and breadth of technical and non-technical skills. SL projects may be particularly superior for increasing students' understanding of sustainability, cultural competency, and sense of civic responsibility. It is particularly difficult to balance educational outcomes for the students with benefits for the community/client partners in single semester courses. Projects for local communities or individuals seem to yield the most tangible results for partners in a one-semester time span, while international projects with a development focus offer an array of logistical and cultural challenges. The instructors must devote time and attention to developing relationships with partners in advance of the course and follow-up to help ensure optimal outcomes for the partners. The lessons learned from these courses may help others effectively incorporate service projects into their own capstone design courses.

Biggs, H., Breen, C., Slotow, R., Freitag, S., & Hockings, M. (2011). How assessment and reflection relate to more effective learning in adaptive management. *Koedoe*, 53(2). doi: 10.4102/koedoe.v53i2.1001

Assessment (an immediate evaluation of significance or performance) and reflection (a lengthy, deep consideration) should be important components of adaptive management leading to learning. In this paper we use a prototype adaptive cycle and feedback framework, which are related to some aspects of learning theory, to examine the extent to which assessment and reflection were applied in a series of studies and initiatives in the Kruger National Park. In addition to evaluating assessment and reflection, we also considered how the

various contributing components of each case were inter-related to provide a holistic view of each initiative. Two other studies in the Kruger National Park, which have examined learning specifically, are also discussed. One of them suggests that in a complex environment, learning necessarily has a dual nature, with each component of seven contrasting pairs of the aspects of learning in partial tension with the other. We use these dualities to further probe assessment, reflection, inter-relatedness and learning in the cases presented. Each contrasting aspect of a 'learning duality' turns out to emphasise either assessment or reflection, which reinforces the idea that both are needed to facilitate sufficient learning for successful adaptive management. We hope this analysis can act as a springboard for further study, practice and reflection on these important and often underrated components of adaptive management. Conservation implications: The better understanding of assessment and reflection as being largely separate but complementary actions will assist adaptive management practitioners to give explicit attention to both, and to relate them better to each other.

Biswas-Diener, R. & Patterson, L. (2011). An experiential approach to teaching positive psychology to undergraduates. *Journal of Positive Psychology* 6(6): 477-481

Positive psychology is not only a science, but an applied science as well. As such, the undergraduate classroom can act as a laboratory in which students can personally experience the interventions associated with this field. In this article, we argue that an experiential approach to teaching positive psychology is, potentially, the most impactful form of instruction for this subject. We provide examples of how to increase experiential learning including syllabus development, creating practical assignments, and using course relevant technology.

Blahus, R. (2011). Experiential Education as a Part of Human Development in Czech Republic Business Companies. In Despres, C. (Ed) *Proceedings of the 7th European Conference on Management Leadership and Governance* 467-476 ISBN 978-1-908272-16-4

For business companies, employees are undoubtedly one of the most important sources of competitive advantage. Due to the fact, that these companies understand much more how important knowledge, skills and quality of their people are, the importance of their systematic and efficient education and development is growing too. If it is well prepared, experiential education brings very efficient way to develop human resources. According to the results of David Kolb's research, participants could recall six times more information gained by communication, illustration and experience comparing to information gained only by communication and two times more information comparing to information gained by combination of communication and illustration. This efficiency is achieved primarily by direct involvement of participants in education process and by their own activity. Experience of the participant, developed from solving tasks and problems, is after finishing the activity analysed by targeted feedback supervised by lector. Main aim of this targeted feedback is to evaluate and generalize the gained experience to a form of practically usable knowledge. Very

high costs are a disadvantage of this very efficient education. Sometimes it is also very difficult for companies to define main goal of the program - what leads to vacuous use of experiential methods for amusing events - as rewards for employees and managers. The main aim of this paper is to refer about results of quantitative questionnaire research among Czech business companies from year 2011. This research is aimed at the range of experiential education in these companies. It also tries to find the answers to questions about purposes for which experiential education is used in them and what reasons lead them to use or not use it. Within this research framework, this paper shall identify specifics of Czech experiential education. It is very different from similar programs offered abroad. Lots of years, Czech Republic develops separately without any foreign influence and with specific nature conditions, which don't allow difficult expeditions in wild nature. But it starts formation of an unusual approach to experiential education. It is known as Czech Way now and it is a subject of interest for a lot of experiential education companies all over the world.

Bland, A. J., Topping, A., & Wood, B. (2011). A concept analysis of simulation as a learning strategy in the education of undergraduate nursing students. *Nurse Education Today*, 31(7), 664-670. doi: 10.1016/j.nedt.2010.10.013

Simulation is increasingly referred to in the nursing literature and its use in healthcare has developed dramatically over the past decade. Whilst the concept of simulation is not new, there is now a greater emphasis on its use in nurse education (Murray et al., 2008). The purpose of this article is to develop understanding and define the concept of simulated learning as a strategy used in the education of undergraduate nursing students. The analysis outlined in this paper was guided by a systematic process of studying a concept presented by Walker and Avant (2005). The analysis sought to identify how the concept of simulation is interpreted in the existing literature printed in English and retrieved from databases (Medline, CINAHL, PubMed, and Cochrane Library), internet search engines (GoogleScholar) and hand searches. The definition offered is a work in progress and presents a theoretically grounded understanding of what simulated learning currently represents. The identified antecedents, critical attributes and consequences are presented as a basis to stimulate further research, development and understanding. (C) 2010 Elsevier Ltd. All rights reserved.

Borredon, L., Deffayet, S., Baker, A. C. & Kolb, D. A. (2011). Enhancing deep learning: Lessons from the introduction of learning teams in management education in France. *Journal of Management Education* 35(3): 324-350\*

Drawing from the reflective teaching and learning practices recommended in influential publications on learning styles, experiential learning, deep learning, and dialogue, the authors tested the concept of “learning teams” in the framework of a Leadership program implemented for the first time in a top French management school (Grande Ecole).

Qualitative feedback and personal observations on the implementation and outcomes of using this new learning paradigm reveals that although the steps from teaching to learning initially tested for MBA students in the U.S.A are widely

accepted, there were unexpected obstacles and opportunities in setting up the model in France. Some of these differences can be attributed to culture, particularly to immensely different educational philosophies that shape attitudes and norms within French classrooms and to the notion of learning itself which is normalized by the social expectations of careers in management forged in French history.

This article provides the theoretical basis of the particular learning model tested, describes the conditions within which it was implemented in one French Grande Ecole, and describes unexpected obstacles and favorable outcomes of the teaching/learning experiences from a cross cultural perspective. The authors conclude with recommendations on implementing learning models across cultures.

Boet, S., Bould, M. D., Bruppacher, H. R., Desjardins, F., Chandra, D. B., & Naik, V. N. (2011). Looking in the mirror: Self-debriefing versus instructor debriefing for simulated crises. *Critical Care Medicine*, 39(6), 1377-1381. doi: 10.1097/CCM.0b013e31820eb8be

Objective: To examine the effectiveness of self-debriefing as compared to instructor debriefing in the change of nontechnical skills performance of anesthesiology residents. Design: Prospective, randomized, controlled study. Setting: A university hospital simulation center. Subjects: Fifty anesthesiology residents. Interventions: Subjects were instructed in the principles of non-technical skills for crisis management. Subsequently, each resident participated in a high-fidelity simulated anesthesia crisis scenario (pretest). Participants were randomized to either a video-assisted self-debriefing or instructor debriefing. In the self-debriefing group, subjects reviewed their pretest scenario by themselves, guided by the Anesthetists' Non-Technical Skills scale. The instructor debriefing group reviewed their pretest scenario guided by an expert instructor also using the Anesthetists' Non-Technical Skills scale as a framework. Immediately following their respective debriefings, subjects managed a second simulated crisis (post-test). Measurements and Main Results: After all data were collected, two blinded experts independently rated videos of all performances in a random order using the Anesthetists' Non-Technical Skills scale. Performance significantly improved from pretest to post-test ( $p < .01$ ) regardless of the type of debriefing received. There was no significant difference in the degree of improvement between self-debriefing and instructor debriefing ( $p = .58$ ). Conclusions: Nontechnical skills for crisis resource management improved with training, as measured by the Anesthetists' Non-Technical Skills scale. Crisis resource management can be taught, with measurable improvements. Effective teaching of nontechnical skills can be achieved through formative self-assessment even when instructors are not available. (Crit Care Med 2011; 39:1377-1381)

Bott, G., Mohide, E. A., & Lawlor, Y. (2011). A CLINICAL TEACHING TECHNIQUE FOR NURSE PRECEPTORS: THE FIVE MINUTE PRECEPTOR. *Journal of Professional Nursing*, 27(1), 35-42. doi: 10.1016/j.profnurs.2010.09.009

Although preceptorship is the leading approach to the clinical education of senior undergraduate nursing students in the westernized world, few specific nursing

preceptor-focused clinical teaching techniques are reported in the literature. One promising preceptor-specific teaching strategy is the Five Step "Microskills" Model of Clinical Teaching (J.O. Neher, K.C. Gordon, B. Meyer, & N. Stevens, 1992). This technique, also known as the One Minute Preceptor (OMP; J.O. Neher & N. Stevens, 2003), has been used for more than 15 years in clinical medical education. In this article, we trace the origins of the OMP and describe an adaptation to nursing education, referred to as the Five Minute Preceptor (5MP). The 5MP steps are the following: (1) get the student to take a stand, (2) probe for supporting evidence, (3) teach general rules, (4) reinforce the positives, and (5) correct errors or misinterpretations. In addition, we explore the relationship between the 5MP and experiential learning and provide a detailed example of the 5MP's use in undergraduate clinical nursing education. Recommendations are provided for the development of a 5MP educational package and the evaluation of the 5MP's use in baccalaureate nursing programs. (Index words: Preceptor; One Minute Preceptor; Clinical teaching methods; Undergraduate nursing education; Experiential learning) *J Prof Nurs* 27:35-42, 2011. (C) 2011 Elsevier Inc. All rights reserved.

Bowling, A. M. (2011). *THE EFFECT OF SIMULATION ON KNOWLEDGE, SELF-CONFIDENCE, AND SKILL PERFORMANCE*. Ph.D. Dissertation Case Western Reserve University School of Nursing.\*

The current research supports that utilizing simulation for nursing education will increase a student's knowledge and self-confidence, but there are only a handful of research studies that have looked at the effect of simulation on skill performance. The purpose of this study is to examine the effect of two educational interventions on measures of knowledge, self-confidence, and skill performance in junior level BSN nursing students. An asynchronous nonequivalent control group pretest posttest design will be used to examine and compare the effects of the two educational interventions, medium fidelity simulation and pencil-paper based case scenario, in a pediatric nursing course. The student's knowledge will be measured with a multiple choice test, self-confidence measured utilizing the Self-Confidence in Learning Using Simulations Scale, and skill-performance will be measured utilizing an objective structured clinical examination (OSCE). The OSCE has been routinely used in medicine to assess medical student's clinical abilities and is just beginning to be utilizing in nursing to assess student's ability to perform skills.

Breud, J., Chevallier, D., Benizri, E., Fournier, J. P., Carles, M., Delotte, J., . . . Benchimol, D. (2012). The place of simulation in the surgical resident curriculum. The pedagogic program of the Nice Medical School simulation center. *Journal of Visceral Surgery*, 149(1), E52-E60. doi: 10.1016/j.jviscsurg.2011.12.007

Introduction: Surgical training relies on medical school lectures, practical training in patient care and in the operating room including instruction in anatomy and experimental surgery. Training with different techniques of simulators can complete this. Simulator-based training, widely used in North America, can be applied to several aspects of surgical training without any risk for patients:

technical skills in both open and laparoscopic surgery, the notion of teamwork and the multidisciplinary management of acute medicosurgical situations. Method: We present the curriculum developed in the Simulation Center of the Medical School of Nice Sophia-Antipolis. All residents in training at the Medical School participate in this curriculum. Results: Each medical student is required to pursue theoretical training (familiarization with the operating room check-list), training in patient management using a high fidelity mannequin for various medical and surgical scenarios and training in technical gestures in open and laparoscopic surgery over a 2-year period, followed by an examination to validate all technical aptitudes. This curriculum has been approved and accredited by the prestigious American College of Surgeons, making this the first of its kind in France. Conclusion: As such, it should be considered as a model and, in accordance to the wishes of the French Surgical Academy, the first step toward the creation of true schools of surgery. (C) 2012 Elsevier Masson SAS. All rights reserved.

Bressmann, T., & Eriks-Brophy, A. (2012). Use of simulated patients for a student learning experience on managing difficult patient behaviour in speech-language pathology contexts. *International Journal of Speech-Language Pathology*, 14(2), 165-173. doi: 10.3109/17549507.2011.638727

A student learning experience about managing difficult patients in speech-language pathology is described. In 2006, 40 students participated in a daylong learning experience. The first part of the experience consisted of presentations and discussions of different scenarios of interpersonal difficulty. The theoretical introduction was followed by an active learning experience with simulated patients. A similar experience without the simulated patients was conducted for 45 students in 2010. Both years of students rated the experience with an overall grade and gave qualitative feedback. There was no significant difference between the overall grades given by the students in 2006 and 2010. The qualitative feedback indicated that the students valued the experience and that they felt it added to their learning and professional development. The students in 2006 also provided detailed feedback on the simulation activities. Students endorsed the experience and recommended that the learning experience be repeated for future students. However, the students in 2006 also commented that they had felt inadequately prepared for interacting with the simulated patients. A learning experience with simulated patients can add to students' learning. The inclusion of simulated patients can provide a different, but not automatically better, learning experience.

Brooks, C. A., Nelson, B. M. & Murrell, P. H. (2011). Personal and Professional Development for Judges: The Institute for Faculty Excellence *Journal of Adult Development* 18(3):135-143

This interview study describes the role that participation in the Institute for Faculty Excellence in Judicial Education (IFEJE) played in the personal and professional development of four judges. Judicial education is a relatively new field of adult and continuing professional education. There is limited literature

devoted to this area of study outside of the arena of substantive legal or judging topics. Interviews served as the primary data source for this study along with program evaluations, photographs, and e-mail correspondence from Institute participants. The findings revealed that the combined safe environment, challenges, and support participants experienced at the Institute and learning about adult learning helped them: feel less isolated in their work; stretch their normal work boundaries resulting in the completion of projects for which they had great passion; and benefited them as judges, supervisors, teachers, and in other social relationships.

Brown, J. O. (2011). Dwell in Possibility: PLAR and e-Portfolios in the Age of Information and Communication Technologies. *International Review of Research in Open and Distance Learning*, 12(1), 1-23

Emily Dickinson wrote, "I dwell in Possibility-A fairer House than Prose-More Numerous of Windows-Superior-for Doors" (Johnson, 1961, p. 657). Dickinson's simple yet profound reference to the expansive nature of poetry over prose may be taken as a metaphor for the possibilities of information and communication technologies (ICTs) over written modes of expression. Whether we identify with this analogy or not, what we can say today with some certainty is that the advent of ICTs has impacted prior learning assessment and recognition (PLAR) by expanding the potential for knowledge acquisition, expression, and delivery. The purpose of this article is to examine the potential of experiential learning e-portfolios to promote connections between several different types of learning academic, workplace, and web-based. The author contends that this type of PLAR enables undergraduate adult learners to not only articulate and equate experiential learning to academic knowledge but also, and most importantly, to demonstrate knowledge visually and audibly through the utilization of ICTs. Two pilot case studies of e-portfolio development are described to support the author's position.

Brower, H. H. (2011). Sustainable Development Through Service Learning: A Pedagogical Framework and Case Example in a Third World Context. *Academy of Management Learning & Education*, 10(1), 58-76.

Because of changes in awareness, student values, and social responsibility, universities have an increasing interest in developing meaningful courses on sustainable community development and social enterprise. I suggest that the nature of these courses and the complexity of the issues are best addressed using a service-learning pedagogical approach. Two faculty members and eight students spent 1 month studying and experiencing poverty, malnutrition, education with dire lack of resources, and other social dilemmas and explored how one brings sustainable change, owned by the indigenous community. This case example of a business elective about sustainable community development in a third world country serves to illustrate the framework for delivering such content. The unique characteristics of sustainable community development are integrated with the strengths of service learning into a framework that may be used by others who might develop similar courses. Drawing on both literatures, the framework



provides a powerful opportunity to experience the context in which development happens while learning the content.

Brown, J. (2011). Dwell in Possibility: PLAR and e-Portfolios in the Age of Information and Communication Technologies *International Review of Research in Open and Distance Learning* 12(1):1-23

Emily Dickinson wrote, "I dwell in Possibility-A fairer House than Prose-More Numerous of Windows-Superior-for Doors" (Johnson, 1961, p. 657). Dickinson's simple yet profound reference to the expansive nature of poetry over prose may be taken as a metaphor for the possibilities of information and communication technologies (ICTs) over written modes of expression. Whether we identify with this analogy or not, what we can say today with some certainty is that the advent of ICTs has impacted prior learning assessment and recognition (PLAR) by expanding the potential for knowledge acquisition, expression, and delivery. The purpose of this article is to examine the potential of experiential learning e-portfolios to promote connections between several different types of learning academic, workplace, and web-based. The author contends that this type of PLAR enables undergraduate adult learners to not only articulate and equate experiential learning to academic knowledge but also, and most importantly, to demonstrate knowledge visually and audibly through the utilization of ICTs. Two pilot case studies of e-portfolio development are described to support the author's position.

Buan, A. R., Monte, R. N., dela Cruz, J. S., & Salangsang, M. T. A. (2011). Preservation of Culture Heritage through Philippine Games. *Asia Life Sciences*, 20(2), 431-442.

Philippine games are part of our cultural heritage that was once popular but is now almost buried in oblivion. People have forgotten to play these games hence, most children have taken their value for granted as the social teaming process became broken. Children today engage in desktop or hand-held computer games instead of playing diverse array of traditional games. Displaced Philippine games, which serve as socio-historical markers mean less appreciation of our culture and its relationship with the environment-social and natural. The rationale of this study is to help in the appreciation, preservation and propagation of Philippine games. The traditional games are presented in a new light that could give the youth a renewed outlook on Philippine culture and environment consequently helps in preserving this important facet of Filipino daily lives.

Budeva, D., Kehaiova, M. & Petkus, E. (2012). Nationality as a determinant of learning style preferences: Comparing students from Bulgaria and USA. 2012 Marketing Educator's Association Annual Conference Proceedings, 228-230

[www.marketingeducators.org](http://www.marketingeducators.org) \*

Table 1 shows the learning style dimensions for the total sample and separately for Bulgarian and US marketing students.

Table 1: Learning Styles: Descriptive Statistics

Variable	Total Sample			Bulgarian Sample			US Sample		
	N of respondents	Mean	St. Dev.	N of respondents	Mean	St. Dev.	N of respondents	Mean	St. Dev.
CE	282	25.07	5.75	187	24.94	5.29	95	25.33	6.57
AC	282	32.89	6.41	187	33.43	5.68	95	31.82	7.57
AE	282	30.13	5.53	187	30.36	4.94	95	29.68	6.54
RO	281	31.18	6.05	186	30.17	5.53	95	33.17	6.56
AE_RO	281	-0.96	9.46	186	0.33	8.56	95	-3.48	10.6
AC_CE	282	7.82	9.96	187	8.5	8.76	95	6.49	11.9

Buykx, P., Kinsman, L., Cooper, S., McConnell-Henry, T., Cant, R., Endacott, R., & Scholes, J. (2011). FIRST(2)ACT: Educating nurses to identify patient deterioration - A theory-based model for best practice simulation education. *Nurse Education Today*, 31(7), 687-693. doi: 10.1016/j.nedt.2011.03.006

Delayed assessment and mismanagement of patient deterioration is a substantial problem for which educational preparation can have an impact. This paper describes the development of the FIRST(2)ACT simulation model based on well-established theory and contemporary empirical evidence. The model combines evidence-based elements of assessment, simulation, self-review and expert feedback, and has been tested in undergraduate nurses, student midwives and post-registration nurses. Participant evaluations indicated a high degree of satisfaction and substantial self-rated increases in knowledge, confidence and competence. This evidence-based model should be considered for both undergraduate and post-registration education programs.

## C

Cable, C., Chong, T. & Pratt, D. D. (2012). Teaching Plastic Surgery from Different Perspectives. *Plastic and Reconstructive Surgery* 129(6): 1428-1434

Just as everyone has a different learning style, teachers too approach the task from different perspectives. There are five basic teaching perspectives or styles: transmission, apprenticeship, developmental, nurturing, and social justice. The acronym BIAS is useful to describe the beliefs, intentions, assessments, and strategies associated with each perspective. The authors present a hypothetical 1-week rotation in plastic and reconstructive surgery in which a student encounters instructors who embody the five basic teaching perspectives. By presenting these perspectives, the authors introduce valuable teaching techniques that can benefit all those charged with the education of learners along the spectrum from

premedical to continuing education venues. Educational objectives include the following: (1) explain and illustrate different approaches to effective teaching in plastic surgery; (2) introduce readers to the Teaching Perspectives Inventory as a means of determining their primary teaching style; and (3) argue for a "plurality of the good" in teaching.

Caglayan, H. S. (2011). The investigation of academicians' learning styles in school of physical education and sports in Turkey. *Educational Research and Reviews* Vol. 6(3), pp. 326-333\*

This study was carried out with the purpose of determining the academicians' learning styles in school of physical education and sports and whether there was a relationship between their learning styles and gender, age, appellation and the department they worked or not. In the study survey method that was used. The sample of the study consisted of 206 academicians who were working in public Schools of Physical Education and Sports (n=183) and Schools of Sport Science and Technology (n=23). "The Kolb Learning Styles Inventory" which was developed by Kolb (1985) and adapted to Turkish by Aska and Akkoyunlu (1993) was used as data collection tool. In the analysis of data, frequency and percentages were used, the relationships among variables were investigated with chi square statistical method. The level of significance was accepted as 0.05. The results revealed that, the academicians in the School of Physical Education and Sports had 47.6% converging, 30.1% assimilating, 11.7% diverging, 10.7% accommodating learning styles and there was no significant difference between their learning styles and gender, age, appellation and the department they worked ( $P>0.05$ ).

Callaghan, A. (2011). Student nurses' perceptions of learning in a perioperative placement. *Journal of Advanced Nursing*, 67(4), 854-864. doi: 10.1111/j.1365-2648.2010.05518.x

The aim of this study was to explore undergraduate nurses' perioperative specialist clinical experience and the impact this experience has on their perceptions of aspects of perioperative nursing. Background. Perioperative nursing is a highly specialized nursing practice, which is often underutilized for undergraduate clinical placement experience. The environment is perceived as technological. Experts recognize the extensive learning opportunities available to undergraduate nurses' in this environment. This study explores how this specialist environment facilitates undergraduate student nurses' learning in an Australian context. Method. The methodological approach used Heidegger's hermeneutic phenomenology. The study was underpinned by Benner's novice-to-expert skill acquisition theory. Data were collected through in-depth interviews with six third-year undergraduate nursing students following a perioperative clinical placement experience. Data were collected in December 2005. Findings. The findings of this study identify aspects of perioperative nursing and the perioperative environment interpreted through the lens of each participant. Three themes were identified from the data: aspects of nursing care, skill acquisition and the clinical learning environment in a perioperative setting. Each participant gained insight not only

into perioperative nursing but also into its relationship to the general nature of nursing in a specialist setting. Conclusion. The preparation of novice nurses in a perioperative environment should include preparing them to identify the differences in patient care in an alternative setting. A consensus is required in Australia regarding the aspects of generalist nursing care, which need to be visible and clearly articulated for the novice by competent perioperative nurses.

Campbell, R., Green, G. & Grimshaw, M. (2011). Inciting Advanced Levels of Practitioner Reflection Through Progressive Graphic Elicitation. In Ashwin, M. (Ed) *Proceedings of the 10th European Conference on Research Methodology for Business and Management Studies* 84-92 ISBN 978-1-908272-02-7

Qualitative research routinely requires experienced practitioners in a given field to be interviewed, and there are a range of methods known to elicit dialogue. The method presented in this paper, however, goes a stage further, it seeks not only to elicit dialogue but to provide subjects with additional knowledge, which they are encouraged to use as a lens for reflection on their own experience. Using a progressive series of related information graphics, accompanied by explanations, subjects are quickly taught a new topic and are asked to reflect on their own practice while the learning occurs. The approach was tested with six Information Technology (I.T.) specialists, each with extensive experience of encouraging users to participate in new I.T. environments. Subjects were provided with information graphics that incrementally increased their understanding of psychological theories related to attitude change, namely cognitive dissonance and the elaboration likelihood model. As their knowledge increased, they were guided to reflect on occasions where they had encountered phenomena related to such psychological theory, its effect and affiliated best practice. Over all, this approach was effective, with over 50,000 words of relevant, advanced discourse forthcoming. In this paper, the methodology, its affiliated epistemology and an overview of the test are presented.

Can, S. (2011). INVESTIGATION OF THE RELATIONSHIPS BETWEEN THE LEARNING STYLES OF PRESERVICE ELEMENTARY TEACHERS AND SOME VARIABLES *Hacettepe Universitesi Egitim Fakultesi Dergisi-Hacettepe University Journal of Education* 41:70-82

The purpose of this descriptive study carried out through survey method is to elicit the learning styles of pre-service elementary school teachers and investigate the relationships between these learning styles and gender, grade level, age and learning type. The Kolb Learning Style Inventory was used to obtain data. The present study was carried out with 409 1st, 2nd 3rd, and 4th year students from the classroom teacher education department of the education faculty at Mugla University in the spring term of 2008-2009 academic year. The sampling of the study was randomly constructed. In the analysis of the data, some descriptive statistics; frequencies and percentages, and a non-parametric test, Chi-square, were used. As a result of the analyses, a significant relationship was found between the learning styles of the students and their grade levels; but no significant relationships were found for age, gender, and learning type.

Cano, J. L., & Lidon, I. (2011). Guided reflection on project definition. *International Journal of Project Management*, 29(5), 525-536. doi: 10.1016/j.ijproman.2010.04.008

Project definition can be understood as the process whereby the needs of stakeholders are identified and specifications are defined. It is recognised to be a complex problem, but also a key factor influencing the success of the project. The aim of this research was to make a study on whether guided reflection is useful as a learning aid in project definition. To this end, an experiment was carried out with the student body on a Project Management course, who were asked to reflect on their first encounter with managing a real life project for a client. The results show that students make judgements in keeping with those pronounced by professionals with years of experience, while at the same time making statements highlighting the shortcomings of the educational system. (C) 2010 Elsevier Ltd. and IPMA. All rights reserved.

Cant, R. P. & Cooper, S. J. (2011). The benefits of debriefing as formative feedback in nurse education. *Australian Journal of Advanced Nursing* 29(1):37-47\*

**Objective** This paper explores the nursing literature to identify the educative process and essential features of debriefing. **Setting** Nursing education settings: undergraduate, postgraduate and professional development in nursing and midwifery. **Data sources** Studies of debriefing in nurse education were located in peer reviewed journals between 1990 and May 2010. Searches were made using keywords in six healthcare and one education database. Eleven nursing studies reporting education of individuals and six studies of teams were selected for inclusion; only one study provided learning outcome data. Hence, the literature was synthesised in a narrative form to include related studies. **Primary argument** Formative feedback is important in experiential learning and is often applied in nursing in the form of facilitated structured debriefing. Debriefing is most commonly reported in relation to clinical skills development and as part of individual and team-based simulation training. Educational outcomes are dependant upon the skills of the facilitator in offering feedback in accordance with best practice. Although a key component of higher level education, there is a lack of published evidence with regard to the effectiveness of debriefing techniques in nurse education. A framework for debriefing practice is presented. **Conclusion** Structured facilitated debriefing is an important strategy to engage students in learning and is essential in simulation training. Further research is warranted to fully understand the impact of the method in nurse education.

Cardenas, C. (2011). A Multidisciplinary Approach to Teach the Design of Socially Relevant Computing Systems for Social Change. *International Journal of Engineering Education*, 27(1), 3-13.

In recent years many universities worldwide are promoting social-based education models. The Service-Learning pedagogical methodology has been adopted to do that. In computer science education, the Socially Relevant Computing paradigm is gaining inertia. Many discipline-based service-learning approaches in engineering education are focused from the technology-based perspective. That means, the

way needs should be fulfilled is through technology conceived and developed perhaps without any societal context. In this paper we propose going beyond this traditional conception. We present a methodology tested for three years on how to teach the design of Socially Relevant Computing Systems for social change. By taking into account a social-based design methodology, named Social Intelligence Design, and a multi-disciplinary approach, students from computer-related academic programs can design the social change and see the technology as a mean to accomplish that. Examples of some Socially Relevant Computing systems for social change are provided. We validate our proposed methodology with a questionnaire based on the ABET outcomes. The proposed approach seems very promising to design and conceive Socially Relevant Computing systems within this new paradigm.

Carlile, G. S. (2012). TEACHING WITHIN THE OPERATING THEATER. *Perspectives in Biology and Medicine*, 55(1), 127-136.

All surgeons within teaching hospitals share in the collective responsibility for training more junior doctors. A large proportion of training focuses around developing good clinical practice and ensuring the trainee is reaching competency. Formal structured teaching sessions aim to improve the trainee's theoretical knowledge and wider understanding. But surgical trainees must also learn how to operate. In order to do this, a more experienced surgeon must teach and supervise them in how to perform common procedures. This article discusses effective teaching within the operating theater, drawing on the author's own reflective practice. It introduces the concepts of theater prerequisites, used for assessing the suitability of theater cases for teaching, and active observation as one of the methodologies for teaching in theater.

Carmel-Gilfilen, C. (2012) Uncovering Pathways of Design Thinking and Learning: Inquiry on Intellectual Development and Learning Style Preferences. *Journal of Interior Design* 09/2012; 37(3). DOI: 10.1111/j.1939-1668.2012.01077.x

**ABSTRACT** The purpose of this study was to explore thought development and learning styles using the Perry scheme of intellectual development and Kolb's experiential learning theory (ELT). One hundred thirty-nine beginning, intermediate, and advanced interior design and architecture students were empirically assessed using the measure of intellectual development, the measure of designing, and the learning style inventory, respectively. The study objectives were to examine thought development and learning styles of interior design and architecture students, determine whether differences exist between design students and normative data, and explore relationships between thought development and learning styles. Supporting previous research using the Perry scheme, students were found in the positions of dualism and multiplicity with global thought development proving more advanced than design thinking. Furthermore, overall thought development appeared significantly higher in the sample than in normative data on college students. Supporting the ELT, the study uncovered the presence of all learning styles with preference toward diverging and accommodating learning noted. In addition, the concrete experience

preferences of design students appeared significantly higher in the sample than in normative data on college students. Results indicated no association between learning style and global or discipline-specific thought development level; however, qualitative data provide insights into the ways design students approach thinking and learning.

Carr, J. D., Cheshire, H. M., Hess, G. R., Bailey, D., & Devine, H. A. (2011). Assessing Embedded Geospatial Student Learning Outcomes in Forestry and Natural Resources Curricula. *Journal of Forestry*, 109(7), 409-416.

We developed an approach for assessing student learning of geospatial objectives embedded across undergraduate forestry and natural resources curricula at North Carolina State University. Our main goals were to characterize student attainment of geospatial outcomes and improve student learning based on those findings. Several instruments, including tracking questions, rubrics, questionnaires, and surveys, were used to facilitate the process. Although initial results from a longitudinal survey show a marked increase in student exposure to and awareness of geospatial tools and technologies, tracking questions, rubrics, and questionnaires show that geospatial learning is taking place below our intended performance target. These findings have allowed us to identify avenues for improving student attainment of geospatial learning outcomes, such as articulating standard geospatial objectives, improving our assignment and instructional techniques, and establishing performance standards. The assessment methods presented could be adapted to assess aspects of other curricula and courses.

Caulley, L., Wadey, V., & Freeman, R. (2012). Learning Styles of First-Year Orthopedic Surgical Residents at 1 Accredited Institution. *Journal of Surgical Education*, 69(2), 196-200. doi: 10.1016/j.jsurg.2011.09.002

**BACKGROUND:** This study represents 1 arm of a 5-year prospective study investigating the learning styles of orthopedic residents and their surgical educators. **METHODS:** This project investigates the learning styles of the 2009-2010 year 1 orthopedic surgical residents. A cross-sectional survey using the Kolb Learning Style Inventory was completed by 13 first year orthopedic residents. Direct 1-to-1 interviews were completed with the primary investigator and each participant using the Kolb Learning Style Inventory and learning styles were determined. **RESULTS:** Converging learning style was the most common among the residents (53.8%). Residents demonstrated a high tendency toward the learning skill of abstract conceptualization combined with active experimentation, and a transition from action-oriented to more reflective learning style with age and postgraduate education. **CONCLUSIONS:** These results may be useful in creating strategies specific to each learning style that will be offered to residents to enhance future teaching and learning.

Cendan, J., & Lok, B. (2012). The use of virtual patients in medical school curricula. *Advances in Physiology Education*, 36(1), 48-53. doi: 10.1152/advan.00054.2011

The demonstration of patient-based cases using automated technology [virtual patients (VPs)] has been available to health science educators for a number of

decades. Despite the promise of VPs as an easily accessible and moldable platform, their widespread acceptance and integration into medical curricula have been slow. Here, the authors review the technological underpinnings of VPs, summarize the literature regarding the use and limitations of VPs in the healthcare curriculum, describe novel possible applications of the technology, and propose possible directions for future work.

Chandler M. A. (2012). *The effects of learning styles and online education on low-income and first-generation college students*. D. Ed. Thesis Trevecca Nazarene University\*

This quasi-experimental study investigated the impact of a learning style intervention on persistence and success of low-income and first-generation college students enrolled in online courses. With the continuing rise of online education, there is potential for both promise and problems within higher academia. The TRiO Student Support Services program at a four-year, mid-size public university was the location and focus of this study. The Kolb Learning Style Inventory was utilized to determine learning style preferences. The results in this study indicated there were statistically significant findings on the perceptions of the TRiO SSS counseling learning style intervention, although, there were no impacts on GPA and persistence.

Charsky, D., & Ressler, W. (2011). "Games are made for fun": Lessons on the effects of concept maps in the classroom use of computer games. *Computers & Education*, 56(3), 604-615. doi: 10.1016/j.compedu.2010.10.001

Does using a computer game improve students' motivation to learn classroom material? The current study examined students' motivation to learn history concepts while playing a commercial, off-the-shelf computer game, Civilization III. The study examined the effect of using conceptual scaffolds to accompany game play. Students from three ninth-grade classrooms were assigned to one of three groups: one group used an expert generated concept map, one group constructed their own concept maps, and a control group used no map. It was predicted that the use of concept maps would enhance the educational value of the game playing activity, in particular students' motivational levels; however, the opposite happened. Students who used a concept map showed lower motivation on the task relative to their baseline motivation for regular classroom instruction. In contrast, the levels of motivation in playing the game, for students in the control group, met or exceeded their levels of motivation during regular classroom instruction. These results suggest that using a conceptual scaffold can



decrease students' motivation to learn classroom material through game play, perhaps because conceptual maps can (a) focus students' attention on the difficulty of learning the concepts and on the extrinsic rewards for playing the game and (b) make game play less autonomous, less creative, and less active. All of these can negate the primary property that provides playing its principal potential pedagogical power: fun.

Chatterjee, Shiffon Mohanty, Atasi & Bhattacharya, Bani (2011). Peer Collaboration, Facilitator Intervention, and Learning Styles in Computer Game-Based Learning: Initial Findings From an Empirical Study. In Gouscos, D. & Meimaris, M.( EDs). *5th European Conference on Games Based Learning* 683-690

Computer games have received a lot of attention in recent years as tools that provide engaging and effective learning experiences for children. However, relatively less is known about how different components of a computer game-based learning environment might influence the learning outcomes from educational computer games. This paper presents initial findings from an empirical study conducted as part of an ongoing PhD research which aims to explore whether and how factors such as the context of gameplay and individual learner characteristics influence learning. Employing a quasi-experimental design, the paper seeks to address the following research question: What is the relationship, if any, between the learning outcomes from educational computer games and the pedagogical context within which the games are played? How do differences in learning styles contribute to differences in learning gains from educational computer games? Pedagogical context, for the purpose of this paper, comprises two components - facilitator intervention and peer collaboration. Accordingly, four pedagogical contexts are defined: collaborative with active facilitation; collaborative without active facilitation; individualistic with active facilitation; and individualistic without active facilitation. The participants are 231 students from grades seven and eight of five schools in a town in eastern India, assigned to four groups each corresponding to one of the four pedagogical contexts. Two educational computer games - Global Conflicts: Sweatshops and Playing History: The Plague, both based on social science topics are played. Learning outcomes, as measured by scores on post-game assessment tools specific to each of the two games are analysed and findings presented. Initial findings suggest that computer game-based learning is influenced by the learning context within which the actual game-play activity is situated. Specifically, peer collaboration and facilitator support are found to be effective in promoting learning through computer game-play. However, there is a need to further explore the relationship between individual learning styles and game-based learning outcomes.

Chen, C. T. & Chen, C. F. (2011). The Influence of Internship Experiences on the Behavioral Intentions of College Students in Taiwan. *Asia-Pacific Education Researcher* 20(1): 73-92

This study investigates the effect of internship experience on behavioral intention of college students in Taiwan. The results of empirical study suggest that internship experiences can be divided into positive experiences and negative

experiences, each containing five major aspects: sensory experiences, affective experiences, creative cognitive experiences, physical experiences, and relational experiences. Each aspect has different effects on satisfaction with experiences, willingness to return to the original units, willingness to work, willingness to recommend, unit transition, thoughts of suspending schooling, career transition, internal complaints, and external complaints. Moreover, different personal traits have significant differences on the students' behavioral intentions of internship.

Chen, G. D., Chuang, C. K., Nurkhamid, & Liu, T. C. (2012). WHEN A CLASSROOM IS NOT JUST A CLASSROOM: BUILDING DIGITAL PLAYGROUNDS IN THE CLASSROOM. *Turkish Online Journal of Educational Technology*, 11(1), 202-211.

In the context of classroom, it is possible to create a playground with digital technology beneficial for learning in spite of rising enthusiasm in incorporating educational games in classroom. This paper is an essay to describe a learning playground called Digital Learning Playground (DLP). It is essentially an application of digital technology to build a Mixed Reality environment with game-based-learning-like ingredient for classroom context. A learning theory that could be used to describe the learning process is that of experiential learning by Kolb. Meanwhile, Total Scenario Response (TSR) can be used for its learning design. Although the experiment was applied in the context of learning English, it may open a possibility to extend for the purpose of learning other subjects, such as Math.

Chen, J. L. (2011). The effects of education compatibility and technological expectancy on e-learning acceptance. *Computers & Education*, 57(2), 1501-1511. doi: 10.1016/j.compedu.2011.02.009

Discerning what influences a student's acceptance of e-learning is still unclear and has not been well investigated. On the basis of the expectancy-value theory, much effort has been put into identifying the effectual factors regarding the technological expectancy of students. However, aside from technological usage, the adoption of an e-learning system still must consider learning behavior. Thus, researchers should take into consideration both technological and learning expectancies of students while investigating e-learning acceptance. Following mainstream literature on information system acceptance, this study postulates that a student's behavioral intention to accept an e-learning system is determined both by his or her technological expectancy and educational compatibility. Four primary factors, that is, performance expectancy, effort expectancy, social influence, and facilitating conditions, specified in the Unified Theory of Acceptance and Use of Technology (UTAUT) are used to reflect the technological expectancy of students. Further, educational compatibility, which refers the congruence of e-learning systems with the unique leaning expectancies of students, is integrated with the UTAUT to form a new theoretical model for e-learning acceptance. An empirical survey is conducted to examine the proposed model. A total of 626 valid samples were collected from the users of an e-learning system. The findings show that both technological expectancy and educational compatibility are important determinants of e-learning acceptance. However,

educational compatibility reveals a greater total effect on e-learning acceptance than does technological expectancy. Implications and practical guidelines for both e-learning developers and practitioners are subsequently presented. (C) 2011 Elsevier Ltd. All rights reserved.

Chen, N., Kinshuk, Wei, C. & Liu, C. (2011). Effects of matching teaching strategy to thinking style on learner's quality of reflection in an online learning environment.

*Computers & Education* 56: 53–64\*

Reflection plays an important role in improving learning performance. This study, therefore, attempted to explore whether learners' reflection levels can be improved if teaching strategies are adapted to fit with learners' thinking styles in an online learning environment. Three teaching strategies, namely constructive, guiding, and inductive, were designed to match with three thinking styles, namely legislative, executive, and judicial respectively. An online reflection learning system was subsequently developed to reflect this scenario. An experiment was then conducted where the learners were classified into fit or non-fit group in order to analyze whether there was a good fit between the teaching strategies designed by the teacher and the thinking styles of learners. A total of 223 graduate and undergraduate students participated in the experiment. The results revealed that the reflection levels of the fit group had outperformed the non-fit group.

Chen, T. L., Sheen, H. J., Yueh, H. P., Chiang, F. K. & Chang, P. W. (2012). Designing Nano-biotechnology Summer Camp with Experiential Learning Theory. *International Journal of Engineering Education* 28(5):1078-1087

In recent years, nanotechnology research has become a popular topic of interest, and the development of nanotechnology talent is also considered highly important worldwide. The Taiwan government has developed related policies and initiatives that support advanced and innovative nanotechnology research and budgets on human resource development in this field. It is our belief that the earlier students develop their awareness and interests in nanotechnology, the higher the possibility that they will become accomplished engineers in this field. Connected to this scenario, a nano-biotechnology summer camp was initiated in 2009 to take advantage of David Kolb's experiential learning theory. The curriculum integrates conceptual knowledge into practical activities for a complete learning experience. Fifty-two senior high school students attended this camp, and each student completed a questionnaire survey aiming to explore students' responses to this learning experience. Results of the present study revealed that the students were satisfied with the teaching and learning in the camp. They were also largely in favor of both 'hands-on experiments and laboratory experiences' and believed that more learning and better experiences occurred through these two course activities. This paper further discusses some important issues observed and suggests guidelines for future research and practice in nano-technology training.

Chen, Y. C. (2011). Learning Styles and Adopting Facebook Technology. In Kocaoglu, D. F., Anderson, T. R. & Daim, T. U. 2011 *Proceedings of Picmet 11: Technology Management in the Energy-Smart World* ISBN 978-1-890843-23-6

With the development of technologies, Web 2.0 has become an important issue in learning. With the growing of Web 2.0 technology, online social networking such as Facebook has emerged and become popular. Facebook is considered to be an educational tool since enabling peer feedback, interaction, and learning in a social context. Moreover, preparing appropriate environments for learners with different needs is essential in the academic process. Creating such learning environment will not be possible without understanding students' differences. Kolb's Learning Style Model is one of the commonly used models when investigating students' learning preferences. The study was to investigate the differences of students' learning outcome and satisfaction in a class using an online social networking tool-Facebook among different learning styles. Results show that participants in the Converger group performed better than participants with other learning styles. Moreover, the Converger group had a more positive attitude toward Facebook because in their perception, Facebook facilitates their interaction with others and improves content understanding in the class. Suggestions of integrating Facebook into class as well as recommendations for future research are provided.

Chipulu, M., Ojiako, U., Ashleigh, M., & Maguire, S. (2011). An Analysis of Interrelationships Between Project Management and Student-Experience Constructs. *Project Management Journal*, 42(3), 91-101. doi: 10.1002/pmj.20225

This article seeks to explore, through the utilization of correlational analysis, how the parameters that impact the student experience may be interrelated. We found that the experiences of students studying project management appear to be heavily influenced by e-resource provisions and the actual experiences that the students are subjected to when using virtual learning environments (VLEs). These findings support previous research acknowledging that information and communications technology (ICT) plays an important role in teaching and learning project management. Students' experience of interpersonal skills also correlated uniquely and significantly with other constructs, supporting the premise that learning is integral to the development of interpersonal skills. Discussion surrounds the interdependency of student experiences adding to their learning and how future research should consider larger and more diverse samples to establish exactly what constructs detract and/or add to their learning in project management, which could then contribute to pedagogical discourse in other disciplines.

Chism, N. V. (2011). Learning and Teaching in Higher Education: The Reflective Professional, 2nd edition. *Review of Higher Education*, 34(3), 506-508.

Chowdhury, A. H., Van Mele, P., & Hauser, M. (2011). Contribution of Farmer-to-Farmer Video to Capital Assets Building: Evidence from Bangladesh. *Journal of Sustainable Agriculture*, 35(4), 408-435. doi: 10.1080/10440046.2011.562059

Sustainable agriculture requires suitable group learning approaches that trigger capital assets building. Drawing mainly on face-to-face extension, methods and approaches used in sustainable agricultural projects aim at triggering learning and capital assets building. To target and to reach out to a large number of resource-poor households the potential role of media, such as video, has received less

attention. In Bangladesh, videos on sustainable rice seed practices were developed with farmers and then shown in multiple villages. This study reports on the contribution of farmer-to-farmer video-mediated group learning to capital assets building of women in resource-poor households. Data were collected using structured interviews with 140 randomly selected women in 28 video villages and 40 women in four control villages in north-west Bangladesh. Video-mediated group learning enhanced women's ability to apply and experiment with seed technologies. It also stimulated reciprocal sharing of new knowledge and skills between them, other farmers and service providers. Rice yields increased by 15%, which improved the women's social and economic status and intra-household decision-making. Over 20% of the households attained rice self-sufficiency, with no changes observed in control villages. This study has provided insights into the potential use of farmer-to-farmer video in sustainable agriculture to strengthen human, social and financial capital and to reduce poverty.

Ciaschi, A., Caprara, A., Gillespie, F., Furnari, G., & Mamede, S. (2011). Changing doctors' behaviours: an educational program to disseminate a new clinical pathway for the hospital management of hip fractures in elderly patients in the Lazio Region, Italy. *Journal of Evaluation in Clinical Practice*, 17(4), 811-818. doi: 10.1111/j.1365-2753.2010.01496.x

**Rationale and aims** Concerns with patient safety have increased interest in approaches to improving doctors' performance, yet dissemination of clinical guidelines and conventional continuing medical education have often failed. This study investigated the effects of an educational program based on reflection upon experience on the quality of care for patients with hip fracture in Lazio, Italy. **Methods** Five hospitals participated. The study consisted of the development of a clinical pathway, a preparatory phase and the educational intervention itself, which comprised a course followed by monthly audits with reflection on practice, guided by analysis of patients' charts. Data on the quality of care for patients with hip fracture were collected from the routine information system for the period before and after the intervention. **Results** There was a significant increase in the proportion of patients who underwent surgery within 48 hours of admission (from 7% in 2006 to 26.4% in 2007) and a significant reduction in the average length of hospital stay (from 18.8 to 16.4 days). Some process indicators of quality of care were high after the intervention, though non-recommended practices were still routinely used (e. g. urinary catheterization in 72.2% of patients). There were differences in the changes when comparing hospitals. **Conclusion** An educational intervention that combined the dissemination of a clinical pathway with external auditing geared to reflection upon practice was effective in promoting changes in doctors' behaviours. The persistence of non-recommended practices and the variation among hospitals indicate that multiple factors influence performance and affect the effectiveness of interventions.

Cicevic, S., Tubic, V., Nesic, M., & Cubranic-Dobrodolac, M. (2011). YOUNG DRIVERS PERCEPTUAL LEARNING STYLES PREFERENCES AND TRAFFIC ACCIDENTS. *Promet-Traffic & Transportation*, 23(3), 225-233.

Young drivers are over-represented in crash and fatality statistics. One way of dealing with this problem is to achieve primary prevention through driver education and training. Factors of traffic accidents related to gender, age, driving experience, and self-assessments of safety and their relationship to perceptual learning styles (LS) preferences have been analyzed in this study. The results show that auditory is the most prominent LS. Drivers in general, as well as drivers without traffic accidents favour visual and tactile LS. Both inexperienced and highly experienced drivers show relatively high preference of kinaesthetic style. Yet, taking into account driving experience we could see that the role of kinaesthetic LS is reduced, since individual LS has become more important. Based on the results of this study it can be concluded that a multivariate and multistage approach to driver education, taking into account differences in LS preferences, would be highly beneficial for traffic safety.

Clinton, M., Bernhard-Oettel, C., Rigotti, T., & de Jong, J. (2011). Expanding the temporal context of research on non-permanent work Previous experience, duration of and time remaining on contracts and employment continuity expectations. *Career Development International*, 16(2), 114-139. doi: 10.1108/13620431111115596

The purpose of this paper is to explore an expanded temporal context of non-permanent work through an examination of the influence of previous experience of temporary working, contract duration and time remaining on contract and expectations of continued employment on reports of job insecurity, job satisfaction, in-role performance and organisational commitment.

Design/methodology/approach - Hypotheses were tested using responses of 1,169 temporary workers from a multi-national, cross-sectional questionnaire study.

Findings - Hierarchical regression analyses indicated that having previous experience of temporary work was associated with higher in-role performance. No significant effects were found for contract duration, but shorter time remaining on present contract was associated with greater job insecurity and also greater in-role performance. However the strongest effects were found for expectations of continued employment, with stronger expectations being linked to more positive reports of each outcome. A number of moderation effects were found that indicated interactions between temporal variables and revealed a moderating role of preference for temporary work.

Originality/value - The paper is one of the first to formally consider the influence of a broader temporal context on attitudes and behaviours of temporary workers. Significant associations were found between elements relating to each of the past, present and future and important individual and organisational variables in the present. These effects were sustained above and beyond the influence of variables such as country, sector, preferences, skill level, contract type, and demographics that are known to affect temporary workers' attitudes and behaviours.

Coburn, A. (2011). Building social and cultural capital through learning about equality in youth work. *Journal of Youth Studies*, 14(4), 475-491. doi: 10.1080/13676261.2010.538041

The changing lives of young people provided the context for the Scottish Government to publish, 'Moving Forward - a strategy for improving young people's chances through Youth Work'. This strategy reported young peoples' aspirations to be treated equally and to know their opinions count. Contemporary theories on youth work suggested that equality was at its heart, yet little had been done to examine equality within generic youth work settings, although there was information on targeted interventions, such as youth work with Muslim young women or young black men. This article draws on a study that examined what young people learned about equality in a generic youth work setting. Theories of critical pedagogy provided a framework through which to explore how problem-posing youth work enabled young people to articulate voice and influence decisions. Youth work is argued as border pedagogy and proposed as enhancing the egalitarian nature of practices that enabled young people to interrogate their beliefs, values and identities and to act in ways that supported the development of cultural and social capitals.

Coetzer, A., Peter, R. & Peter, V. (2011). Employee learning processes in New Zealand small manufacturing firms. *Journal of Management & Organization* 17(6):764-781

We investigate differences between the ways novices and experienced specialists perceive their workplaces as learning environments and also examine differences between the learning processes of these two groups of employees. The study's research questions are explored by applying discriminant analysis to survey data collected from 218 employees in 31 New Zealand small manufacturing firms. We found that novices and experienced specialists do differ significantly in their perceptions of (1) work-environment conditions that either help or hinder learning, (2) supervisors' proximate support for learning, and (3) satisfaction with workplace learning. We also found that novices and experienced specialists do differ significantly in terms of the sources and methods of learning that they use. Our results identify the individual variables that contribute most to the discrimination between the two groups. Limitations of the study and the implications of our findings for researching and managing employee learning in small firms are discussed.

Collier, A. (2012). Interview with David Kolb. *AFS Intercultural Link* | V 3 - I 4 p10-11\*

Almost all of AFS's educational efforts from our ICL exchange programs to internal training offerings rely on **Experiential Learning (EL)** methods. We believe that integrating learning approaches as EL does, creates deeper wisdom. Find out more about what EL is, plus founding theorist David Kolb tells us more about how AFS can benefit from EL.

Collins, K. S. (2011). *Evaluating differences in test achievement of medical dosimetry students participating in instruction with synchronous versus asynchronous video considering personal learning style and Bloom's taxonomy level* Ph.D. dissertation S Illinois University Carbondale\*

The purpose of this study was to determine the dominant learning style of dosimetry students. The study also investigated to see if there was a significant difference in test performance based on synchronous/asynchronous participation, specific learning style, and the Bloom's taxonomy level of the test questions. To conduct the study, 25 medical dosimetry students enrolled at an accredited university were studied. Fifteen students participated in the course through a synchronous format using live video conferencing. Ten students used streaming video for their instruction in an asynchronous format. To determine the students' learning styles, Kolb's Learning Style Inventory was used.

Findings from the study indicated the most common learning styles of dosimetry students were converging and assimilating. The study also found no significant differences in test performance by students based on synchronous or asynchronous class participation, individual learning style, or the item's Bloom's taxonomy level. Even though no significant differences were found, this study offers insight to potential students and dosimetry educators about taking or offering distance education courses.

Collins, M., Harrison, D., Mason, R., & Lowden, A. (2011). Innovation and creativity: exploring human occupation and professional development in student education. *British Journal of Occupational Therapy*, 74(6), 304-308. doi: 10.4276/030802211x13074383958020

This short evaluation report discusses the development of a creative project that encourages student-centred learning. Year 3 occupational therapy students are given the opportunity to explore occupational science theories, applied to an area of human activity through creative media, such as film making, poetry, textiles, animation and photography. Student evaluation of the project identified its value as a highly stimulating learning encounter. The article outlines the educational



underpinnings for the project and how the use of creativity enables students to develop their understanding of human occupation, which informs their professional socialisation and identity.

Conklin, J., Kothari, A., Stolee, P., Chambers, L., Forbes, D., & Le Clair, K. (2011). Knowledge-to-action processes in SHRTN collaborative communities of practice: A study protocol. *Implementation Science*, 6. doi: 10.1186/1748-5908-6-12

**Background:** The Seniors Health Research Transfer Network (SHRTN) Collaborative is a network of networks that work together to improve the health and health care of Ontario seniors. The collaborative facilitates knowledge exchange through a library service, knowledge brokers (KBs), local implementation teams, collaborative technology, and, most importantly, Communities of Practice (CoPs) whose members work together to identify innovations, translate evidence, and help implement changes. This project aims to increase our understanding of knowledge-to-action (KTA) processes mobilized through SHRTN CoPs that are working to improve the health of Ontario seniors. For this research, KTA refers to the movement of research and experience-based knowledge between social contexts, and the use of that knowledge to improve practice. We will examine the KTA processes themselves, as well as the role of human agents within those processes. The conceptual framework we have adopted to inform our research is the Promoting Action on Research Implementation in Health Services (PARIHS) framework. **Methods/design:** This study will use a multiple case study design (minimum of nine cases over three years) to investigate how SHRTN CoPs work and pursue knowledge exchange in different situations. Each case will yield a unique narrative, framed around the three PARIHS dimensions: evidence, context, and facilitation. Together, the cases will shed light on how SHRTN CoPs approach their knowledge exchange initiatives, and how they respond to challenges and achieve their objectives. Data will be collected using interviews, document analysis, and ethnographic observation. **Discussion:** This research will generate new knowledge about the defining characteristics of CoPs operating in the health system, on leadership roles in CoPs, and on the nature of interaction processes, relationships, and knowledge exchange mechanisms. Our work will yield a better understanding of the factors that contribute to the success or failure of KTA initiatives, and create a better understanding of how local caregiving contexts interact with specific initiatives. Our participatory design will allow stakeholders to influence the practical usefulness of our findings and contribute to improved health services delivery for seniors.

Cook D. A. (2012). Revisiting Cognitive and Learning Styles in Computer-Assisted Instruction: Not So Useful After All. *Academic Medicine* 87(6): 778-784\*

In a previous systematic review, the author proposed that adaptation to learners' cognitive and learning styles (CLSS) could improve the efficiency of computer-assisted instruction (CAI). In the present article, he questions that proposition, arguing that CLSs do not make a substantive difference in CAI. To support this argument, the author performed an updated systematic literature search, pooled

new findings with those from the previous review, and reinterpreted this evidence with a focus on aptitude-treatment interactions. (An aptitude-treatment interaction occurs when a student with attribute 1 learns better with instructional approach A than with approach B, whereas a student with attribute 2 learns better with instructional approach B). Of 65 analyses reported in 48 studies, only 9 analyses (14%) showed significant interactions between CLS and instructional approach. It seems that aptitude-treatment interactions with CLSs are at best infrequent and small in magnitude. There are several possible explanations for this lack of effect. First, the influence of strong instructional methods likely dominates the impact of CLSs. Second, current methods for assessing CLSs lack validity evidence and are inadequate to accurately characterize the individual learner. Third, theories are vague, and empiric evidence is virtually nonexistent to guide the planning of style-targeted instructional designs. Adaptation to learners' CLSs thus seems unlikely to enhance CAI. The author recommends that educators focus on employing strong instructional methods. Educators might also consider assessing and adapting to learners' prior knowledge or allowing learners to select among alternate instructional approaches.

Corcoran, M. A. (2011). Caregiving Styles: A Cognitive and Behavioral Typology Associated With Dementia Family Caregiving. *Gerontologist*, 51(4), 463-472. doi: 10.1093/geront/gnr002

Purpose: An increasing number of elderly individuals are diagnosed with Alzheimer's disease and related disorders (ADRD), many of whom receive daily caregiving from spouse or adult child. Caregiving is a "cultural activity," and as such it is strongly influenced by sociocultural beliefs about caregiving and how it should be enacted. Understanding this thinking-action process has important implications for future research and service. Reasoned action theory provides empirical evidence that attitudes and beliefs, as they are influenced by the social environment, predict intentions to act. In turn, behavioral intentions can reliably predict behaviors. This grounded theory study describes a typology of caregiving styles relevant to family members of an individual with ADRD, where caregiving style is defined as a culturally based pattern in thinking and action. The goal of this study was to characterize the relationship between caregiver intentions and care strategies. Methods: Study participants included 97 individuals residing in the Washington, DC, area, who provide daily care for a family member with ADRD. Narrative data were collected from each caregiver during three 1-hr interview sessions. A subset of 30 caregiver-care recipient (CR) dyads was videotaped during typical interactions. Results: Four caregiving styles were identified (facilitating, balancing, advocating, and directing), which differ primarily in the intended focus of care and preferred interactions with the CR. Implications: The results provide a foundation for future studies of the relationships between sociocultural context, caregiving styles and strategies, and ensuing outcomes for caregiver-CR dyads.

Cottle, N. R., & Glover, R. J. (2011). Teaching Human Development: A Case for Blended Learning. *Teaching of Psychology*, 38(3), 205-208. doi: 10.1177/0098628311411900

This article makes a case for the use of blended learning in teaching human development as a means to encourage higher-order student learning outcomes. The authors review literature regarding the use and effectiveness of blended learning, discuss an illustrative example of a redesign of a human development course, present outcomes from a quasi-experimental comparison of delivery methods (e.g., blended vs. face-to-face lecture), and consider the strengths and weaknesses of the blended approach.

Crider, M. C., & McNiesh, S. G. (2011). Integrating a Professional Apprenticeship Model with Psychiatric Clinical Simulation. *Journal of Psychosocial Nursing and Mental Health Services*, 49(5), 42-U38. doi: 10.3928/02793695-20110329-01

In this article, we present a theory-based application of clinical simulation in psychiatric-mental health nursing education. As described by Benner, Sutphen, Leonard, and Day, a three-pronged apprenticeship that integrates intellectual, practical, and ethical aspects of the professional role is critical in the development of practical reasoning in nursing education and training. Clinical encounters are often fraught with ambiguity and uncertainty. Therefore, educating for a practice discipline requires experiential and situated learning. Using the three-pronged experiential model in simulated psychiatric-mental health nursing practice supports the development of critical nursing skills, ethics, and theoretical concepts. A clinical scenario is presented that demonstrates the application of this model of professional apprenticeship in psychiatric-mental health education. Applications of the concept presented may be used in training nurses new to the practice of psychiatric-mental health nursing.

Crook, A., Mauchline, A., Maw, S., Lawson, C., Drinkwater, R., Lundqvist, K., . . . Park, J. (2012). The use of video technology for providing feedback to students: Can it enhance the feedback experience for staff and students? *Computers & Education*, 58(1), 386-396. doi: 10.1016/j.compedu.2011.08.025

There are numerous issues surrounding the provision of assessment-related feedback in Higher Education, which in recent years have been highlighted in the National Student Survey. In this paper questionnaire data from staff and students at the University of Reading are used to confirm the main issues encountered with feedback, namely problems of time efficiency for staff, lack of engagement by students with feedback and issues with the timeliness and quality of feedback received. Therefore we explored the potential of technology, specifically video, to address these issues by enabling staff to produce brief feedback videos for students. The videos were housed within a new online resource, 'ASSET', and were used to investigate whether use of this technology could enhance the feedback experience for both staff and students. A pilot of the ASSET resource for generic feedback provision found that it was considered advantageous by staff and students. Moreover, the use of video was also shown to resolve many of the

common problems of feedback in relation to quality and engagement of students.  
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Crowell, S. (2011). Is Transcendental Topology Phenomenological? *International Journal of Philosophical Studies*, 19(2), 267-276. doi: 10.1080/09672559.2011.560480

Cuinas, I., Santalla, V., Alejos, A. V., Isasa, M. V., Rodriguez, E. D., & Sanchez, M. G. (2011). Playing LEGO Mindstorms (R) while Learning Remote Sensing. *International Journal of Engineering Education*, 27(3), 571-579.

An experience developed in the frame of a graduate level course in Electrical Engineering is introduced in this paper. The use of LEGO Mindstorms indexer and sensors appears to solve the need of cheap and interactive experimental work to learn about sensors along a topic on Remote Sensing, involving the students in a play that becomes a strong learning tool. The evaluation methodology consisted in a test and a survey. The outcomes show a large satisfaction level among students, but also a correct labour in the cognitive dimension.

Czeczotkova, B., Kostolanyova, K. & Sarmanova, J. (2011). The Optimal Teaching Style Based on Variability of Study Materials. In Greener, S. & Rospigliosi, A. *Proceedings of the 10th European Conference on E-Learning, Vols 1 and 2* 145-151 ISBN 978-1-908272-22-5

Teaching by standard eLearning is being gradually replaced by a new form - personalized eLearning. Personalized eLearning is understood as not only an instruction tailored to each student according to his characteristics, but it is also adaptable according to the actual conditions under which the learning takes place. Pilot testing of students and subsequent analysis determined a group of student's characteristics to which the eLearning study environment can be adapted. These characteristics must be put into accord with forms and variants of created learning materials. This paper deals with the assignment of an appropriate method of learning management to students' individual learning styles.

## D

D'Amore, A., James, S. & Mitchell, E. K. L. (2012). Learning styles of first-year undergraduate nursing and midwifery students: A cross-sectional survey utilising the Kolb Learning Style Inventory. *Nurse Education Today* 32(5): 506-515\*

It is important that educators understand their students' learning styles. In this study we investigate the learning styles of first-year undergraduate nursing and midwifery university students and whether these learning styles are influenced by student demographic characteristics. A cross-sectional survey including demographic questions and the Kolb Learning Style Inventory was utilised. There was a 78% response rate (n = 345). The majority of first-year students investigated in this study were divergers (29.5%), followed by assimilators (28.8%), accommodators (23.9%) and convergers (17.9%). Female students had a higher reflective observation (RU) score than male students (p = 0.0078). Those

with English as first language showed a higher active experimentation score ( $p = 0.0543$ ) and a lower concrete experience (CE) score ( $p = 0.0038$ ). Australian citizens and permanent residents had a higher RO score ( $p = 0.0560$ ) and a lower CE score ( $p = 0.0100$ ) than migrants and international students. Nursing/arts students had a higher abstract conceptualisation (AC) score than nursing students ( $p = 0.0013$ ). Students enrolled in 4-5 subject units had a higher AC score than those enrolled in 1-2 units ( $p = 0.0244$ ). Nursing and midwifery students are mainly of the diverger and assimilating learning styles. Some student demographic characteristics show a significant influence on learning styles. This study has teaching and research implications.

Dahnke, M. D. & Dreher, H. M. (2011). *Philosophy of Science for Nursing Practice: Concepts and Application*. NY: Springer Publishing

Dauwerse, L., van der Dam, S., & Abma, T. (2012). Morality in the mundane: Specific needs for ethics support in elderly care. *Nursing Ethics*, 19(1), 91-103. doi: 10.1177/0969733011412102

Ethics support is called for to improve the quality of care in elderly institutions. Various forms of ethics support are presented, but the needs for ethics support remain unknown. Using a mixed-methods design, this article systematically investigates the specific needs for ethics support in elderly care. The findings of two surveys, two focus groups and 17 interviews demonstrate that the availability of ethics support is limited. There is a need for ethics support, albeit not unconditionally. Advice-based forms of ethics support are less appropriate as they are removed from practice. Ethics support should be tailored to the often mundane and easily overlooked moral issues that arise in long-term care. Attention should also be given to the learning styles of nurses who favour experiential learning. Raising awareness and developing a climate of openness and dialogue are the most suitable ways to deal with the mundane moral issues in elderly care.

Davidoff, F. (2011). Music Lessons: What Musicians Can Teach Doctors (and Other Health Professionals). *Annals of Internal Medicine*, 154(6), 426-W142. doi: 10.1059/0003-4819-154-6-201103150-00009

Medicine is a learned profession, but clinical practice is above all a matter of performance, in the best and deepest sense of the word. Because music is, at its core, a pure distillate of real-time performance, musicians are in an excellent position to teach us about better ways to become and remain expert performers in health care and ways for our teachers and mentors to help us do that. Ten features of the professionalization of musicians offer us lessons on how the clinical practice of medicine might be learned, taught, and performed more effectively.

Davies, M. (2011). Concept mapping, mind mapping and argument mapping: what are the differences and do they matter? *Higher Education*, 62(3), 279-301. doi: 10.1007/s10734-010-9387-6

In recent years, academics and educators have begun to use software mapping tools for a number of education-related purposes. Typically, the tools are used to help impart critical and analytical skills to students, to enable students to see

relationships between concepts, and also as a method of assessment. The common feature of all these tools is the use of diagrammatic relationships of various kinds in preference to written or verbal descriptions. Pictures and structured diagrams are thought to be more comprehensible than just words, and a clearer way to illustrate understanding of complex topics. Variants of these tools are available under different names: "concept mapping", "mind mapping" and "argument mapping". Sometimes these terms are used synonymously. However, as this paper will demonstrate, there are clear differences in each of these mapping tools. This paper offers an outline of the various types of tool available and their advantages and disadvantages. It argues that the choice of mapping tool largely depends on the purpose or aim for which the tool is used and that the tools may well be converging to offer educators as yet unrealised and potentially complementary functions.

Davies, A. R., Doyle, R., & Pape, J. (2012). Future visioning for sustainable household practices: spaces for sustainability learning? *Area*, 44(1), 54-60. doi: 10.1111/j.1475-4762.2011.01054.x

Despite widely articulated concerns about unsustainable production and consumption processes, governance interventions have led to only incremental shifts in routinised production and consumption behaviour, particularly within households of western, industrialised societies. In response, techniques of future visioning have been mooted as more ambitious governing mechanisms that could help to liberate policymakers and other stakeholders from current patterns of disjointed incrementalism in the field of sustainable production and consumption. At the heart of these claims is the assertion that visioning promotes learning that can lead to the emergence of innovative approaches to sustainability challenges from problem redefinition to practical action. This paper examines the extent to which participatory visioning creates spaces for sustainable learning using empirical evidence from workshops focused on transforming household consumption practices in Ireland. It is concluded that participatory visioning approaches do provide supportive physical places and intellectual spaces for personal and collaborative learning with regard to potential sustainability transformations. The bounded nature of the particular workshops examined, in terms of duration, focus and participants, means that embedding such learning within wider organisational structures and practices is likely to be a much less certain process that, if it does occur, will unfold over longer timescales and in unpredictable ways.

de Boer, A. L., du Toit, P. H., Bothma, T. & Scheepers, D. (2012). Constructing a Comprehensive Learning Style Flexibility Model for the Innovation of an Information Literacy Module *Libri* 62(2): 185-196\*

The Department of Information Science in the Faculty of Engineering, Built Environment and Information Technology at the University of Pretoria is responsible for offering a semester module on Information Literacy to all first-year students across all faculties. The Department has embarked on a process of curriculum innovation of the module. For this purpose the learning style theory of

Herrmann (1995) and related principles are implemented. At the same time we have expanded the learning style model, referred to as the Whole Brain learning model that Herrmann has developed. We constructed a comprehensive learning style flexibility model or comprehensive whole brain model based on our scholarly engaging with the application of the related principles in numerous contexts. These contexts include our own teaching practices and research and supervision of postgraduate students. The Information Literacy module serves as an exemplar of curriculum innovation based on the concept of learning style flexibility or whole brain learning as it is reflected in our comprehensive model. The model answers the question of how a comprehensive teaching and learning model can be constructed to serve as a guideline for facilitating learning in a learning style flexible/whole brain fashion, accommodating differences in terms of learning preferences and developing students' and lecturers' full potential? The differences in terms of learning preferences referred to in the question were scientifically determined by means of the Herrmann Brain Dominance Instrument (HBDI) (Herrmann 1995). However, the model was not constructed based on this quantitative data only. Through different qualitative methods, such as text analysis, observations, student feedback and interviews, used in different contexts, we as authors extracted from our own work and students' work the ideas that helped shape the model. A constructivist approach was followed as it is embedded in the process of action research.

de Boer J., Kommers, P. A. M., & de Brock, B. (2011). Using learning styles and viewing styles in streaming video. *Computers & Education* 56 (2011) 727–735\*

Improving the effectiveness of learning when students observe video lectures becomes urgent with the rising advent of (web-based) video materials. Vital questions are how students differ in their learning preferences and what patterns in viewing video can be detected in log files. Our experiments inventory students' viewing patterns while watching instructional videos. Four viewing styles were postulated and checked for correlations with existing learning styles and the recent signaling of parallels with the learner's short-term memory capacity. Finally we checked whether learners' awareness of their actual viewing style potentially contributed to learning outcomes. The viewing behavior of 50 undergraduate students has been investigated. The students performed an individual learning task based upon instructional videos. Felders learning styles test and Huai's short-term memory test were used and checked for correlation. Video recordings in a usability lab were used to measure the students' viewing behavior. A multiple-choice test was integrated to measure possible learning effects. Moreover, students were interviewed afterwards. No strong correlation between the viewing styles and pervasive personal traits of students was perceived. Some students seem to switch their viewing style based upon their cognitive need, without lowering their test score. This flexibility of the student in adapting his viewing behavior might account for the missing correlation between pervasive personality traits and viewing styles. Students scored 20% higher on the test scores when using an awareness instruction.

de Haan, E., Culpin, V. & Curd, J. (2011). Executive coaching in practice: What determines helpfulness for clients of coaching? *Personnel Review* Vol. 40 No. 1, 2011 pp. 24-44\*

Purpose – Executive coaching is gaining in popularity, both as part of personal or organizational development programmes and as a tailored form of individual consulting. The purpose of this study is to examine how various aspects of the executive coaching intervention make a difference to the clients of coaching themselves. Design/methodology/approach – The study involved a web-based questionnaire (163 closed and three open questions) completed by 71 executive coaching clients shortly after the beginning of their coaching contract and by 31 of those again approximately six months later. Findings – The research found that clients' appreciation of coaching was high. In response to the research question "What determines helpfulness for clients?" a picture emerged of a client valuing the relationship with and the qualities of the coach, while making little distinction between specific interventions of that same coach. The findings support the idea that common factors are at work in executive coaching, so that helpfulness is much less predicted by technique or approach than by factors common to all coaching, such as the relationship, empathic understanding, positive expectations . Research limitations/implications – For further quantitative research into the effectiveness or helpfulness of executive coaching it will become increasingly important to explore the relative effectiveness of the various common factors. Practical implications – The findings show that professional executive coaches would do well to enhance the common factors in their work, such as the quality of their empathic understanding, the quality of the coaching relationship as perceived by the client, and the expectations of their client. Originality/value – This research shows that a broad range of techniques are deemed helpful, and equally so. It is therefore not the preference for a specific technique that makes a difference, but rather the ability to employ many techniques, to use them well and at the right moment. This is clear support for a common-factors perspective on executive coaching.

de Jong, A. A., Runhaar, H. A. C., Runhaar, P. R., Kolhoff, A. J., & Driessen, P. P. J. (2012). Promoting system-level learning from project-level lessons An analysis of donor-driven 'indirect' learning about EIA systems in Ghana and the Maldives. *Environmental Impact Assessment Review*, 33(1), 23-31. doi: 10.1016/j.eiar.2011.10.001

A growing number of low and middle income nations (LMCs) have adopted some sort of system for environmental impact assessment (EIA). However, generally many of these EIA systems are characterised by a low performance in terms of timely information dissemination, monitoring and enforcement after licencing. Donor actors (such as the World Bank) have attempted to contribute to a higher performance of EIA systems in LMCs by intervening at two levels: the project level (e.g. by providing scoping advice or EIS quality review) and the system level (e.g. by advising on EIA legislation or by capacity building). The aims of these interventions are environmental protection in concrete cases and enforcing the institutionalisation of environmental protection, respectively. Learning by



actors involved is an important condition for realising these aims. A relatively underexplored form of learning concerns learning at EIA system-level via project level donor interventions. This 'indirect' learning potentially results in system changes that better fit the specific context(s) and hence contribute to higher performances. Our exploratory research in Ghana and the Maldives shows that thus far, 'indirect' learning only occurs incidentally and that donors play a modest role in promoting it. Barriers to indirect learning are related to the institutional context rather than to individual characteristics. Moreover, 'indirect' learning seems to flourish best in large projects where donors achieved a position of influence that they can use to evoke reflection upon system malfunctions. In order to enhance learning at all levels donors should thereby present the outcomes of the intervention elaborately (i.e. discuss the outcomes with a large audience), include practical suggestions about post-EIS activities such as monitoring procedures and enforcement options and stimulate the use of their advisory reports to generate organisational memory and ensure a better information dissemination. (C) 2011 Elsevier Inc. All rights reserved.

de Kraker, J., Kroeze, C., & Kirschner, P. (2011). Computer models as social learning tools in participatory integrated assessment. *International Journal of Agricultural Sustainability*, 9(2), 297-309. doi: 10.1080/14735903.2011.582356

Participatory integrated assessment (PIA) is a structured process conducted with stakeholders to assess the environmental, economic and social dimensions of a complex issue and the impacts of policy choices. PIA may result in social learning a convergence in the stakeholders' perspectives on the problem and its solutions which creates a basis for more sustainable, collective action. This paper addresses the role of computer models used in integrated assessment in supporting social learning and discusses a selection of model-based PIA projects. We argue that models may play two important roles. First, with models the consequences of options can be explored turning the PIA process into an experiential learning cycle for the stakeholders. Second, models provide a platform and structure for stakeholders to communicate, negotiate and integrate their perspectives. However, in many PIA projects, computer models fail to play a significant supporting role in social learning. Experiences with other participatory modelling approaches indicate that a higher degree of stakeholder involvement in model development can increase the effectiveness of models as social tools. This, however, is time- and resource-intensive and difficult to scale up but insights from collaborative learning science and technology may help to enhance the effectiveness and efficiency of PIA model in supporting social learning.

De Meuse, K. P., Dai, G. R., Swisher, V. V., Eichinger, R. W. & Lombardo, M. M. (2012). Leadership Development: Exploring, Clarifying, and Expanding Our Understanding of Learning Agility. *Industrial and Organizational Psychology-Perspectives on Science and Practice* 5(3):280-286\*

We read the DeRue, Ashford, and Myers(2012) article with much interest. As a company, Lominger (purchased by Korn/Ferry in 2006) has conducted research on learning agility for nearly 20 years. Although much of this research has been

internal in the form of technical reports and whitepapers, we also have published and presented our findings in a number of venues (De Meuse, 2011; De Meuse & Dai, 2011; De Meuse, Dai, & Hallenbeck, 2010; Eichinger & Lombardo, 2004; Eichinger, Lombardo, & Capretta, 2010). Our clients have purchased our learning agility assessments since the mid-1990s. Within the past few years, we have observed a significant interest in using learning agility to identify and develop high potential talent. We find that many organizations express interest in measuring learning agility and employing it as a talent management tool, even though they have limited understanding of what it is. Consequently, we were delighted to see that the journal of Industrial and Organizational Psychology devoted a serious effort to defining, understanding, and measuring this important construct. Overall, we found the DeRue et al. article to be a positive step in this direction. It supported a recent journal article that we had published entitled, “Learning Agility: A Construct Whose Time Has Come” (De Meuse et al., 2010). It is our hope that the scholarly investigation of learning agility will increase our understanding of the construct so it is applied appropriately in the management of talent. There are many areas where we are aligned with the authors’ point of view. However, we would like to highlight several key areas where this article and our research and views differ significantly. Specifically, we address the following three areas: (a) conceptualization and definition of learning agility, (b) the measurement of it, and (c) empirical evidence examining its relationship to leadership success.

de Rijke, P., & Plucker, J. A. (2011). Getting what we wish for: The realities of business education for a global economy. *Business Horizons*, 54(4), 375-382. doi: 10.1016/j.bushor.2011.03.004

Business schools around the world have embraced globalization and, as a result, attempted to attract international students to their programs. Teaching diverse student groups has many advantages, but is not without its challenges, including cultural differences in educational expectations and student self-efficacy. The goal of this article is to suggest that we can create plans and activities capable of helping Asian students adapt more quickly to the expectations of Western education. We herein describe Rotterdam Business School’s experiences in working with a diverse—mainly Asian—population of students, focusing on strategies that may assist them in adapting to the expectations of the global business school classroom.

De Vita, G., & Bernard, M. J. (2011). Fostering reflective learning in Confucian Heritage Culture environments. *Innovations in Education and Teaching International*, 48(2), 183-193. doi: 10.1080/14703297.2011.564013

This paper reports on two tutors' efforts to foster reflective learning in the context of a business synoptic module delivered as part of a programme of collaborative provision at City University of Hong Kong. In assessing what the design and implementation of processes aimed at fostering reflective learning have accomplished, evaluatory evidence of students' work suggests that Hong Kong

Chinese learners are as capable as Western students to adapt to modes of learning and assessment requiring a reflective, deep learning approach.

Dean, K. L. & Jolly, J. P. (2012). Student Identity, Disengagement, and Learning *Academy of Management Learning & Education* 11(2): 228-243

Current student engagement literature fails to fully appreciate the psychosocial aspect of learning, especially the process of "opting out" of learning opportunities. We formulate a model of identity-based disengagement in an attempt to understand why some students choose to reject learning opportunities. Management education in particular may be subject to student disengagement due to learning activities that engender affective, identity-challenging responses. Using social identity theory, we model how some learning activities can trigger elements of students' identities, forcing a cognitive dissonance confrontation. We suggest that students undertake an identity-based risk-reward assessment when determining which learning opportunities to accept or reject. We argue that by increasing sensitivity to the process of disengagement, instructors can help draw students back into learning opportunities. Practical implications of the model and suggestions for future research end the article.

Dearden, J., & Wilson, A. (2011). Using Participatory Computer Simulation to Explore the Process of Urban Evolution. *Transactions in Gis*, 15(3), 273-289. doi: 10.1111/j.1467-9671.2011.01257.x

When planners intervene in urban systems they seek in part to generate a positive response from those parts of a city outside of their control, namely the private market and private individuals. This response is difficult to predict due to the fact that the city is a nonlinear system of organized complexity. Models of cities which seek to explain this response are necessarily complicated and dynamic. Where an analytical solution is not possible we turn to computer simulation and interactive visualization in order to understand their output. Allowing human participation in such simulations provides a sandbox in which to experiment with the dynamic behaviour of an urban model and play a part in its evolution. Two possible options for structuring this participation are: (1) toy retail systems, which allow unconstrained experimentation, and (2) games, which impose rules and involve role-play and competition. To explore these ideas we construct a toy retail system and a two-player retail game, both of which are derived from an existing agent-based retail model. We explore the application of these systems to the metropolitan county of South Yorkshire in the UK.

De Clecq, D., Horig, B. & Martin, B. (2012) The roles of learning orientation and passion for work in the formation of entrepreneurial intention. *International Small Business Journal*. 09/2013; 31(6):652-676. DOI: 10.1177/0266242611432360 \*

**ABSTRACT** In order to extend understanding of the drivers that underlie entrepreneurial intention formation, this article investigates the hitherto underexplored roles of people's learning orientation and passion for work. It considers how these personal characteristics may moderate the instrumentality of their perceived ability to become a successful entrepreneur, and perceptions of the

attractiveness of becoming an entrepreneur. Using a survey of 946 university students, it finds that learning orientation and passion for work invigorate the role of these feasibility and desirability considerations in enhancing entrepreneurial intention. A follow-up analysis reveals that the moderating effects of learning orientation and passion for work on the perceived attractiveness–entrepreneurial intention relationship are stronger to the extent that people value the intrinsic goal of autonomy in their future career more, but these moderating effects are immune to the importance of the extrinsic goal of earning financial rewards. Several implications for research and practice emerge.

Dedic, V., Markovic, S. & Kuleto, V. (2012). Learning Styles and Graphical User Interface: Is there any Preference? *New Educational Review* 28(2): 73-83

User interface becomes the major channel to convey information in e-learning context: a well-designed and friendly interface is thus the key element in helping users to get the best results quickly. This paper investigates the importance of a certain choice offered: if several graphical user interface designs are offered to distance learning students of known learning styles, should we find any preferences? To find that, a procedure for determining association between learning styles and GUI was devised. A total of 51 participants were tested to find out if there was any correlation between students' learning styles and their GUI preferences. We have found that the fact of having any preference towards a GUI is associated with AC score of Kolb's model.

Deever, W. T. (2012). Learning style differences in adult students' perceptions of the effectiveness of classroom techniques for teaching quantitative skills. Unpublished Ph.D. dissertation. Walden University, Rochester.

Delarue, E., Laga, E., Meeus, L., Belmans, R., & D'Haeseleer, W. (2011). Achieving Learning Potentials in an Educational Simulation Game for Trading and Generating Electrical Energy. *International Journal of Engineering Education*, 27(4), 703-712.

This paper presents and motivates the development of a techno-economic education package, consisting of two simulation games, to simulate both the trading and the generation of electricity in a liberalized market. Six attributes (storytelling; players as problem solvers and explorers; feedback; challenges that fit the student characteristics; competition; appropriate graphics and sounds) are relevant in order for simulation games to achieve their learning potentials. These attributes are identified within both developed simulation games.

Deliktas, B. (2011). Computer Technology for Enhancing Teaching and Learning Modules of Engineering Mechanics. *Computer Applications in Engineering Education*, 19(3), 421-432. doi: 10.1002/cae.20321

Improving the quality of learning and teaching has always been in the interest of instructors in all fields of study. There have been tremendous efforts to this end. In this article, learning and teaching modules enhanced with computer technology are introduced. This approach is based on concept questioning and scenario building aided with interactive animation, simulation, and rich graphical content.

Modules for the engineering mechanics course covering fundamental topics in Statics, Strength of Materials, and Dynamics are prepared by using the proposed approach. Some examples of the prepared modules are presented. Design of the course module and its evaluation from student's perspective are discussed. Based on evaluations using questionnaires by the students it can be inferred that this approach to teaching and learning helps students to increase their capacity to understand and instructors to convey their ideas more conveniently.

Dennick, R. (2012). Twelve tips for incorporating educational theory into teaching practices. *Medical Teacher* 34(8):618-624

Background: Although there is no single overarching theory of learning, there is a group of learning theories that shares some common elements which can provide useful guidance on a range of teaching and learning practices. Aim: This article aims to describe Constructivist, Experiential and Humanistic learning theories, to explain how these three theories are fundamentally related and to demonstrate how each of them suggests teaching and learning practices. Conclusion: Common educational theories can be combined to provide 12 practical tips for teachers and facilitators. This demonstrates how theoretical ideas lead to practical consequences.

DeRue, D. S., Ashford, S. J. & Myers, C. G. (2012). Learning Agility: In Search of Conceptual Clarity and Theoretical Grounding. *Industrial and Organizational Psychology-Perspectives on Science and Practice* 5(3): 258-279\*

As organizations become more complex and dynamic, individuals' ability to learn from experience becomes more important. Recently, the concept of learning agility has attracted considerable attention from human resource professionals and consultants interested in selecting on and developing employees' ability to learn from experience. However, the academic community has been largely absent from this discussion of learning agility, and the concept remains ill defined and poorly measured. This article presents a constructive critique of the existing literature on learning agility, seeks to clarify the definition and conceptualization of the construct, and situates learning agility within a broader nomological network of related constructs. We conclude by discussing several important directions for future research on learning agility.

DeRue, D. S., Ashford, S. J. & Myers, C. G. (2012). Learning Agility: Many Questions, a Few Answers, and a Path Forward. *Industrial and Organizational Psychology-Perspectives on Science and Practice* 5(3): 316-322\*

This article responds to and extends the commentaries offered in response to our focal article on learning agility. After summarizing the basic themes in the commentaries, we use this response to clarify points that were unclear in our original article and push back on certain points raised in a few of the responses. In particular, we reframe the rigor-relevance debate from an either/or to a both/and discussion, clarify the relationship between learning agility and ability to learn, explain how learning agility in organizations moves beyond cognition, and

describe how exchanges such as the one we have collectively engaged in here are central to progressing the scientific study on learning agility and its effective use in practice.

DeRue, D. S., Nahrgang, J. D., Hollenbeck, J. R. & Workman, K. (2012). A Quasi-Experimental Study of After-Event Reviews and Leadership Development. *Journal of Applied Psychology* 97(5): 997-1015\*

We examine how structured reflection through after-event reviews (AERs) promotes experience-based leadership development and how people's prior experiences and personality attributes influence the impact of AERs on leadership development. We test our hypotheses in a time-lagged, quasi-experimental study that followed 173 research participants for 9 months and across 4 distinct developmental experiences. Findings indicate that AERs have a positive effect on leadership development, and this effect is accentuated when people are conscientious, open to experience, and emotionally stable and have a rich base of prior developmental experiences.

Dieckmann, P. (2012). Debriefing Olympics-A Workshop Concept to Stimulate the Adaptation of Debriefings to Learning Contexts *Simulation in Healthcare* 7(3): 176-182  
Debriefing is important in simulation-based education but rarely studied empirically. (1-8) In this article, I describe an experience-based workshop concept that was tested with approximately 80 participants during the Annual Meeting of the Society in Europe for Simulation Applied to Medicine (SESAM), June 2 to 4, 2011, in Granada, Spain. On a metalevel, the goal of the workshop was to raise the awareness of debriefing as an important part of simulation-based learning and to increase the awareness about different styles of debriefing-possibly stimulating further investigations of debriefings. (Sim Healthcare 7:176-182, 2012)

Diehm, R. A. & Lupton, M. (2012). Approaches to Learning Information Literacy: A Phenomenographic Study. *Journal of Academic Librarianship* 38(4): 217-225  
This paper reports on an empirical study that explores the ways students approach learning to find and use information. Based on interviews with 15 education students in an Australian university, this study uses phenomenography as its methodological and theoretical basis. The study reveals that students use three main strategies for learning information literacy: 1) learning by doing; 2) learning by trial and error; and 3) learning by interacting with other people. Understanding the different ways that students approach learning information literacy will assist librarians and faculty to design and provide more effective information literacy education.

DiLullo, C., McGee, P. & Kriebel, R. M. (2011). Demystifying the Millennial Student: A Reassessment in Measures of Character and Engagement in Professional Education. *Anatomical Sciences Education* 4(4): 214-226

The characteristic profile of Millennial Generation students, driving many educational reforms, can be challenged by research in a number of fields including cognition, learning style, neurology, and psychology. This evidence

suggests that the current aggregate view of the Millennial student may be less than accurate. Statistics show that Millennial students are considerably diverse in backgrounds, personalities, and learning styles. Data are presented regarding technological predilection, multitasking, reading, critical thinking, professional behaviors, and learning styles, which indicate that students in the Millennial Generation may not be as homogenous in fundamental learning strategies and attitudes as is regularly proposed. Although their common character traits have implications for instruction, no available evidence demonstrates that these traits impact their fundamental process of learning. Many curricular strategies have been implemented to address alleged changes in the manner by which Millennial students learn. None has clearly shown superior outcomes in academic accomplishments or developing expertise for graduating students and concerns persist related to the successful engagement of Millennial students in the process of learning. Four factors for consideration in general curricular design are proposed to address student engagement and optimal knowledge acquisition for 21st century learners. *Anat Sci Educ* 4: 214-226. (C) 2011 American Association of Anatomists.

Di Trapani, G., & Clarke, F. (2012). Biotechniques laboratory: An enabling course in the biological sciences. *Biochemistry and Molecular Biology Education*, 40(1), 29-36. doi: 10.1002/bmb.20573

Practical skills and competencies are critical to student engagement and effective learning in laboratory courses. This article describes the design of a yearlong, stand-alone laboratory course the Biotechniques Laboratory a common core course in the second year of all our degree programs in the biological sciences. It is an enabling, introductory laboratory course with a focus on the development of basic, practical skills, competencies, and knowledge in experimental techniques commonly used across the biological sciences. It is based on a full hands on approach where all students undertake a variety of practical exercises derived principally from the disciplines of biochemistry, molecular biology, cell biology, and microbiology. Explicit skills training, the opportunity to repeat laboratory exercises until the required skill and/or competency is achieved, the consolidation of learned skills in different contexts throughout the course and a competency based assessment method are all distinctive features that facilitate the achievement of the desired student outcomes. Students graduate from this course enabled to more effectively engage and achieve in advanced laboratory courses and research projects developing higher order skills and knowledge for use in graduate studies and/or employment.

Dickey, M. D. (2011). The pragmatics of virtual worlds for K-12 educators: investigating the affordances and constraints of Active Worlds and Second Life with K-12 in-service teachers. *Etr&D-Educational Technology Research and Development*, 59(1), 1-20. doi: 10.1007/s11423-010-9163-4

The purpose of this study is to address the pragmatics of integrating virtual worlds for teaching and learning for K-12 education. Specifically this qualitative investigation focuses on a reflective dialogue gathered from a group of K-12

(primary and secondary school) educators about their experiences using both Active Worlds Educational Universe and Second Life. Reflections consist of both their experiences as (a) a learner within both applications, (b) developing instructional content in both applications, and (c) perceptions of value of each application for teaching and learning. The goal of this research is to investigate how K-12 teachers' perceptions of virtual worlds may impact the integration of new tools for teaching and learning.

Dincol, Sinem Temel, Senar Oskay, Ozge O. Erdogan, Umit I. Yilmaz, Ayhan (2011). The effect of matching learning styles with teaching styles on success. *3rd World Conference on Educational Sciences (WCES) Feb 03-07, 2011 Istanbul, TURKEY* Ankara Univ, Bahcesehir Univ, Near E Univ ISBN 1877-0428

This study aims to examine the matching between the learning styles of instructors and teacher candidates and between the teaching styles of instructors and learning styles of teacher candidates. Our research also examines the effect of this matching on the success of teacher candidates. Grasha-Riechmann Learning Style Scale was applied to the teacher candidates and to the instructors. Teaching Styles Inventory was applied to the instructors. Students' grades related to the Chemistry and Teaching Pedagogy Courses in the spring term of the 2009-2010 academic years were taken as a success criterion. It is concluded that matching learning styles of instructors with that of teacher candidates and matching teaching styles of instructors with the learning styles of the teacher candidates has not significant effect on the success of the teacher candidates.

Dogan, B. & Cermik, H. (2012). THE ADAPTATION OF HOW I LEARN INVENTORY INTO TURKISH: VALIDITY AND RELIABILITY STUDIES *Hacettepe Universitesi Egitim Fakultesi Dergisi-Hacettepe University Journal of Education* 43:154-163

In this study, it was aimed to adapt "How I Learn Inventory" into Turkish. The validity of the structure and the concurrent, the internal-consistency and the reliability of test-repeated test were investigated in this study. As a result of investigating the language equivalence, it was found that there was a positive relationship between English and Turkish version of inventory. In order to analyse structure validity of the inventory, principal components analysis, exploratory and confirmatory factor analysis were used and items were grouped into four dimension. In the first and fourth groups there were seven items whereas in the second and third groups there were six items. In addition to this, in order to concurrent validity the inventory, Kolb Learning Style Inventory was used. For the reliability of the inventory, test-repeated test and Cronbach alpha internal consistency rates were used. The reliability is satisfactory.

Doll, W. J. & Deng, X. D.(2011). Antecedents of Improvisation in IT-Enabled Engineering Work. *Journal of Organizational and End User Computing* 23(3):26-47

The success of engineering work depends on the ability of individuals to improvise in response to emerging challenges and opportunities (Kappel & Rubenstein, 1999). Building on experiential learning theory (Eisenhardt & Tabrizi



1995; Kolb, 1984) and improvisation theory (Miner, Bassoff & Moorman, 2001), this authors argue that information systems facilitate the generation of new product and process design ideas by providing richer feedback, creating shorter learning cycles, and enabling engineers to try a variety of new ideas more easily. An empirical research model of the antecedents of improvisation in IT-enabled engineering work is proposed. This model is examined using a sample of 208 individuals engaged in computer-intensive engineering design work. The multiple regression results suggest that software capability, autonomy, problem solving/decision support usage, system use for work planning, and length of use explain the extent of new product and process ideas that are generated. The practical and theoretical implications of these findings are discussed

Donato, A. A., & George, D. L. (2012). A Blueprint for Implementation of a Structured Portfolio in an Internal Medicine Residency. *Academic Medicine*, 87(2), 185-191. doi: 10.1097/ACM.0b013e31823f40a2

The Accreditation Council for Graduate Medical Education recommends the structured portfolio as a preferred assessment tool for assessing all six of its core physician competencies. However, compared with other evaluation measures, it may be one of the most resource-intensive for learners and evaluators. Given the time and effort needed to properly develop mentors, train evaluators, and persuade learners, facilitation of the learning environment supporting a portfolio may be the most important variable determining its success or failure. The authors review the components necessary to successfully build and maintain a robust portfolio learning environment in a graduate medical education setting. These include gaining staff acceptance, staging implementation, enhancing learner participation, training mentors, choosing paper versus electronic formats, and selecting assessment methods. Their blueprint for implementing a portfolio is informed by their five-year experience with a portfolio rollout in one internal medicine residency, from 2006 to 2011.

Dorca, F. A., Lima, L. V., Fernandes, M. A. & Lopes, C. R. (2012). Consistent Evolution of Student Models by Automatic Detection of Learning Styles. *Ieee Latin America Transactions* 10(5): 2150-2161

One of the most important features of adaptative e-learning systems is the personalisation according to specific requirements of each individual student. In considering learning and how to improve student learning, these systems must know the way in which an individual learns. In this context, we introduce a new approach for consistent evolution of student models by automatic detection of student learning styles. Most of the work in this field presents complex and inefficient approaches. Our approach is based on learning styles combination and dynamic correction of inconsistencies in the student model, taking into account the non-deterministic aspect of the learning process. Promising results were obtained from tests, and some of them are discussed in this paper.

Downey, J., & Acm, S. (2011). *Software Practitioners Dropping-out: A Research Proposal*.

This paper proposes an exploratory study to determine why some computer science or software engineering graduates abandon their careers in software to pursue radically different paths. While these people may be experiencing a generic mid-life crisis, is it possible that the tremendous technical focus of their work means they are ill-prepared for the senior roles on offer, roles that involve interpersonal as opposed to technical skills?

Drozдова, Michaela, Takacs, Ondrej & Sarmanova, Jana (2011). Experimental Assessment of Virtual Students. *10th European Conference on e-Learning (ECEL)* Nov 10-11, 2011 Brighton, ENGLAND 188-194 ISBN 978-1-908272-22-5

In this fast developing society full of changes is learning getting more and more important. How can we make it more effective? One of the approaches uses electronic learning with its capability to adapt learning process to individual students needs. Students' characteristics important for adaptive learning must be known in order to achieve this. In this paper the most frequently used method - the questionnaire is used to identify the students' characteristics. The problem is that even small number of student's properties leads to vast number of its combinations. To make the design of adaptive learning easier, we try to narrow this combinations by setting few virtual students with given values of respective properties that represent most common combinations of student properties. In this paper we describe the methods and results of virtual student assessment using quantitative analysis of filled learning styles questionnaire. We created new questionnaire that measures sensual perception, motivation and learning styles. Sensual perception describes which form of information suits students best: visual, auditive, verbal or kinesthetic. Social aspects concerns with type of company that student prefers when learning. The systematic approach describes sequence of learning, which can be either in logical sequence of steps or almost randomly, without connections, in great steps. We divide way of learning on deriving and experimenting. In accordance to sequence of learning we can divide students on detail oriented, which focus on small pieces of information and compose them to the global picture, and holistic, which focus on big pieces of abstract information from which it works through to details. The approach of learning can be divided into: deep, where student's main goal is to fully understand the curriculum, strategic, where are prioritized results and effectiveness and surface approach, where students only try to meet basic requirements. Degree of student's ability to independently control his learning is given by his self regulation of learning. This questionnaire was filled by 500 students from different fields of study. We analyzed these results using clustering, decision tree and principal component analysis. Cluster analysis tries to discover groups of mutually similar objects which differ from other groups. We set virtual students using this method. Decision tree analysis focuses on one property and tries to discover other properties that affect its values. Several interesting dependencies between properties were discovered using this method, for example students have high motivation if they do not possess surface learning style.

Duru, M., & Martin-Clouaire, R. (2011). Cognitive tools to support learning about farming system management: a case study in grazing systems. *Crop & Pasture Science*, 62(9), 790-802. doi: 10.1071/cp11121

The complex challenge of farm management has prompted a search for ways in which scientific knowledge can be acquired and combined with practical know-how and experience to enhance the adaptability, profitability and environmental soundness of agricultural systems. Cognitive tools offer a kind of model-based learning support that facilitates and stimulates critical thinking about the functioning of agricultural production processes and the ways to control them in various and changing situations. The purpose of this paper is to delineate, illustrate and analyse the concept of cognitive tool together with the learning process and conditions in which such a tool would be used. We review three such tools built to help understand, improve, adapt or design grazing management practices in pasture-based livestock farms. For each of them we examine the knowledge content of the tool, the way it is represented, the kind of use and the nature of the support it provides to its users.

Dreher, H. M. (2011). *Role development for doctoral advanced nursing practice*. NY: Springer Publishing

Dyer, B. & T. Löytönen (2011): Engaging dialogue: co-creating communities of collaborative inquiry, *Research in Dance Education*, 12:3, 295-321

<http://dx.doi.org/10.1080/14647893.2011.614333>

This dialogical article reflects stories of encounter. The unexpected collision of our worlds and thoughts, and the familiarities and tensions we came to recognize in each other's experiences when facilitating collaborative research in two communities of dance teachers, has given birth to this shared line of inquiry. We have come to acknowledge that our collaborative endeavor to better understand our experiences facilitating dance professionals in exploring their cultures of dance teaching and pedagogical practices has offered reassurance, inspiration, even discomfort, as it has led us to newfound awareness of our ways of doing research and facilitating inquiry. Our two-year dialogical journey has led us to consider the chaotic and continually shifting, transformative process of constructing oneself as a researcher in the midst of converging locations, spaces, time and others. In this article, we consider how perspectives gained from our experiences facilitating dance teachers in inquiry, and our conversations about these encounters, might align with, challenge or present new ways of looking at collaborative inquiry as a mode of research, learning, discovery and change.

Dysthe, O., & Engelsen, K. S. (2011). Portfolio practices in higher education in Norway in an international perspective: macro-, meso- and micro-level influences. *Assessment & Evaluation in Higher Education*, 36(1), 63-79. doi: 10.1080/02602930903197891

The point of departure for this article is the 'chameleon' aspect of portfolios and the diversity of portfolio models and practices in higher education on the international arena today. Our aim is to investigate the contextual character of this diversity by using Norwegian higher education as an example and to show how

macro-level influences, particularly the Bologna related Quality Reform, have shaped the overall development of portfolio practices. We contextualise and discuss the sudden expansion of learning and assessment portfolios in Norway after 2002. Our data are primarily a nationwide survey of portfolio practices, supplemented by findings in a research evaluation of the reform and previously published case studies. The majority of portfolios in Norwegian higher education can be classified as 'disciplinary-based course work portfolios' and they typically serve a combination of learning and assessment purposes. But within this category we found systematic differences between different educational areas where the main dividing line seems to be between professional and non-professional education. The underlying research perspective is sociocultural and this directs our attention to contexts, cultures and traditions that shape portfolio development and practices rather than to individual differences (micro level).

## E

Eagleton S, Muller A. (2011). Development of a model for whole brain learning of physiology. *Adv Physiol Educ* 35: 421-426, 2011; doi:10.1152/advan.00007.2011\*

In this report, a model was developed for whole brain learning based on Curry's onion model. Curry described the effect of personality traits as the inner layer of learning, information-processing styles as the middle layer of learning, and environmental and instructional preferences as the outer layer of learning. The model that was developed elaborates on these layers by relating the personality traits central to learning to the different quadrants of brain preference, as described by Neethling's brain profile, as the inner layer of the onion. This layer is encircled by the learning styles that describe different information-processing preferences for each brain quadrant. For the middle layer, the different stages of Kolb's learning cycle are classified into the four brain quadrants associated with the different brain processing strategies within the information processing circle. Each of the stages of Kolb's learning cycle is also associated with a specific cognitive learning strategy. These two inner circles are enclosed by the circle representing the role of the environment and instruction on learning. It relates environmental factors that affect learning and distinguishes between face-to-face and technology-assisted learning. This model informs on the design of instructional interventions for physiology to encourage whole brain learning.

Eaves, M. (2011). The relevance of learning styles for international pedagogy in higher education. *Teachers and Teaching*, 17(6), 677-691. doi: 10.1080/13540602.2011.625143

As the number of international students and transnational education agreements continue to rise at an unprecedented rate in many countries, an area of research that continues to lag behind is how far students' learning styles can adapt to different educational contexts. Learning styles research has recently developed from simplistic yet popular models, subjected to recent heavyweight criticisms concerning their validity and reliability, into more complex conceptual models

based on metacognitive concepts, processing strategies and motivation. Research based on the latter models tends to be limited to learning styles comparisons of Asian students, particularly from Confucian Heritage Cultures and Western samples. The findings from both psychometric and non-psychometric studies indicate some cultural differences in learning styles. However, there are growing concerns that the application of learning styles concepts from Western cultures and research may not be valid in non-Western education contexts, due to fundamental differences in learning processes or misinterpretation of international students' learning behaviour. This article considers recent developments in the area of learning styles research, including concerns over the validity of popular measures, and their application to international pedagogy.

Ebrahim, H. B., Verbeek, D. C., & Mashiya, J. N. (2011). Enabling roles to reclaim teacher agency: Insights from the Advanced Certificate in Teaching (Foundation Phase). *Perspectives in Education*, 29(4), 58-65.

In developing the Advanced Certificate in Teaching (ACT) as a professional qualification for continuing teacher education for early schooling at the University of KwaZulu-Natal we asked the following: "What are the enabling roles foundation phase teachers need to play in order to reclaim their space as agents who significantly influence their professional practice and how can they be assisted to become fully engaged in these roles?" We believe that this focus is timely and critical given the current effect of the discourse of standards and accountability on teacher agency. In this article we present a framework of enabling roles which create opportunities for teacher-students to experience critical reflection, transformatory learning and the development towards stronger agency. A significant implication of the framework is that teachers gain the experience of being part of a community in dialogue instead of a blunt tool for externally imposed curriculum demands. Space is created for both personal direction and the development of practice from within the foundation phase. We are mindful of the fact that, once the course has been completed and the qualification obtained, the lack of personal commitment and institutional pressure to teach in government-sanctioned ways may create slippage and constrain liberating roles. Nonetheless, we feel that, in introducing the roles in the ACT developmental opportunities for teacher autonomy and transformative professionalism will be created.

Edelbring, S. (2012). Technology in education: Necessary but not sufficient. Understanding learning with virtual patients. Ph. D. Dissertation, Stockholm, Sweden: Karolinska Institute Centre for Medical Education\*

With the rapid technological development and the broadening access to computers over recent decades, several technological innovations have emerged in medical education, including virtual patients. Students' use of virtual patients is proposed to fill gaps in clinical exposure, and train clinical reasoning. However, higher education faculties have been slow to adopt new technology as a regular part of curricula. Virtual patients and similar technologies have either been implemented by enthusiastic teachers or by university policy directives. A possible reason for the low uptake of virtual patients in curricula is a lack of a clear understanding of how their use contributes to student learning.

The four studies described in this thesis address learning with virtual patients from three perspectives: the student perspective on learning with virtual patients; the course integration perspective; and the individual study strategy perspective. A mixed methods approach was used given the overarching interest to seek understanding and clarification of student learning with virtual patients.

Data were gathered by research interviews with medical students during clerkship, and by questionnaires in clerkship preparatory courses. Interview data was analysed by a phenomenological approach, and scales were formed from questionnaire responses which were analysed cross-sectionally for the four teaching hospitals affiliated with the medical programme at Karolinska Institutet. Use frequency, students' perceived benefit of virtual patients, their wish for more guidance on using virtual patients and, wish for more assessment and feedback on virtual patient work were targeted in the questionnaires. Furthermore, the students' preferences of study strategies were analysed in relation to the virtual patient activity using regulation strategy scales from the Inventory of Learning Styles devised by Jan Vermunt.

The findings suggested that virtual patient learning activities offer possibilities of applying biomedical knowledge to clinical cases in a way that was engaging and supported decision-making. Furthermore, the virtual patient learning activities were perceived as having an intermediate function between textbook learning and learning with actual patients. The consequences of integration strategies in the course context were influential for how students perceived the benefit of learning with virtual patients.

Intensity of processing of virtual patient cases, and presenting cases for other students were associated with high perceived benefit of virtual patient learning activities. Students' self-regulation abilities were also associated with perceived benefit of the virtual patient learning activities, although to a lesser extent than the influence of the course context.

The technology of virtual patients provides possibilities that enhance student learning, and should thus be a necessary part of education. However, this research show that an educational integration strategy is needed that supports students' active processing of virtual patient cases.

Edelbring, S., Dastmalchi, M., Hult, H., Lundberg, I. E., & Dahlgren, L. O. (2011). Experiencing virtual patients in clinical learning: a phenomenological study. *Advances in Health Sciences Education*, 16(3), 331-345. doi: 10.1007/s10459-010-9265-0

Computerised virtual patients (VPs) are increasingly being used in medical education. With more use of this technology, there is a need to increase the knowledge of students' experiences with VPs. The aim of the study was to elicit the nature of virtual patients in a clinical setting, taking the students' experience as a point of departure. Thirty-one students used VPs as a mandatory part of an early clinical rotation in rheumatology. Using the qualitative approach of phenomenology, we interviewed these students and then analysed data regarding their experiences of VPs as a learning activity. The result shows that students perceived VP activities in relation to actual patients, the clinical context and other learning activities. The VPs represented typical clinical cases which encouraged clinical reasoning and allowed for decision making. The students experienced the activities as integrating biomedical knowledge and clinical experience, providing structure that prepared for the unstructured clinical environment and patient encounters under unstressful conditions. However, the VPs were experienced as lacking the emotional interactivity and complexity of actual patients. Theoretical frameworks of clinical reasoning and experiential learning are suggested as foundations for further educational integration of VPs in the clinical environment. VP activities during clinical rotations provide experiences of clinical reality and allow students to solve problems actively. These features are dependent on VP technology but are also contingent on the surrounding environment.

Ehlman, K. & Ligon, M. (2012). THE APPLICATION OF A GENERATIVITY MODEL FOR OLDER ADULTS. *International Journal of Aging & Human Development* 74(4): 331-344

Generativity is a concept first introduced by Erik Erikson as a part of his psychosocial theory which outlines eight stages of development in the human life. Generativity versus stagnation is the main developmental concern of middle adulthood; however, generativity is also recognized as an important theme in the lives of older adults. Building on the work of Erikson, McAdams and de St. Aubin (1992) developed a model explaining the generative process. The aims of this article are: (a) to explore the relationship between generativity and older adults as it appears in research literature; and (b) to examine McAdam's model and use it to explain the role of generativity in older adults who share life stories with gerontology students through an oral history project.

Eilam, B. (2012). System thinking and feeding relations: learning with a live ecosystem model. *Instructional Science*, 40(2), 213-239. doi: 10.1007/s11251-011-9175-4

Considering well-documented difficulties in mastering ecology concepts and system thinking, the aim of the study was to examine 9th graders' understanding of the complex, multilevel, systemic construct of feeding relations, nested within a larger system of a live model. Fifty students interacted with the model and manipulated a variable within it in the course of this model ecosystem yearlong inquiry, in a laboratory/traditional learning environment. Students' written responses to 10 pretest-posttest probes underwent fine-grain analysis regarding 53 descriptors of the system of feeding relations. Overall, students exhibited initial system thinking, manifested in different levels of increased ability to identify:

system components, processes, levels, and their interrelations; ecosystem patterns and control mechanisms; equilibrium shifts; and spatial and temporal aspects of feeding relations. However, many still exhibited a deficient understanding of the system studied, reflecting a deficient system thinking. Implications for systemic ecology teaching and learning are discussed.

Ekici, Gulay (2011). Analysis of variables that express perception of high school students towards the class environment of biology laboratories. *3rd World Conference on Educational Sciences (WCES)* Feb 03-07, 2011 Istanbul, TURKEY Ankara Univ, Bahcesehir Univ, Near E Univ 15: 1901-1905 ISBN 1877-0428

The aim of this research is to identify the variables that express the perception of the students towards biology laboratory class environment. The biology laboratory environment inventory, developed by Fraser, Gidding & McRobbie (1992), Learning style inventory of Kolb (1985) and biology self-efficacy inventory of Ekici (2009) are used in this research. The significant results of the research; the perception of the students towards biology laboratory environment has a positive and meaningful relation with their sex, biology self-efficacy perception level, learning style and overall academic success, but any relation is not defined with class variable. The results of regression analysis introduces that the perception of the students towards biology laboratory environment has a positive and meaningful relation with their sex, biology self-efficacy perception level, learning style and overall academic success, but the classroom variable has a negative and meaningful effect on it. These interpretative variables signify % 41.9 of total variance in the perception towards biology laboratory class environment. (C) 2011 Published by Elsevier Ltd.

Ergin, S. & Sari, M. (2012). Effects of the 4MAT instruction method on the achievement of high school students with different learning styles on the subjects of work, power and energy in physics. *Energy Education Science and Technology Part B-Social and Educational Studies*

The purpose of this study is to examine the effect of 4MAT (4 Mode Application Techniques) instruction on the achievement of high school students with different learning styles on the subjects of work, power and energy in physics education. The subjects were 124 students from four 10th grade classes of two high schools located in Ankara. The two of the four classes were selected as experimental group and the remaining two classes as control group. The students were taught for 7 weeks. The experimental group was taught via 4MAT instruction method prepared by the researcher, whereas the control group was taught using lecturing and question-answer methods. A quasi-experimental design with pretest-posttest control group was used in this study. Pilot applications were carried out for validity and reliability of the measurement tools used in this study. Prior to the study, in order to determine the equivalence of the experimental group and the control group, Work-Power-Energy Achievement Test (WPEAT) was applied. Similarly, prior to the study, so as to determine the learning styles of the students, Kolb Learning Style Inventory (KLSI) was applied. Following the application, WPEAT was applied to both groups also as a posttest. The following findings



were obtained in this study. The students had different learning styles and 4MAT instruction method increased students' achievement significantly. In addition, the answers given by the students to the open-ended questions asked in the classes where 4MAT instruction method was applied indicate that this method was welcomed by the students. It is of importance that the 4MAT instruction method should be used in physics lessons with a view to boost the students' achievements and to help students develop positive attitudes toward physics.

Eriksen, C., Gill, N., & Bradstock, R. (2011). Trial by Fire: natural hazards, mixed-methods and cultural research. *Australian Geographer*, 42(1), 19-40. doi: 10.1080/00049182.2011.546317

This paper considers the issues of research 'relevance' and 'use' to reflect upon a cultural geography research project on bushfire that did not begin with any specific aim of being useful to policy makers but which has garnered considerable and ongoing interest from a broad audience. It provides an example of how the integration of quantitative and qualitative research methods and data can enhance research into cultural aspects of natural hazards whilst simultaneously playing a key role in ensuring that the research results are of interest to a wide range of groups. Using a mixed-methods research approach was found to provide insight into complex factors that influence attitudes and actions towards bushfire amongst diverse landholders in rural-urban interface areas in south-east Australia. We argue that mixed-methods research is a powerful tool in building and enhancing a cultural geography that has policy relevance, retains analytical depth, and is acceptable to risk managers. The ability of cultural geography through mixed-methods research to illuminate how socio-cultural processes are central to environmental attitudes and preparedness behaviour has direct relevance to recent international discussions of how to manage the vulnerability of the growing number of people living in bushfire-prone rural-urban interface areas.

Eriksen, C., & Prior, T. (2011). The art of learning: wildfire, amenity migration and local environmental knowledge. *International Journal of Wildland Fire*, 20(4), 612-624. doi: 10.1071/wf10018

Communicating the need to prepare well in advance of the wildfire season is a strategic priority for wildfire management agencies worldwide. However, there is considerable evidence to suggest that although these agencies invest significant effort towards this objective in the lead up to each wildfire season, landholders in at-risk locations often remain under-prepared. One reason for the poor translation of risk information materials into actual preparation may be attributed to the diversity of people now inhabiting wildfire-prone locations in peri-urban landscapes. These people hold widely varying experiences, beliefs, attitudes and values relating to wildfire, which influence their understanding and interpretation of risk messages - doing so within the constraints of their individual contexts. This paper examines the diversity of types of local environmental knowledge (LEK) present within wildfire-prone landscapes affected by amenity-led in-migration in south-east Australia. It investigates the ways people learn and form LEK of wildfire, and how this affects the ability of

at-risk individuals to interpret and act on risk communication messages. We propose a practical framework that complements existing risk education mechanisms with engagement and interaction techniques (agency-community and within community) that can utilise LEK most effectively and facilitate improved community-wide learning about wildfire and wildfire preparedness.

Eubank, D., Orzano, J., Geffken, D., & Ricci, R. (2011). Teaching Team Membership to Family Medicine Residents: What Does It Take? *Families Systems & Health*, 29(1), 29-43. doi: 10.1037/a0022306\*

Primary care reform proponents advocate for patient-centered medical homes built on interdisciplinary teamwork. Recent efforts document the difficulty achieving reform, which requires personal transformation by doctors. Currently no widely accepted curriculum to teach team membership in Family Medicine residencies exists. Organizational Development (OD) has 40 years of experience assessing and teaching the skills underlying teamwork. We present a curriculum that adapts OD insights to articulate a framework describing effective teamwork; define and teach specific team membership skills; reframe residents' perception of medicine to make relationships relevant; and transform training experiences to provide practice in interdisciplinary teamwork. Curriculum details include a rotation to introduce the new framework, six work-shops, experiential learning in the practice, and coaching as a teaching method. We review program evaluations. We discuss challenges, including institutional resources and support, incorporation of a new language and culture into residency training, recruitment "for fit," and faculty/staff development. We conclude that teaching the relationship skills of effective team membership is feasible, but hard. Succeeding has transformative implications for patient relationships, residency training and the practice of family medicine.

Eubank, D., Geffken, D., Orzano, J. & Ricci, R. (2012). Teaching Adaptive Leadership to Family Medicine Residents: What? Why? How? *Families Systems & Health* 30(3): 241-252\*

Health care reform calls for patient-centered medical homes built around whole person care and healing relationships. Efforts to transform primary care practices and deliver these qualities have been challenging. This study describes one Family Medicine residency's efforts to develop an adaptive leadership curriculum and use coaching as a teaching method to address this challenge. We review literature that describes a parallel between the skills underlying such care and those required for adaptive leadership. We address two questions: What is leadership? Why focus on adaptive leadership? We then present a synthesis of leadership theories as a set of process skills that lead to organization learning through effective work relationships and adaptive leadership. Four models of the learning process needed to acquire such skills are explored. Coaching is proposed as a teaching method useful for going beyond information transfer to create the experiential learning necessary to acquire the process skills. Evaluations of our efforts to date are summarized. We discuss key challenges to implementing such a

curriculum and propose that teaching adaptive leadership is feasible but difficult in the current medical education and practice contexts.

Evans, C., & Cools, E. (2011). Applying styles research to educational practice. *Learning and Individual Differences*, 21(3), 249-254. doi: 10.1016/j.lindif.2010.11.009

## F

Farini, F. (2011) Cultures of education in action: Research on the relationship between interaction and cultural presuppositions regarding education in an international educational setting. *Journal of Pragmatics* 43: 2176-2186\*

Children's International Summer Villages (CISV) is an international organization that offers opportunities for children to learn that, despite national or cultural differences, they are members of the human community in an interdependent world. The most important CISV program of activities is the "Village", which is a four-week meeting including between 9 and 11 national delegations of 11-year-old children. Since 1951, several villages have been organized on five continents and have involved thousands of children. CISV villages place particular emphasis on children's self-realization, promoting children's sense of responsibility and their skills in planning and managing social contexts.

In this article, we analyze adult-child interactions recorded at eight CISV villages in Italy during the summers of 2006 and 2007. A total of 412 h of adult-children interaction were recorded in the context of a research evaluating the concrete application of pedagogical concepts such as the promotion of active participation among children and the consideration of children's creativity.

We analyze the organization of interactive sequences, adjacency pairs and projections of actions and reactions. Our analysis shows that, despite the emphasis on children's autonomy, specific interactional devices are used by the adults to maintain control over the trajectory and the "agenda" of the interactions.

Farooq, M. S. (2011). *University Students' Cognitive Styles, Learning Styles, and Academic Performance: Evidence from Pakistan*. Ed.D. thesis. UNIVERSITE LUMIERE LYON 2\*

Learning remained at top priority for educators throughout all the times to develop sensitivity, practicality and critical thinking in their students. Some students become good learners and some do not. The reason behind this disparity in performance of students is the diversity in cognitive and learning styles of students. The diverse learning needs of learners lead the psychologists from centuries to focus on the mechanism of learning and explore the ways to make the teaching learning process effective. These unique cognitive style and a preferred learning styles allow the individuals to optimize their strengths and polish their personalities. The main purpose of this study was to assess the cognitive styles and learning styles of university students belonging to different areas of specialization. This inquiry was also intended to explore the relationship of these styles with the students' academic performance and other different demographic variables. This Study was conducted by using the Cognitive Style Questionnaire and Kolb's Learning Style Inventory to assess the cognitive styles and learning

styles of university students respectively. A questionnaire was also used to collect the demographic information of the respondents. The sample of this study comprised of 1023 respondents, who were female and male graduate students belonged to 24 different fields of study. They were mostly unmarried with the age group of 19-24 years belonging to urban and rural areas. The information collected on demographic questionnaire were about age, gender, marital status, domicile, family size, field of study, medium of instruction at school level, and their academic scores obtained at secondary, higher secondary and university level examinations. The information collected through Cognitive Style Questionnaire and Learning Style Inventory helped to assess their styles respectively. The treatment and analysis of data reveals that the respondents possessed 80 different types of cognitive profiles consisting of 12 different dimensions of four selected cognitive styles. For each cognitive style most of the students were with Visual, Reflexive/Impulsive mixed, Focusing, and Field Dependent/Field Independent mixed cognitive style dimensions. The academic performance was found statistically independent from the effect of cognitive styles. Data analysis also showed that majority of the sample students were with Diverger learning style followed by Assimilator learning style. Department wise position of respondents for their preferred learning styles showed that most of the respondents from all the departments prefer Diverger learning styles except Biochemistry & Biotechnology students who prefer Assimilator learning styles at the most. There was no student from different fields who preferred Assimilator learning style. A comparison showed that female students have more association with all learning styles than male students. Marital status and domicile of students does not affect cognitive style and learning style preference. Students' medium of instruction at school level also affected learning style preference. Learning styles have significant positive correlation with the marks obtained in secondary school and higher secondary school level examinations. Further it was also found that the marks obtained at university level examination have no significant relationship with learning styles of students. Students' field of study and learning styles has also significant association with each other. Learning styles have a significant relationship with Reflexive, Impulsive, and Reflexive/Impulsive mixed cognitive style of respondents. Medium of instruction has a statistical relationship with cognitive styles and learning styles of students. Professional development of secondary, higher secondary and university teachers should embrace the training about identification of cognitive styles and learning styles and enables them to adapt instructional strategies in accordance with the styles of their learners.

Fernandez-Samaca, L., & Ramirez, J. M. (2011). Learning Control Concepts in a Fun Way. *International Journal of Engineering Education*, 27(1), 187-199.

This paper proposes Hands-On sessions as a didactic strategy for lectures in theoretical courses, where students can construct and understand control concepts when they play a game designed by the teacher. The teacher uses a game to introduce the topic in order to motivate the students to learn in a fun way and improve their knowledge retention. Students develop activities in groups of three to five members; they follow instructions from a guideline describing the game.

Hands-On sessions offer an alternative to learning control theory from concrete experiences so students can grasp knowledge and relate the concepts to simple events. The game can be seen as a road to achieving concepts; it has key issues that allow students to construct knowledge. This approach proposes employing Hands-On sessions using simple materials instead of high-technology complex elements, software, or a specialized space. This work describes a model to design and develop Hands-On sessions. It also introduces activities designed for students to learn topics such as: describing a typical control loop, analysis in the time domain, stability, root locus analysis, and frequency analysis, for control courses in an engineering program. Finally, the paper describes feedback and comments from the students.

Farini, F. (2011). Cultures of education in action: Research on the relationship between interaction and cultural presuppositions regarding education in an international educational setting. *Journal of Pragmatics*, 43(8), 2176-2186. doi:

10.1016/j.pragma.2011.02.001\*

Children's International Summer Villages (CISV) is an international organization that offers opportunities for children to learn that, despite national or cultural differences, they are members of the human community in an interdependent world. The most important CISV program of activities is the "Village", which is a four-week meeting including between 9 and 11 national delegations of 11-year-old children. Since 1951, several villages have been organized on five continents and have involved thousands of children. CISV villages place particular emphasis on children's self-realization, promoting children's sense of responsibility and their skills in planning and managing social contexts. In this article, we analyze adult-child interactions recorded at eight CISV villages in Italy during the summers of 2006 and 2007. A total of 412 h of adult-children interaction were recorded in the context of a research evaluating the concrete application of pedagogical concepts such as the promotion of active participation among children and the consideration of children's creativity. We analyze the organization of interactive sequences, adjacency pairs and projections of actions and reactions. Our analysis shows that, despite the emphasis on children's autonomy, specific interactional devices are used by the adults to maintain control over the trajectory and the "agenda" of the interactions. .

Fee, A., & Gray, S. J. (2011). Fast-tracking expatriate development: the unique learning environments of international volunteer placements. *International Journal of Human Resource Management*, 22(3), 530-552. doi: 10.1080/09585192.2011.543631

International volunteering has traditionally been viewed as a pursuit that, while admirable, provided little benefit for the volunteer beyond altruistic satisfaction. Yet several recent studies suggest that an international volunteer placement can fast-track the development of valuable global skills and capabilities. To date, no research has offered a systematic explanation for this. This article presents a framework that outlines the unique mechanisms of international volunteer placements that contribute to them being fertile learning environments for expatriates. In doing so, it draws on evidence from a longitudinal study of the

learning experiences of a sample of international volunteers from Australia and New Zealand.

Fennell, M., & Segal, Z. (2011). Mindfulness-based cognitive therapy: culture clash or creative fusion? *Contemporary Buddhism*, 12(1), 125-142. doi: 10.1080/14639947.2011.564828

Mindfulness-based cognitive therapy creates an unlikely partnership, between the ancient tradition of mindfulness meditation rooted in Buddhist thought, and the much more recent and essentially western tradition of cognitive and clinical science. This article investigates points of congruence and difference between the two traditions and concludes that, despite first appearances, this is a fruitful partnership which may well endure.

Ferkany, M. & Whyte, K. P.(2012). The Importance of Participatory Virtues in the Future of Environmental Education. *Journal of Agricultural & Environmental Ethics* 25(3): 419-434\*

Participatory approaches to environmental decision making and assessment continue to grow in academic and policy circles. Improving how we understand the structure of deliberative activities is especially important for addressing problems in natural resources, climate change, and food systems that have wicked dimensions, such as deep value disagreements, high degrees of uncertainty, catastrophic risks, and high costs associated with errors. Yet getting the structure right is not the only important task at hand. Indeed, participatory activities can break down and fail to achieve their specific goals when some of the deliberators lack what we will call participatory virtues. We will argue for the importance of future research on how environmental education can incorporate participatory virtues to equip future citizens with the virtues they will need to deliberate about wicked, environmental problems. What is the role of education for deliberative skills and virtues relative to other aspects of environmental education, such as facts and values education? How important is it relative to careful design of the deliberative process? What virtues really matter?

Fleming, S., McKee, G., & Huntley-Moore, S. (2011). Undergraduate nursing students' learning styles: A longitudinal study. *Nurse Education Today*, 31(5), 444-449. doi: 10.1016/j.nedt.2010.08.005\*

This paper reports on the main findings of a longitudinal study of the learning styles of one cohort of undergraduate pre-registration nursing students at an Irish university. The Honey and Mumford (2000a) Learning Styles Questionnaire was administered to a sample of students in their first (n=202) and final year of study (n = 166), the final sample number (58) was based on matched pairs. The most common dominant learning style in first year was the dual learning category (35%) while a large proportion of the students (53%) in their final year had no dominant learning style. The preferred learning style of students in their first (69%) and final (57%) year was reflector. Learning styles were significantly different at the two time points and there was a significant relationship between some learning styles and students' age but not with academic achievement. Total

scores of all learning styles showed significant improvements across the two time points of the study. An important implication for nurse education practice is the need for nurse educators to be aware of students' learning styles and in an attempt to maximise students' learning potential, utilise a range of teaching and learning methodologies and assessments that develop all learning styles.

Forcada, N., Casals, M., Roca, X., Gangoellés, M., & Fuertes, A. (2011). Improving Design Competences: Experiences in Group-based Learning Based on ICTs in a Blended Learning Environment. *International Journal of Engineering Education*, 27(2), 292-302.

The aim of this research was to design and implement a learning methodology based on continuous assessment in group-based learning in a blended learning environment with a view to improving design skills and identifying the attitude of learners toward this methodology. This was achieved through a case study of the Industrial Plants course of the Degree in Industrial Scheduling at the School of Industrial and Aeronautical Engineering of Terrassa (ETSEIAT) of the Universitat Politècnica de Catalunya (UPC) during the 2008-2009 academic year. Qualitative and quantitative methods, including questionnaires, interviews and result analysis, were used in the case study. The findings show that the use of information and communication technologies (ICTs) for improving design skills in group-based learning is feasible and delivers good learning results. Students and instructors appreciated the opportunity for students to work in groups, in combination with face-to-face and ICT sessions, and to study using the written material and the correction protocol that was provided.

Forsman, L. (2010). EFL Education in the New Millennium: Focus on the Promotion of Awareness of Difference and Diversity. *Scandinavian Journal of Educational Research*, 54(5), 501-517. doi: 10.1080/00313831.2010.508926

This article addresses the changing role of the education of English as a Foreign Language by presenting results from a study aimed at problematizing and increasing the understanding of the inclusion of cultural aspects in the language classroom. The study from which this article is drawn consists of theoretical explorations into the field, linked to an action research project exploring the promotion of intercultural competence during the three years of lower secondary school of a class of 17 minority Swedish-speaking students in Finland (aged 13-15). The focus of this article is on one of the main areas explored in the study: the promotion of awareness of difference and diversity to help prevent and modify stereotypical views through a constructivist framework of learning, including the implementation of experiential and dialogical approaches in the classroom.

Francis, C. A., Jordan, N., Porter, P., Breland, T. A., Lieblein, G., Salomonsson, L., . . . Langer, V. (2011). Innovative Education in Agroecology: Experiential Learning for a Sustainable Agriculture. *Critical Reviews in Plant Sciences*, 30(1-2), 226-237. doi: 10.1080/07352689.2011.554497

The transdisciplinary field of agroecology provides a platform for experiential learning based on an expanded vision of research on sustainable farming and food systems and the application of results in creating effective learning landscapes for

students. With increased recognition of limitations of fossil fuels, fresh water, and available farmland, educators are changing focus from strategies to reach maximum yields to those that feature resource use efficiency and resilience of production systems in a less benign climate. To help students deal with complexity and uncertainty and a wide range of biological and social dimensions of the food challenge, a whole-systems approach that involves life-cycle analysis and consideration of long-term impacts of systems is essential. Seven educational case studies in the Nordic Region and the U.S. Midwest demonstrate how educators can incorporate theory of the ecology of food systems with the action learning component needed to develop student potentials to create responsible change in society. New roles of agroecology instructors and students are described as they pursue a co-learning strategy to develop and apply technology to assure the productivity and security of future food systems.

Franzoni-Velazquez, A. L., Cervantes-Perez, F. & Assar, S. (2012). A Quantitative Analysis of Student Learning Styles and Teacher Teachings Strategies in a Mexican Higher Education Institution. *Journal of Applied Research and Technology*. 10(3): 289-308\*

Research on learning processes has shown that students tend to learn in different ways and prefer to use different teaching resources. The understanding of learning styles can be used to identify, and implement, better teaching and learning strategies, in order to allow students to acquire new knowledge in a more effective and efficient way. In this study we analyze similarities and differences in learning styles among students enrolled in computing courses, in engineering and social sciences programs at the Instituto Tecnológico Autónomo de México (ITAM). In addition, we also analyze similarities and differences among the teaching strategies shown by their corresponding teachers. A comparative analysis on student learning profiles and course outcomes, allow us to suggest that, despite academic program differences, there are strong similarities among the students learning styles, as well as among the teaching styles of their professors. Seemingly, a consistent pattern of how these students learn also exists: Active, Sensitive, Visual and Sequential. At the end of the paper, we discuss how these findings might have significant implications in developing effective pedagogic strategies, as well as didactic multimedia based materials for each one of these academic programs.

Fuller, I. C. (2012). Taking students outdoors to learn in high places. *Area*, 44(1), 7-13. doi: 10.1111/j.1475-4762.2010.00990.x

Fieldwork is an integral component of the geography degree. It is perceived by lecturers and students alike as an enjoyable, valuable learning experience outside in the real world. But what determines the type of field experiences we offer? To what extent is the fieldwork experience informed by best practice in pedagogy, research location and field, institutional practice/constraints, leader's outdoor experience, or a combination of all these and more? This paper offers a personal reflection on physical geography fieldtrip design in New Zealand, Britain and Spain involving New Zealand and British students over a period of 14 years,



spanning two contrasting university systems and two institutions. A range of learning experiences is considered: residential and day trips, Cook's Tours and detailed investigations. These cover a range of academic and altitudinal levels from first year to final year undergraduate and from sea level to mountain top. Key drivers in the design and development of these field courses are considered in order to explore the reason for taking students to a plethora of high places, defined not only in the sense of altitude, but also in the sense of perceived intrinsic geographical value. The role played by the great outdoors in fostering development of geographical knowledge is discussed by considering the notion that taking students outside to learn in high places will automatically be of a cognitive advantage and intrinsically foster deeper levels of learning. The outdoor environment has much to offer the development of geographical knowledge among student cohorts, but care is required to maximise its potential.

## G

Gaba, D. M. (2011). A Remarkable Journal Impact Factor for Simulation in Healthcare. *Simulation in Healthcare*, 6(6), 313-315. doi: 10.1097/SIH.0b013e31823ca798

Garber, L. L., Hyatt, E. M., Boya, U. O. & Ausherman, B. (2012) The association between learning and learning style in instructional marketing games. *Marketing Education Review*. 22(2): 167-183 \*

To understand how learners of respective types respond to marketing games, a joint space generated by canonical correlation analysis is used to recreate Kolb's learning style-type plot and locate business students as points within it according to their learning style types. Two hundred twenty-three undergraduate students played The Marketing Game! and completed exit surveys soliciting their attitude toward the game experience and Kolb's learning styles inventory. Results indicate that marketing games offer all learners a positive experience. Such inclusiveness is achieved because students can frame the game experience to match their preferred learning styles. Pedagogical implications are discussed.

Garielsson J. & Politis, D. (2012) Work experience and the generation of new business ideas among entrepreneurs: An integrated learning framework. *International Journal of Entrepreneurial Behaviour & Research* 01/2012; 18(1):48-74.  
DOI: 10.1108/13552551211201376 \*

**ABSTRACT** Purpose – This paper seeks to develop an integrated framework to examine how entrepreneurs' work experience is associated with the generation of new business ideas. The framework combines human capital theory with theory and research on entrepreneurial learning.

Design/methodology/approach – A statistical analysis on a sample of 291 Swedish entrepreneurs is conducted.

Findings – The paper finds that a learning mind-set that favors exploration is the strongest predictor of the generation of new business ideas. It also finds that breadth in functional work experience seems to favor the generation of new business ideas while deep industry work experience is negatively related to new business idea generation. In addition, the paper finds indications that a learning mind-set that favors exploration is required to more fully benefit from

investments in human capital.

Research limitations/implications – The study's findings add to knowledge of how investments in human capital via work experience, and the employment of a learning mindset that favors exploration, influence performance outcomes in the early stages of the entrepreneurial process.

Practical implications – The study's findings suggest that entrepreneurs should develop and nurture a learning mind-set that favors exploration as this will increase their ability to generate more new business ideas. Moreover, movements across different functional work areas appear to have great potential as sources of ideas for new products and markets.

Originality/value – Prior empirical studies have not taken individual learning preferences among entrepreneurs into account. Nor have they explicitly tested the effect of depth versus breadth in work experience. The paper thus provides novel insights with respect to how these factors interact in the process of generating new business ideas

Galdames, I. S., Gandarilla, A. P., Lopez, M. C., Matamala, D. Z., & Marchant, C. S. (2010). Professional Modeling of Learning Styles does Exist? *International Journal of Morphology*, 28(1), 13-18.

The identification of learning styles has been a permanent teacher preoccupation, showing how each student learns and studies, allowing to modify the design and implementation of learning processes, making them more effective in training a health professional. The present study analyzed the differences of the learning styles in a group of students in Kinesiology measured in the first and last years of his career. We designed a descriptive exploratory longitudinal quantitative study by applying the questionnaire learning styles Honey-Alonso (CHAEA) on Kinesiology students, Universidad de Talca. A first analysis of learning styles was conducted on 48 students the first half of his career in 2003 and then a second analysis in 38 of these students in the latter half of his career in 2007. t test for related samples was used to establish its significance. The students had all learning styles. The prevalence was higher in reflexive style, then theoretical, pragmatic and finally active styles. Preferences for reflexive, pragmatic and active learning styles had no significant differences between the years 2003-2007. Only the theoretical style increased their preferences in 2007. Our research highlights the importance of identifying the ways students study and learn during the early years of his career, this information may be used to develop methodological strategies that promote the acquisition of better skills.

Gemmell, R. M., Boland R. J. & Kolb, D. A. (2011). The socio-cognitive dynamics of entrepreneurial ideation. *Entrepreneurial Theory and Practice* , 36(5): 1053-1073  
DOI: 10.1111/j.1540-6520.2011.00486.x.\*

Entrepreneurs need creative ideas to develop innovative new products. We interviewed 32 technology entrepreneurs to generate a grounded theory about how technology entrepreneurs use social behaviors, techniques and cognitive processes to attain, develop, refine, validate and filter (for usefulness) creative ideas for successful new products, processes or services. The results reveal a complex,

cyclical and recursive multi-level social process with emphasis on active and social experimentation. Greatest ideational productivity occurs when strong social ties interactively solve problems in an environment of trust -- in particular, when “Trusted Partners” exchange and refine ideas through a form of shared cognition. Findings will be of great interest to researchers interested in entrepreneurship, social creativity and management team dynamics. Practitioners will benefit from this new insight into the methodologies and practices of successful entrepreneurs.

Gemmell, R. M. (2012). Socio-cognitive foundations of entrepreneurial venturing. Unpublished Ph. D Dissertation. Weatherhead School of Management, CWRU.\*

This dissertation employs a mixed methods approach to explore cognitive and social dimensions of entrepreneurial creativity and innovation. I interviewed 32 technology entrepreneurs to generate a grounded theory about how technology entrepreneurs use social behaviors, techniques and cognitive processes to attain, develop, refine, validate and filter (for usefulness) creative ideas for successful new products, processes or services. The results reveal a complex, cyclical and recursive multi-level social process with emphasis on iterative active and social experimentation. Successful entrepreneurs use experimentation to facilitate and accelerate learning, preferring to succeed or fail quickly. Greatest ideational productivity occurs when strong social ties interactively solve problems in an environment of trust – in particular, when “Trusted Partners” exchange and refine ideas through a form of shared cognition.

In the second study, I surveyed 172 technology entrepreneurs to determine the effects of learning style and learning flexibility on iterative decision methods and innovation decision speed, behavioral mediators hypothesized to produce entrepreneurial innovation and success. The Kolb learning style preference for active experimentation predicted the entrepreneur’s use of iterative methods to innovate and achieve success. The anticipated positive indirect influence of learning flexibility on innovation surprisingly occurred via a chain of two consecutive negative effects. Entrepreneurs with high learning flexibility move less swiftly to make key strategic innovation decisions; however, in doing so they are more innovative.

The final study explores the traits and interactions of “Trusted Partners” and their impact upon entrepreneurial learning capacity, innovativeness and firm performance. I surveyed 153 technology entrepreneurs, all of whom report having a Trusted Partner, and discovered that effective partnerships more likely develop between two individuals with broad combined expertise (high Partner Functional Breadth). However, partner expertise diversity negatively affected the ability of partners to engage in constructive learning interactions and exploratory learning. I conclude that cofounder/partners ideally need both breadth and significant expertise overlap to facilitate the shared language and vision necessary for productive collaborative learning interactions. These findings show that broad but overlapping partner/co-founder expertise, when combined with a strong sense of personal trust, leads to elevated absorptive capacity, innovation and performance within entrepreneurial firms.

Gemmell, R. M. (2011). Entrepreneurial Innovation as a Learning System. Quantitative Research Report in the Management of Sustainable Systems PhD Program at the Weatherhead School of Management, CWRU.\*

We surveyed 172 technology entrepreneurs to explore links between learning style and learning flexibility and decision making behaviors hypothesized to produce entrepreneurial innovation and success. Our findings reveal a system of entrepreneurial learning and innovation with subtle and surprising interactions between learning processes and behavioral mediators.

Gemmell, R. M., Kolb, D. A. & Somers, A. 2012. Entrepreneurial Innovation as a Learning System. Paper presented at the Academy of Management 2012 Conference.\*

We surveyed 172 technology entrepreneurs to explore links between learning style, learning flexibility and behavioral mediators hypothesized to produce entrepreneurial innovation and success. The Kolb learning style preference for active experimentation predicted the entrepreneur's use of iterative and experimental methods to innovate and achieve success. The positive indirect influence of learning flexibility on innovation was confirmed as expected; however, the positive effect occurs via a chain of two consecutive negative effects. Entrepreneurs with high learning flexibility move less swiftly to make key strategic decisions; however, by doing so they were more innovative.

Gerber, E., & Carroll, M. (2012). The psychological experience of prototyping. *Design Studies*, 33(1), 64-84. doi: 10.1016/j.destud.2011.06.005

While scholars have studied what design practices accomplish, few have considered how people feel when enacting these practices. An eighteen-month ethnographic study of a high-tech examined the psychological experience of engaging in the practice of low-fidelity prototyping. The study finds that the production and rapid visualization of multiple ideas through low-fidelity prototyping allows practitioners to reframe failure as an opportunity for learning, supports a sense of forward progress, and strengthens beliefs about creative ability. Results suggest how design work practices can be designed to help employees manage in uncertain conditions. (C) 2011 Elsevier Ltd. All rights reserved.

Gilmore, S., & Anderson, V. (2012). Anxiety and experience-based learning in a professional standards context. *Management Learning*, 43(1), 75-95. doi: 10.1177/1350507611406482

This article contributes an analysis of the use of experiential learning and reflection within a management education context where its use has received less attention: a learning environment dominated by the requirements of a professional body, where successful attainment of the qualification offered by the programme is linked with entry into the profession and to promotion within it. Using a psychoanalytic lens, this study shows the tension occurring between experiential learning methods and the 'expert knowledge' requirements of professional bodies. Tension is essential for learning but we argue that the consequences of it are uncertain and that it deserves more attention within the management education

domain. We highlight the ways by which anxiety generated by this tension can stimulate meaningful and reflexive outcomes but our findings also indicate that 'learning inaction' (Vince, 2008) is also possible, particularly where tutors are unable to provide a sufficient 'holding' environment when anxieties arising from experience-based learning and expert knowledge demands become too hard to bear.

Giuse, N. B., Koonce, T. Y., Storrow, A. B., Kusnoor, S. V. & Ye, F. (2012). Using Health Literacy and Learning Style Preferences to Optimize the Delivery of Health Information. *Journal of Health Communication* 17:122-140

Limited patient understanding of hypertension contributes to poor health outcomes. In 2 sequential randomized studies, the authors determined the impact of administering information tailored to health literacy level alone or in combination with preferred learning style on patients' understanding of hypertension. Patients with high blood pressure were recruited in an academic emergency department. In Experiment 1 (N = 85), the control group received only the routine discharge instructions; the intervention group received discharge instructions combined with information consistent with their health literacy level as determined by the Short Test of Functional Health Literacy. In Experiment 2 (N = 87), the information provided to the intervention group was tailored to both health literacy and learning style, as indicated by the VARK (TM) Questionnaire. To measure learning, the authors compared scores on a hypertension assessment administered during the emergency department visit and 2 weeks after discharge. Participants who received materials tailored to both health literacy level and learning style preference showed greater gains in knowledge than did those receiving information customized for health literacy level only. This study demonstrates that personalizing health information to learning style preferences and literacy level improves patient understanding of hypertension.

Glasziou, P., Ogrinc, G., & Goodman, S. (2011). Can evidence-based medicine and clinical quality improvement learn from each other? *Bmj Quality & Safety*, 20, I13-I17. doi: 10.1136/bmjqs.2010.046524

The considerable gap between what we know from research and what is done in clinical practice is well known. Proposed responses include the Evidence-Based Medicine (EBM) and Clinical Quality Improvement. EBM has focused more on 'doing the right things'-based on external research evidence-whereas Quality Improvement (QI) has focused more on 'doing things right'-based on local processes. However, these are complementary and in combination direct us how to 'do the right things right'. This article examines the differences and similarities in the two approaches and proposes that by integrating the bedside application, the methodological development and the training of these complementary disciplines both would gain.

Gleason, B. L., Peeters, M. J., Resman-Targoff, B. H., Karr, S., McBane, S., Kelley, K., Denetclaw, T. H. (2011). An Active-Learning Strategies Primer for Achieving Ability-Based Educational Outcomes. *American Journal of Pharmaceutical Education*, 75(9).

Active learning is an important component of pharmacy education. By engaging students in the learning process, they are better able to apply the knowledge they gain. This paper describes evidence supporting the use of active-learning strategies in pharmacy education and also offers strategies for implementing active learning in pharmacy curricula in the classroom and during pharmacy practice experiences.

Gogus, Aytac,& Gunes, Hatice, (2011). Learning Styles and Effective Learning Habits of University Students: A Case from Turkey *College Student Journal* 45(3): 586-598\*

This study investigates learning styles and effective learning habits in a Turkish University. Research based on a small private university in Istanbul found that the percentages of undergraduate students examined by Kolb's Learning Style Inventory listed in rank order from most to least were convergers first, assimilators second, accommodators and divergers (almost equal percentages) last. Moreover, this pattern remained stable when gender, faculty, grade level, academic success, weekly time management and study planning variables were at issue. On the other hand, it was observed that significantly higher levels of effective learning habits were revealed in women, seniors, academically successful ones, and students who studied regularly as well as engaged in social activities; however, using different learning styles did not make any contribution to the level of the use of effective learning habits. The results were discussed from an applied perspective and in the current higher education admission system in Turkey.

Goldman, E. F., Swayze, S. S., Swinehart, S. E., & Schroth, W. S. (2012). Effecting Curricular Change Through Comprehensive Course Assessment: Using Structure and Process to Change Outcomes. *Academic Medicine*, 87(3), 300-307. doi: 10.1097/ACM.0b013e318244739c

Effective curriculum oversight requires periodic assessment and continuous improvement of individual course offerings as well as their overall integration. The literature indicates that most course review processes do not use the breadth of information available or sufficiently encourage faculty feedback and reflection, limiting the value derived. Suggestions for which data to include in the course evaluations are available in the literature; however, there is little guidance on effective course review structures and processes. In this article, the authors discuss a course review process revised as part of a comprehensive reform of the George Washington University School of Medicine and Health Sciences undergraduate medical school curriculum management structure. The process improvements incorporated evaluation practices grounded in the medical and higher education literatures and included changes to the data reviewed as well as the review timing, participants, and structure. The revised process uses a broad array of information, requires significant faculty participation, and uses questioning, writing, and dialogue to encourage faculty reflection and learning. Course directors indicate that the process helps them focus, and the information and the perspectives of others lead to reflection and new ideas. Through the process, course directors have changed course content and teaching methods,

improved assessments of learning, and expanded course integration across the curriculum. The procedural and content elements of the process can be easily transferred to other medical schools and are applicable to other curricular reform projects across the continuum of medical education.

Gomez, C. X. & Carvajal, C. C. (2012). Factor analysis of ipsative data: A simulation study. *Psicothema* 24(2): 302-309 \*

Factor analysis of ipsative data: A simulation study. This paper introduces a summary on how to proceed to conduct a factor analysis when the input data are ipsative. The classical factor analysis procedures cannot be used because the covariance matrix is singular. Additionally, previous research on the optimal conditions to conduct factor analysis for ipsatized data is reviewed, and the results of a simulation study are presented. The study includes conditions of sample size, model complexity, and model specification (correct vs. incorrect). The results suggest that researchers should be careful when factor analyzing ipsatized data, particularly if they suspect that the model is incorrectly specified and includes a smaller number of factors.

Gonzalez Tirados, R.M. (2011) Experiential Learning Styles: Results In Engineering And Architecture Colleges. Abstract admitido en Congreso en Viena Abril 2011)

Grabbatin, B. & Fickey, A. (2012). Service-Learning: Critical Traditions and Geographic Pedagogy. *Journal of Geography* 111(6): 254-260

The rise of service-learning in higher education has been critiqued as little more than community service that encourages students to "do good," but fails to generate original scholarship or social change. In this article, we argue that service-learning gives geographers the opportunity to challenge these critiques, by demonstrating the practical and political implications of collaborative research methodologies, while conveying powerful conceptual understandings of inequality. We begin by interrogating the philosophical overlap between experiential and service-based learning in the educational philosophy of John Dewey. Using this foundational approach, several theoretical and methodological debates in geography are examined, celebrating and drawing lessons from classic and current service-learning programs. We conclude with a discussion and reflection on experiences with implementing similar pedagogical projects.

Grant, D. J., & Marriage, S. C. (2012). Training using medical simulation. *Archives of Disease in Childhood*, 97(3), 255-259. doi: 10.1136/archdischild-2011-300592

As the time available for medical education is shortened by reductions in training hours and the demands of modern healthcare delivery, educators are increasingly looking towards simulation as a means of providing safe and reproducible situations for clinical skills teaching, decision-making and team training. The tools available for simulation-based training have developed rapidly over the past 15 years. There is an increasing range of manikins and part-task trainers - devices that permit selected elements of a skill or task to be practised independently of a whole-body manikin. Those interested in simulation have also focused

significantly on adult learning theory to ensure that the training offered through simulation is appropriate, effective and complementary to other educational approaches. By mapping simulated scenarios to the Royal College of Paediatrics and Child Health Curriculum for General Paediatric Training at Level 1, the authors have developed two complementary courses aimed at preparing the general paediatric trainee for progression to the middle grade role. It is hoped that such approaches will become integral to paediatric training in the future.

Green, P. (2012). *Peacebuilding in divided communities: Kaurna Center's approach to training* Kaurna Center for Peacebuilding\*

The Karuna Center for Peacebuilding is committed to the development and implementation of innovative, sustainable, and relational strategies for community peacebuilding and reconciliation in societies where ethnic, religious, and sectarian conflicts threaten the possibility of stable democracy. Since 1994 we have pioneered effective multi-sector training programs that promote genuine dialogue, reconciliation, cooperative problem solving, and nonviolent solutions in twenty-five conflict-ridden or war-torn countries. This training manual represents a sample of the kinds of trainings we have created, making them available to the general public and helping those who seek our services to understand our approach and the values that frame our work.

Green, T. M. & Fisher, B. (2012). Impact of personality factors on interface interaction and the development of user profiles: Next steps in the personal equation of interaction *Information Visualization* 11(3): 205-221

These current comparative studies explore the impact of individual differences in personality factors on interface interaction and learning performance behaviors in both an interactive visualization and a menu-driven web table in two studies. Participants were administered three psychometric measures designed to assess Locus of Control, Big Five Extraversion, and Big Five Neuroticism. Participants were then asked to complete procedural learning tasks in each interface. Results demonstrated that all three measures predicted completion times. Additionally, analyses demonstrated that personality factors also predicted the number of insights participants reported while completing the tasks in each interface. Furthermore, we used the psychometric findings in conjunction with a follow-up psychometric survey with a further 50 participants to build initial user profiles based on the cognitive task being undertaken. We discuss how these findings advance our ongoing research in the Personal Equation of Interaction.

Gripenberg, P. (2011). Computer self-efficacy in the information society Design of learning strategies, mechanisms and skill areas. *Information Technology & People*, 24(3), 303-331. doi: 10.1108/09593841111158392

Purpose - IT related skills are vital for becoming and remaining a citizen in a digitally supported information society - also for adults who are no longer in school; do not use IT in their work; are unemployed, self-employed, or retired; or otherwise without the technical support, possibilities for training, and availability of a community of practice and "master users" that are common in organizational contexts. The paper aims to draw on literature on learning IT skills in the



organizational context and to apply this in a non-organizational, community context. The paper seeks to explore how individual IT-skill and knowledge development could be supported using formal and informal learning strategies, including community services, training courses, information events, learning community and other learning mechanisms. Design/methodology/approach - The paper is empirically grounded in a research and development project with 50 participating families who received a PC, printer, and internet connection, as well as training, technical support, and information events over a period of two years. Both qualitative and quantitative data were gathered throughout the project. Data are here analyzed as an extensive case study. Findings - Based on experiences from the project the paper describes how "digital literacies" could be learned and supported and inclusion in the digital information society enhanced in practice. The paper develops a framework that shows how different learning strategies and mechanisms support different kinds of computer knowledge and skill areas; describes three interlinked areas of IT knowledge and skills; and suggests a number of practical implications on how computer self-efficacy could be supported in a non-organizational context. Originality/value - The paper draws on extant knowledge about learning and developing IT-skills in the organizational context, and applies this knowledge in a different context in order to explore how this knowledge can be used also outside organizations to support adults to be part of the digitally supported information society.

Gross, H., Girard, N., & Magda, D. (2011). Analyzing Theory and Use of Management Tools for Sustainable Agri-environmental Livestock Practices: The Case of the Pastoral Value in the French Pyrenees Mountains. *Journal of Sustainable Agriculture*, 35(5), 550-573. doi: 10.1080/10440046.2011.579840

The aim of this paper is to contribute to the design of management tools for sustainable agricultural systems that are able to accompany farming practices in anticipating the long-term effects of practices on natural resources management. Its originality is to analyze tools on the basis of their cognitive content as well as their management philosophy and their organizational model. We applied this approach to the main tool (Pastoral Value) used to assess the potential of forage resources in France. Our findings show how the tool strongly shapes practices and how it is adapted by technicians to their situation within the context of the French Central Pyrenees, emphasizing the role of experiential knowledge.

Groves, K., Vance, C., & Choi, D. (2011). Examining Entrepreneurial Cognition: An Occupational Analysis of Balanced Linear and Nonlinear Thinking and Entrepreneurship Success. *Journal of Small Business Management*, 49(3), 438-466. doi: 10.1111/j.1540-627X.2011.00329.x

This empirical study advances entrepreneurial cognition research by examining whether entrepreneurs possess a high nonlinear (e.g., intuitive, creative, emotional) thinking style, as some studies and a common stereotype of entrepreneurs would suggest, or whether they possess a more versatile balance in both nonlinear and linear (e.g., analytic, rational, logical) thinking styles. As predicted, 39 entrepreneurs demonstrated greater balance in linear and nonlinear

thinking styles than their professional actor ( $n = 33$ ), accountant ( $n = 31$ ), and frontline manager ( $n = 77$ ) counterparts, though they did not significantly differ in thinking style balance from senior executives ( $n = 39$ ). Unexpectedly, educational background was associated with thinking style balance, suggesting that years of formal education may contribute to one's versatility in utilizing both linear and nonlinear thinking styles. For the entrepreneur sample, linear and nonlinear thinking styles balance predicted years in current business after controlling for industry, number of employees, and demographic variables. Implications for future entrepreneurial cognition research and entrepreneurship education are discussed.

Guillen-Nieto, V., & Aleson-Carbonell, M. (2012). Serious games and learning effectiveness: The case of It's a Deal! *Computers & Education*, 58(1), 435-448. doi: 10.1016/j.compedu.2011.07.015

Although the value of serious games in education is undeniable and the potential benefits of using video games as ideal companions to classroom instruction is unquestionable, there is still little consensus on the game features supporting learning effectiveness, the process by which games engage learners, and the types of learning outcomes that can be achieved through game play. Our aim in this discussion is precisely to advance in this direction by providing evidence of some of the factors influencing the learning effectiveness of a serious game called It's a Deal! This serious game was created for the purpose of teaching intercultural business communication between Spaniards and Britons in business settings in which English is used as the lingua franca. This paper hypothesizes that the immersive, all-embracing and interactive learning environment provided by the video game to its users may contribute to develop and enhance their intercultural communicative competence. The study attempts to answer three main research questions: (a) after playing It's a Deal!, did the students sampled improve their intercultural awareness, intercultural knowledge and intercultural communicative competence in business English? (b) If they improved their intercultural learning, what are the factors influencing such improvement? And (c) if they did not improve their intercultural learning, what are the factors influencing such failure? The game participants who volunteered to take part in the study were all students of English Studies at the University of Alicante in the academic year 2010-2011. One hundred and six students completed both the pre-test and the post-test questionnaires, and played It's a Deal! A sample of fifty students was selected randomly for the empirical study. The results obtained in the tests performed were compared and contrasted intra-group, both qualitatively and quantitatively, for the purpose of finding any statistically significant difference that may confirm whether or not there was an improvement in the students' intercultural communicative competence in business English as a result of the implementation of the It's a Deal! serious game. Findings of this study demonstrate that the video game is an effective learning tool for the teaching of intercultural communication between Spaniards and Britons in business settings in which English is used as the lingua franca. In particular, whereas the game had a small learning effect on intercultural awareness and a medium learning effect on intercultural knowledge,

it had a large learning effect on intercultural communicative competence. The study also documents correlating factors that make serious games effective, since it shows that the learning effectiveness of It's a Deal! stems from the correct balance of the different dimensions involved in the creation of serious games, specifically instructional content, game dimensions, game cycle, debriefing, perceived educational value, transfer of learnt skills and intrinsic motivation.

Gupta, M., & Boyd, L. (2011). An Excel-based dice game: an integrative learning activity in operations management. *International Journal of Operations & Production Management*, 31(6), 608-630. doi: 10.1108/01443571111131962

Purpose - The purpose of this paper is to extend the role of the theory of constraints (TOC) to complement, reinforce, and help integrate conventional operations management (OM) concepts by using an Excel-based version of the dice game discussed in *The Goal* by Goldratt. Design/methodology/approach - The paper discusses the motivation for and the development and evaluation of an Excel-based dice game model of a production system for novice managers to experiment with. A set of experiments related to OM concepts (e.g. inventory, capacity, and variability) is designed and counterintuitive results are discussed. The paper concludes by demonstrating how TOC provides an integrative OM framework. Findings - The novel *The Goal* by Goldratt serves as a comprehensive case study in OM. The computerized dice game provides a mechanism for understanding relationships among various OM concepts. The proposed set of experiments strengthens the linkages between OM and TOC concepts. Managers can conduct additional experiments and predict/interpret the results without spending time in the logistics of setting up the manual dice game repeatedly. Research limitations/implications - The proposed dice game simulates a fairly simple serial production system so the generalization of results obtained might not be intuitively convincing for more complex production systems. More advanced OM concepts such as push (MRP) and pull (JIT) systems can easily be investigated using the underlying logic of the dice game proposed here. Practical implications - The model provides an innovative way to integrate TOC concepts with mainstream OM concepts and thereby, renews interest in OM. Originality/value - Several versions of dice games, both manual and spreadsheet based, have appeared in the literature, however, none attempt to address as wide a variety of operations issues as the game proposed here.

Gureckis, T. M. & Markant, D. B. (2012). Self-Directed Learning: A Cognitive and Computational Perspective. *Perspectives on Psychological Science* 7(5): 464-481

A widely advocated idea in education is that people learn better when the flow of experience is under their control (i.e., learning is self-directed). However, the reasons why volitional control might result in superior acquisition and the limits to such advantages remain poorly understood. In this article, we review the issue from both a cognitive and computational perspective. On the cognitive side, self-directed learning allows individuals to focus effort on useful information they do

not yet possess, can expose information that is inaccessible via passive observation, and may enhance the encoding and retention of materials. On the computational side, the development of efficient "active learning" algorithms that can select their own training data is an emerging research topic in machine learning. This review argues that recent advances in these related fields may offer a fresh theoretical perspective on how people gather information to support their own learning.

Gurpinar, E., Bati, H., & Tetik, C. (2011). Learning styles of medical students change in relation to time. *Advances in Physiology Education*, 35(3), 307-311. doi: 10.1152/advan.00047.2011\*

Gurpinar E, Bati H, Tetik C. Learning styles of medical students change in relation to time. *Adv Physiol Educ* 35: 000-000; doi:10.1152/advan.00047.2011.- The aim of the present study was to investigate if any changes exist in the learning styles of medical students over time and in relation to different curriculum models with these learning styles. This prospective cohort study was conducted in three different medical faculties, which implement problem-based learning (PBL), hybrid, and integrated curriculum models. The study instruments were Kolb's Learning Style Inventory (LSI) and a questionnaire describing the students' demographic characteristics. Sample selection was not done, and all first-year students (n = 547) were targeted. This study was designed in two phases. In the first year, the study instruments were delivered to the target group. The next year, the same instruments were delivered again to those who had fully completed the first questionnaire (n = 525). Of these, 455 students had completed the instruments truly and constituted the study group. The majority of the students were assimilators and convergers in both the first and second years. A change in learning style was observed between 2 yr in 46.9% of the students in the integrated curriculum, in 49.3% of the students in the hybrid curriculum, and 56.4% of the students in the PBL curriculum. The least and most changes observed between the learning style groups were in assimilators and divergers, respectively. Curriculum models and other independent variables had no significant effect on the change between learning styles. The learning styles of medical students may change over time. Further followup studies in larger groups are needed to clarify this relation.

## H

Hafler, J. P. (2011). Effective presentations: tips for success. *Nature Immunology*, 12(11), 1021-1023. doi: 10.1038/ni.2119 \*

Presentations are given in a variety of environments, and effective strategies can be used to improve a speaker's presenting skills.

Hainey, T., Connolly, T. M., Stansfield, M., & Boyle, E. A. (2011). Evaluation of a game to teach requirements collection and analysis in software engineering at tertiary education level. *Computers & Education*, 56(1), 21-35. doi: 10.1016/j.compedu.2010.09.008

A highly important part of software engineering education is requirements collection and analysis which is one of the initial stages of the Database Application Lifecycle and arguably the most important stage of the Software Development Lifecycle. No other conceptual work is as difficult to rectify at a later stage or as damaging to the overall system if performed incorrectly. As software engineering is a field with a reputation for producing graduates who are inappropriately prepared for applying their skills in real life software engineering scenarios, it suggests that traditional educational techniques such as role-play, live-through case studies and paper-based case studies are insufficient preparation and that other approaches are required. To attempt to combat this problem we have developed a games-based learning application to teach requirements collection and analysis at tertiary education level as games-based learning is seen as a highly motivating, engaging form of media and is a rapidly expanding field. This paper will describe the evaluation of the requirements collection and analysis game particularly from a pedagogical perspective. The game will be compared to traditional methods of software engineering education using a pre-test/post-test, control group/experimental group design to assess if the game can act as a suitable supplement to traditional techniques and assess if it can potentially overcome shortcomings. The game will be evaluated in five separate experiments at tertiary education level. (C) 2010 Elsevier Ltd. All rights reserved.

Hammedi, W., van Riel, A. C. R., & Sasovova, Z. (2011). Antecedents and Consequences of Reflexivity in New Product Idea Screening. *Journal of Product Innovation Management*, 28(5), 662-679. doi: 10.1111/j.1540-5885.2011.00831.x

Pre-development activities, such as new product idea screening, are considered to play an important role in innovation success. At the screening stage, a management team evaluates new product and service ideas and makes a first go/no-go decision under high levels of uncertainty and ambiguity. Paying more attention to the decision-making process in the screening stage appears important because too rigorous a use of rigid evaluation criteria and inflexible methods have been shown to have an adverse effect on market performance of novel products. The present study proposes and tests a model of team-level antecedents and consequences of reflexivity-the explicit evaluation and discussion of working methods, tools, and criteria within a team. Recently, researchers have proposed that cognitive style and leadership style are major antecedents of decision-making performance. This study posits that reflexivity offers an explanation of how transformational leadership and cognitive style can eventually affect decision-making performance in the context of new product idea screening. Results of a survey among 126 top managers from large international firms show that the positive effects of transformational leadership and procedural rationality on the effectiveness and efficiency of screening decision making are largely mediated by reflexivity at the team level. This suggests that screening teams can improve their decision making in the following ways: committee chairs are advised to stimulate openness, develop a stop-and-think attitude among screening committee members, and support argument-based discussion in order to adapt available

decision tools, models, and checklists whenever needed. The paper concludes with implications, limitations of the study, and suggestions for further research.

Hardy, S., Bolster, D., Kelly, T., & Yalden, J. (2012). Enhancing facilitation skills through a practice development Masterclass: the other side of the rainbow. *Australian Journal of Advanced Nursing*, 29(2), 36-47.

Objective Professional impact and practice based outcomes of an inaugural Practice Development Facilitation Masterclass, for facilitators of Practice Development activity in Victoria, Australia, is presented. The Masterclass educational program format is designed to incorporate experiential learning strategies with individual transformation as an explicit goal. The program structure is underpinned by critical social science and delivered through a cooperative inquiry approach. Evidence of personal and professional transformation, identified as a consequence of participation in the Masterclass is reviewed, as we aim to share the 'other side of the rainbow', as a symbol of participant's transformation during the Practice Development Facilitation Masterclass experience. Primary argument Skilled facilitation is a key requirement in modern health care, as practitioners are expected to innovate within a changing and complex workplace environment. Conclusion Using a Practice Development facilitation Masterclass program format as outlined, provides a structured experiential educational program that could enhance and enable many professional teams to understand and facilitate effective health care practice. Engaging in a co-operative inquiry process provides a supportive yet challenging learning culture for sustaining individual and team's professional development.

Harvey, G., Fitzgerald, L., Fielden, S., McBride, A., Waterman, H., Bamford, D., . . . Boaden, R. (2011). The NIHR collaboration for leadership in applied health research and care (CLAHRC) for greater manchester: combining empirical, theoretical and experiential evidence to design and evaluate a large-scale implementation strategy.

*Implementation Science*, 6. doi: 10.1186/1748-5908-6-96

Background: In response to policy recommendations, nine National Institute for Health Research (NIHR) Collaborations for Leadership in Applied Health Research and Care (CLAHRCs) were established in England in 2008, aiming to create closer working between the health service and higher education and narrow the gap between research and its implementation in practice. The Greater Manchester (GM) CLAHRC is a partnership between the University of Manchester and twenty National Health Service (NHS) trusts, with a five-year mission to improve healthcare and reduce health inequalities for people with cardiovascular conditions. This paper outlines the GM CLAHRC approach to designing and evaluating a large-scale, evidence-and theory-informed, context-sensitive implementation programme. Discussion: The paper makes a case for embedding evaluation within the design of the implementation strategy. Empirical, theoretical, and experiential evidence relating to implementation science and methods has been synthesised to formulate eight core principles of the GM CLAHRC implementation strategy, recognising the multifaceted nature of evidence, the complexity of the implementation process, and the corresponding need to apply approaches that are situationally relevant, responsive, flexible, and collaborative. In turn, these core principles inform the selection of four interrelated building blocks upon which the GM CLAHRC approach to implementation is founded. These determine the organizational processes, structures, and roles utilised by specific GM CLAHRC implementation projects, as well as the approach to researching implementation, and comprise: the Promoting Action on Research Implementation in Health Services (PARIHS) framework; a modified version of the Model for Improvement; multiprofessional teams with designated roles to lead, facilitate, and support the implementation process; and embedded evaluation and learning. Summary: Designing and evaluating a large-scale implementation strategy that can cope with and respond to the local complexities of implementing research evidence into practice is itself complex and challenging. We present an argument for adopting an integrative, co-production approach to planning and evaluating the implementation of research into practice, drawing on an eclectic range of evidence sources.

Haug, C., Huitema, D., & Wenzler, I. (2011). Learning through games? Evaluating the learning effect of a policy exercise on European climate policy. *Technological Forecasting and Social Change*, 78(6), 968-981. doi: 10.1016/j.techfore.2010.12.001\*

One of the arguments for the use of simulation-gaming approaches in policy appraisal has consistently been their potential to stimulate learning. Yet few studies seek to ascertain the learning effects of these methods in a systematic manner; on the whole, participants' learning from interactive appraisal processes remains both under-conceptualised and under-evaluated. This paper seeks to contribute to filling this gap by developing a typology of learning effects

(cognitive, relational, and normative) that can be expected from policy games. We subsequently present a set of tools for measuring them and test our approach on the case of a policy exercise on burden sharing in future European climate policy involving policy-makers and experts. On the basis of our measurements, we found limited evidence for learning from the policy exercise, mostly in the cognitive and the relational domain. In this context, the use of concept maps is an interesting methodological innovation. Employed as pre- and post-measurements, they proved a useful tool for tracing conceptual change through the exercise among participants. The paper concludes with a plea for more systematic assessment of the learning effects of interactive appraisal exercises, with a view to enabling a deeper discussion on the benefits and limitations of these methods. (C) 2010 Elsevier Inc. All rights reserved.

Hauptman, H., & Cohen, A. (2011). The synergetic effect of learning styles on the interaction between virtual environments and the enhancement of spatial thinking.\*

*Computers & Education*, 57(3), 2106-2117. doi: 10.1016/j.compedu.2011.05.008

Students have difficulty learning 3D geometry: spatial thinking is an important aspect of the learning processes in this academic area. In light of the unique features of virtual environments and the influence of metacognitive processes (e.g., self-regulating questions) on the teaching of mathematics, we assumed that a combination of self-regulating questions and virtual environments would enhance spatial thinking through the exercise of certain spatial abilities with the VR Spaces 1.0 software. These two methods primarily focus on the cognitive domain. In terms of learning styles, we define different cognitive characteristics. The main objective of the present study was to examine whether students with a certain learning style would benefit more from this exercise than other students. To assess the effect of these methods, a sample of 192 10th graders were randomly assigned to four groups, two of which used Virtual Spaces 1.0 (Group 1 with virtual reality and self-regulating questions, N = 52; Group 2 with virtual reality only, N = 52) while the other two used non-Virtual Spaces 1.0 (Group 3 with self-regulating questions only, N = 45; Group 4 was the non-treatment group; N = 45). The findings indicate a differential impact of virtual environments on students with different modal and personal learning styles. The post-test scores for all students (except audio students on the Aptitude Profile Test Series - Educational) were significantly higher than the pre-test scores. The unique nature of this study's findings expresses itself in the fact that the "sensing" students (S type) scored higher than the "intuitive" students (N type) on the Mental Rotation Test group 2 alone. Additionally, the scores of the visual students were higher than those of the kinesthetic style but not significantly. These findings suggest that virtual environment decreases the gap in performance results between the visual and kinesthetic students and highlight the importance of virtual environments to the "sensing" and kinesthetic styles.

Hays, R. & Gay, S. (2011). Reflection or 'pre-reflection': what are we actually measuring in reflective practice? *MEDICAL EDUCATION* 2011; 45: 116-118\*



Hean, S., Craddock, D., & Hammick, M. (2012). Theoretical insights into interprofessional education: AMEE Guide No. 62. *Medical Teacher*, 34(2), E78-E101. doi: 10.3109/0142159x.2012.650740

In this Guide, we support the need for theory in the practice of interprofessional education and highlight a range of theories that can be applied to interprofessional education. We specifically discuss the application of theories that support the social dimensions of interprofessional learning and teaching, choosing by way of illustration the theory of social capital, adult learning theory and a sociological perspective of interprofessional education. We introduce some of the key ideas behind each theory and then apply these to a case study about the development and delivery of interprofessional education for pre-registration healthcare sciences students. We suggest a model that assists with the management of the numerous theories potentially available to the interprofessional educator. In this model, context is central and a range of dimensions are presented for the reader to decide which, when, why and how to use a theory. We also present some practical guidelines of how theories may be translated into tangible curriculum opportunities. Using social capital theory, we show how theory can be used to defend and present the benefits of learning in an interprofessional group. We also show how this theory can guide thinking as to how interprofessional learning networks can best be constructed to achieve these benefits. Using adult learning theories, we explore the rationale and importance of problem solving, facilitation and scaffolding in the design of interprofessional curricula. Finally, from a sociological perspective, using Bernstein's concepts of regions and terrains, we explore the concepts of socialisation as a means of understanding the resistance to interprofessional education sometimes experienced by curriculum developers. We advocate for new, parallel ways of viewing professional knowledge and the development of an interprofessional knowledge terrain that is understood and is contributed to by all practitioners and, importantly, is centred on the needs of the patient or client. Through practical application of theory, we anticipate that our readers will be able to reflect and inform their current habitual practices and develop new and innovative ways of perceiving and developing their interprofessional education practice.

Heim, C. (2012). Tutorial facilitation in the humanities based on the tenets of Carl Rogers. *Higher Education*, 63(3), 289-298. doi: 10.1007/s10734-011-9441-z \*

This article introduces a model for group facilitation in the humanities based on Carl Roger's model for group psychotherapy. Certain aspects of Carl Roger's reflective learning strategies are reappraised and principles, specific only to psychotherapy, are introduced. Five of Rogers's axioms are applied to the tutorial discussion model: a non-directive approach, climate-setting, facilitation, reflective listening and positive regard. The model, which has been trialed in tutorials at The University of Queensland encourages active learning, self-direction and critical thinking.

Helkkula, A. (2011). Characterising the concept of service experience. *Journal of Service Management*, 22(3), 367-389. doi: 10.1108/09564231111136872

Purpose - The purpose of this paper is to review the characterisation of the concept of service experience in service marketing research.

Design/methodology/approach - Using content analysis, 30 articles and two books published in the period from 2005 to 2007 are analysed.

Findings - Three characterisations of the concept of service experience are identified in the literature review: phenomenological service experience (which relates to the value discussion in service-dominant logic and interpretative consumer research); process-based service experience (which relates to understanding service as a sequential process); and outcome-based service experience (which relates to understanding service experience as one element in models of service linking a number of variables or attributes to various outcomes).

Research limitations/implications - To facilitate meaningful research in this area, it is important that researchers critically consider the nature of the concept of service experience in terms of who experiences it, the scope, content, and context of the service experience, and how service experience relates to other concepts, such as value.

Originality/value - No systematic literature review of the characterisation of the concept of service experience has previously been undertaken.

Hendry, C., & Harborne, P. (2011). Changing the view of wind power development: More than "bricolage". *Research Policy*, 40(5), 778-789. doi: 10.1016/j.respol.2011.03.001

Understanding innovation depends at root on good qualitative descriptions. This paper re-assesses the role of "bricolage", and the extent of science-based R&D and experience-based learning, in the development of the Danish wind turbine system. It argues that the competition between these two opposed frames of reference was never conclusively settled, but involved a reassertion of science-based R&D, which was ultimately decisive for long-term success. This adds a dimension to the received account by showing the persistence of contested collective frames of reference as a driving force across the technology life cycle. At the same time, a more nuanced account of these two learning processes enhances theorisation of the innovation process by showing a learning sequence and interplay of modes that is diametrically at odds with the conventional stylised model of the experience curve. (C) 2011 Published by Elsevier B.V.

Hess, J. J., McDowell, J. Z., & Lubet, G. (2012). Integrating Climate Change Adaptation into Public Health Practice: Using Adaptive Management to Increase Adaptive Capacity and Build Resilience. *Environmental Health Perspectives*, 120(2), 171-179. doi: 10.1289/ehp.1103515

**BACKGROUND:** Climate change is expected to have a range of health impacts, some of which are already apparent. Public health adaptation is imperative, but there has been little discussion of how to increase adaptive capacity and resilience in public health systems. **OBJECTIVES:** We explored possible explanations for the lack of work on adaptive capacity, outline climate-health challenges that may lie outside public health's coping range, and consider changes in practice that could increase public health's adaptive capacity. **METHODS:** We conducted a substantive, interdisciplinary literature review focused on climate change

adaptation in public health, social learning, and management of socioeconomic systems exhibiting dynamic complexity. **DISCUSSION:** There are two competing views of how public health should engage climate change adaptation.

Perspectives differ on whether climate change will primarily amplify existing hazards, requiring enhancement of existing public health functions, or present categorically distinct threats requiring innovative management strategies. In some contexts, distinctly climate-sensitive health threats may overwhelm public health's adaptive capacity. Addressing these threats will require increased emphasis on institutional learning, innovative management strategies, and new and improved tools. Adaptive management, an iterative framework that embraces uncertainty, uses modeling, and integrates learning, may be a useful approach. We illustrate its application to extreme heat in an urban setting. **CONCLUSIONS:** Increasing public health capacity will be necessary for certain climate-health threats. Focusing efforts to increase adaptive capacity in specific areas, promoting institutional learning, embracing adaptive management, and developing tools to facilitate these processes are important priorities and can improve the resilience of local public health systems to climate change.

Hjorth, D. (2011). On provocation, education and entrepreneurship. *Entrepreneurship and Regional Development*, 23(1-2), 49-63. doi: 10.1080/08985626.2011.540411

This essay develops an affect-based theory of entrepreneurial entrepreneurship education, something we summarise in a model of provocation-based entrepreneurial entrepreneurship education (the E(3) model). Taking its starting point in an anecdote that illustrates the importance of provocation in processes of learning entrepreneurship, this article responds to previous calls for less economised entrepreneurship education focusing on its creative-relational nature. An affect-based theory of E(3) brings together provocation, deterritorialisation (uprooting) and decoding/imagination, which calls for both critique and creativity, and resonates with appreciations of paralogy as driver in learning processes. The implications of this conceptual model of learning entrepreneurship entrepreneurially are discussed, with particular focus on the role of the pedagogue and on the future of learning entrepreneurship.

Ho, C. M. L., Nelson, M. E., & Mueller-Wittig, W. (2011). Design and implementation of a student-generated virtual museum in a language curriculum to enhance collaborative multimodal meaning-making. *Computers & Education*, 57(1), 1083-1097. doi: 10.1016/j.compedu.2010.12.003

This paper reports on a study, MUSE, which involved Secondary (Grade 7) students in designing and constructing a virtual museum. It presents a description and evaluation of the design and implementation of the technologically-mediated intervention within a language curriculum that emphasizes multimodal meaning-making and expression. Participants' gallery artifacts, interviews, reflections and classroom observations indicated signs of an emergent multimodal awareness with a growing sensitivity to semiotic affordances and constraints. Collaborative learning skills acquired and language learning motivational gains were evident. The investigation identified responsive, adaptive measures in overcoming

unanticipated challenges arising from on-the-ground realities and contextual constraints. The study showed the viability, to a certain extent, of innovative technologically-enhanced interventions in reinforcing instructional pedagogy in classroom contexts. (C) 2010 Elsevier Ltd. All rights reserved.

Hodge, P., Wright, S., Barraket, J., Scott, M., Melville, R., & Richardson, S. (2011). Revisiting 'how we learn' in academia: practice-based learning exchanges in three Australian universities. *Studies in Higher Education*, 36(2), 167-183. doi: 10.1080/03075070903501895 \*

Ideas of 'how we learn' in formal academic settings have changed markedly in recent decades. The primary position that universities once held on shaping what constitutes learning has come into question from a range of experience-led and situated learning models. Drawing on findings from a study conducted across three Australian universities, the article focuses on the multifarious learning experiences indicative of practice-based learning exchanges such as student placements. Building on both experiential and situated learning theories, the authors found that students can experience transformative and emotional elucidations of learning that can challenge tacit assumptions and transform the ways they understand the world. It was found that all participants (hosts, students, academics) both teach and learn in these educative scenarios and that, contrary to common (mis) perceptions that academics live in 'ivory towers', they play a crucial role in contributing to learning that takes place in the so-called 'real world'.

Holman, D., Totterdell, P., Axtell, C., Stride, C., Port, R., Svensson, R. & Zibarras, L. (2012). Job Design and the Employee Innovation Process: The Mediating Role of Learning Strategies. *Journal of Business and Psychology* 27(2): 177-191

The purpose of this article is to examine whether employee learning strategies is a mechanism through which job design affects the employee innovation process. In particular, we test whether work-based learning strategies mediate the relationship between job design characteristics (job control and problem demand) and key components of the innovation process (idea generation, idea promotion, and idea implementation). Data were collected from a survey of 327 employees in a UK manufacturing organization. Structural equation modeling confirmed the mediating role of learning strategies in the relationship between job design and idea generation. The effects of job control on idea generation were mediated by work-based learning strategies and the effects of problem demand on idea generation were partially mediated by work-based learning strategies. Problem demand also had a direct relationship with idea generation and idea promotion. The findings provide support for the general idea that learning is a mechanism thorough which job design affects outcomes. The results of the study show practitioners that creating jobs with high control or high problem demand can help to promote the employee innovation process; and that this is partly due to the role that such jobs play in stimulating the use of learning strategies at work. This article develops and tests a new theoretical model that explains how learning is a route through which job design influences employee innovation.

Hoover, J. D., Giambatista, R. C. & Belkin, L. Y. (2012). Eyes On, Hands On: Vicarious Observational Learning as an Enhancement of Direct Experience. *Academy of Management Learning & Education*, Vol. 11, No. 4, 591-608.  
<http://dx.doi.org/10.5465/amle.2010.0102>\*

This research explores the concept of vicarious observational learning as a component of an experiential learning sequence. We compare measures of task performance when participants observe a task before engaging in direct experience versus immediate direct experience without observation. Two experimental studies were conducted using different types of tasks and different levels of performance analysis. We found support for the hypothesis that experiential learning sequencing, with vicarious observation preceding direct experiential learning, enhances classroom performance. The benefits of vicarious observational learning to direct experience sequencing appeared to be generally robust across task types and levels of analysis. The article concludes with some explanations of the relative efficacy of observational learning to direct experiential learning sequencing as well as implications for management education literature and practice.

Hornikx, J. (2011). Epistemic authority of professors and researchers: differential perceptions by students from two cultural-educational systems. *Soc Psychol Educ* 14:169–183\*

Hosoda, Y. (2006). Development and testing of a clinical learning environment diagnostic inventory for baccalaureate nursing students. *Journal of Advanced Nursing*. 56 (5): 480-490

Hsieh, P. A. J., & Cho, V. (2011). Comparing e-Learning tools' success: The case of instructor-student interactive vs. self-paced tools. *Computers & Education*, 57(3), 2025-2038. doi: 10.1016/j.compedu.2011.05.002

e-Learning tools have profoundly transformed modern pedagogical approaches. Vendors provide different types of systems, such as self-paced (SP) and instructor-student interactive (ISI) e-Learning tools. Although both types of tools represent promising solutions to facilitate the learning process, it is important to theoretically identify a framework to evaluate the success of these tools and assess whether one type of tool is more effective than another. Toward this end, we (1) propose a model to evaluate e-Learning tools' success by extending and contextualizing Seddon's information systems (IS) success model for the e-Learning environment and (2) formulate four hypotheses to predict the differences in the success factors between SP and ISI tools. We test the model and hypotheses using data from 783 students across seven higher education institutions in Hong Kong. The results support the proposed e-Learning tool success model and three of the four hypotheses. ISI tools outperform SP tools in terms of system quality, perceived usefulness, satisfaction, and learning outcome. (C) 2011 Elsevier Ltd. All rights reserved.

Hsieh, S., Jang, Y., Hwang, G. & Chen, N. (2011). Effects of teaching and learning styles on students' reflection levels for ubiquitous learning. *Computers & Education* 57:1194–1201\*

Ubiquitous learning (u-learning), in conjunction with supports from the digital world, is recognized as an effective approach for situating students in real-world learning environments. Earlier studies concerning u-learning have mainly focused on investigating the learning attitudes and learning achievements of students, while the causations such as learning style and teaching style were usually ignored. This study aims to investigate the effects of teaching styles and learning styles on reflection levels of students within the context of u-learning. In particular, we investigated the teaching styles at the dimensions of brainstorming and instruction and recall and the learning styles at the dimensions of active and reflective learning. The experiment was conducted with 39 fifth grader students at an elementary school in southern Taiwan. A u-learning environment was established at a butterfly ecology garden to conduct experiments for natural science courses. The experimental results of one-way ANCOVA show that those students who received a matching teaching–learning style presented a significant improvement in their reflection level. That is, matching the learning styles of students with the appropriate teaching styles can significantly improve students' reflection levels in a u-learning environment.

Hsiung, C. M., & Lin, C. C. (2012). The Learning Styles of Taiwanese Mechanical Engineering Students. In X. H. Liu, Z. Jiang & J. T. Han (Eds.), *Materials Processing Technology, Pts 1-3* (Vol. 418-420, pp. 2143-2146).

Learning style has been proven to be an important factor that affects student learning performance. Ely knowing student learning styles, instructors can modify teaching material and teaching methods accordingly for the greater benefit of students. By understanding the strengths and weaknesses of learning styles, students may adopt complementary learning strategies, thus improving their performance. The Index of Learning Styles (ILS) developed by Felder and Soloman has been widely used in the context of engineering education to enhance both teaching and learning. However, the general statistics and reliability of its Chinese version have not been reported. In this study, we conducted a survey, and 223 students majoring in mechanical engineering at National Pingtung University of Science and Technology (NPUST), Taiwan, participated: This study involved a comparison of the learning style profiles of the students against the results of prior related research conducted in the United States. Subsequently, the internal consistency coefficients of Cronbach's alpha were examined. The results show that the participants were active, perceptive, visual, and sequential learners, similar to their counterparts in the United States. The internal consistency coefficients on the four dimensions in ILS are 0.49, 0.59, 0.64, and 0.36, respectively. The statistics are lower or approximately equal to those of the English version ILS.

Hsu, P. S. (2012). LEARNER CHARACTERISTIC BASED LEARNING EFFORT CURVE MODE: THE CORE MECHANISM ON DEVELOPING PERSONALIZED ADAPTIVE E-LEARNING PLATFORM. *Turkish Online Journal of Educational Technology*, 11(4), 210-220.

This study aims to develop the core mechanism for realizing the development of personalized adaptive e-learning platform, which is based on the previous learning effort curve research and takes into account the learner characteristics of learning style and self-efficacy. 125 university students from Taiwan are classified into 16 groups according to learning efficiency, learning style and self-efficacy. The learner characteristic based learning effort curve mode (LECM) is developed by conducting multi-factor regression on the corresponding learning effort curves generated by the specific group. The research findings conclude that the learner characteristic based LECM is able to represent the specific learning characteristics of the corresponding learning style and self-efficacy effectively. The core value of the learner characteristic based LECM is to realize the future development of personalized adaptive e-learning platform through taking it as the core mechanism.

Hua, Z., Yan, J., & Watson, J. (2011). Children's perceptions of the impact of participation in an intercultural educational programme. *Language and Intercultural Communication*, 11(2), 142-160. doi: 10.1080/14708477.2011.556740

This paper examines the self-perceptions of sixteen 11-year-old UK children who took part in intercultural 'Villages' organised by an international children's charity. The analysis of the data shows that only a short-term increase in Intercultural Communicative Competence was reported by the children immediately after the Village. The increase was neither statistically significant, nor evident nine months after the Village. However, the analysis of the children's self-report shows that most of the children were positive about the experience. Establishing, expanding and maintaining friendship constituted the primary aim as well as outcome of their intercultural learning. These research findings are discussed in the broader contexts of the ideology of global citizenship and the global spaces created through intercultural exchanges.

Huang, E. Y., Lin, S. W., & Huang, T. K. (2012). What type of learning style leads to online participation in the mixed-mode e-learning environment? A study of software usage instruction. *Computers & Education*, 58(1), 338-349. doi: 10.1016/j.compedu.2011.08.003

Learning style is traditionally assumed to be a predictor of learning performance, yet few studies have identified the mediating and moderating effects between the two. This study extends previous research by proposing and testing a model that examines the mediating processes in the relationship between learning style and e-learning performance and the moderating effects of prior knowledge. The results show that the sensory/intuitive dimension of learning style predicts learning performance indirectly through the mediation of online participation. However, other types of learning styles do not affect online participation. Sensory students demonstrate a higher level and intuitive students a lower level of online

participation. Prior knowledge plays an important role as a moderator between online participation and learning performance. This study was conducted in the context of software usage instruction using empirical data from 219 undergraduate students.

Huang, J., & Kim, H. J. (2011). Conceptualizing the processes, benefits, and challenges of organizational lifelong learning at Yuhan-Kimberly, Korea: the notion of anticipative affordance. *International Journal of Human Resource Management*, 22(7), 1423-1441. doi: 10.1080/09585192.2011.561958

This research investigates, reports, and theorizes Yuhan-Kimberly's journey to establish its organizational lifelong learning program in Korea. Based on a four-year longitudinal study and the principles of grounded theory, we propose the notion of anticipative affordance to elaborate the process through which benefits derived from an organization's lifelong learning are created, interconnected, and amplified through the gradual and long-term building and accumulation of shared understanding and commitment. Main theoretical contributions derived from this study are threefold. First, the concept of anticipative affordance enhances our understanding about the key process and challenges related to organizational lifelong learning. Second, anticipative affordance serves as a bridge to synthesize the separation between the cognitive and situated aspects of learning. Third, our research empirically illustrates how collective benefits of organizational learning are actualized over time through the development of learning mechanisms and through the integration of its individual members' learning.

Huang, Y. W., Wang, P. S., & Lin, C. C. (2011). *Developing the Curriculum and Instruction Model for Suicide Prevention and Life Education in Taiwan*.

This chapter attempts to develop a curriculum and instructional model for life education as the basis of suicide prevention. Suicide has become an urgent problem in Taiwanese society as well as in the international community. The "Life education" model is proposed as the foundation for suicide prevention. By integrating the theories of the experiential learning circle, affective education, life skills, shared experience, and traditional Confucianism, a curriculum and teaching model known as the Shared-experience Life education and life skills Instruction Model (SLIM) has been developed. The SLIM model is anticipated to serve as a reference for basic education in suicide prevention.

Hughes, C., Steinhorn, R., Davis, B., Beckrest, S., Boyd, E., & Cashen, K. (2012). University-Based Service Learning: Relating Mentoring Experiences to Issues of Poverty. *Journal of College Student Development*, 53(6), 767-782.

We investigated whether participation in a university-based, service learning mentoring program could affect college students' learning about social inequities and the effects of poverty. The program we examined combined four critical components: (a) Mentor training, (b) mentoring youth on-site in their high-poverty environments, (c) mentors' ongoing reflecting, and (d) class discussion of issues related to poverty and social inequities. By analyzing students' ongoing reflective journals in relation to Kolb's learning cycle, we sought to determine (a)



experiences students reported to engage in while mentoring and (b) the relation between students' experiences and learning about poverty. Mentees' input was obtained via interviews to corroborate mentors' perspectives. Based on findings, recommendations for the field are proposed.

Hui, Z., & Min, L. (2011). *Research of Flow Theory and Experiential Learning Model*. Experience is knowledge, skill, or practice derived from participation or engagement in an activity. Experience is the basis for all learning. It provides an opportunity for knowing and doing to be pursued together. Flow theory has been studied with regard to learner interest, involvement, and enjoyment using self-rating scales. This paper clarifies how (a) experience is a context for experiential learning and flow theories; (b) flow theory is an explanation for how people experience learning;

Hwang, G. J., Sung, H. Y., Hung, C. M., Huang, I., & Tsai, C. C. (2012). Development of a personalized educational computer game based on students' learning styles. *Etr&D-Educational Technology Research and Development*, 60(4), 623-638. doi: 10.1007/s11423-012-9241-x

In recent years, many researchers have been engaged in the development of educational computer games; however, previous studies have indicated that, without supportive models that take individual students' learning needs or difficulties into consideration, students might only show temporary interest during the learning process, and their learning performance is often not as good as expected. Learning styles have been recognized as being an important human factor affecting students' learning performance. Previous studies have shown that, by taking learning styles into account, learning systems can be of greater benefit to students owing to the provision of personalized learning content presentation that matches the information perceiving and processing styles of individuals. In this paper, a personalized game-based learning approach is proposed based on the sequential/global dimension of the learning style proposed by Felder and Silverman. To evaluate the effectiveness of the proposed approach, a role-playing game has been implemented based on the approach; moreover, an experiment has been conducted on an elementary school natural science course. From the experimental results, it is found that the personalized educational computer game not only promotes learning motivation, but also improves the learning achievements of the students.

## J

Jakubik, M. (2011). Becoming to know. Shifting the knowledge creation paradigm. *Journal of Knowledge Management*, 15(3), 374-402. doi: 10.1108/13673271111137394 \*

Purpose - The paper seeks to provide a theoretical contribution to the current phase of the knowledge creation theory of knowledge management (KM) by addressing the need for a paradigm shift and having more ontological and epistemological discussions. Design/methodology/approach - The proposed "becoming to know" framework builds on the KM literature review and on the

study of learning, knowing and becoming concepts from several perspectives, Both conceptual and empirical research papers contribute to the framework. Findings - The paper presents the challenges of KM; it identifies five phases of the knowledge creation theory development through 1995-2008; it summarizes the main criticism against the theory; and it proposes the "becoming epistemology" concept and the "becoming to know" framework. The main elements of this framework are: engaging, exploring, experiencing, emerging, enabling and evolving. Research implications - Study of the KM literature reveals several other challenges that are not addressed here and could provide opportunities for researchers. The paper calls for more discussions regarding the paradigm shift and for more attention to the participative research paradigm, as well as action and case study research in KM. Originality/value - Drawing on the participative paradigm, epistemology of practice, extended epistemology, transformative teleology becoming ontology and on concepts of learning, knowing, and becoming, the proposed framework illustrates the dynamic, iterative, interactive interplay and evolution of ontological and epistemological knowledge creation spirals that is the essence of the knowledge creation theory

James, S., D'Amore, A., & Thomas, T. (2011). Learning preferences of first year nursing and midwifery students: Utilising VARK. *Nurse Education Today*, 31(4), 417-423. doi: 10.1016/j.nedt.2010.08.008

The diversity of first year students is increasing with new schemes promoting access to higher education courses. It is important to assess the learning styles of students in order to cater for their differing learning needs. The aim of this study was to profile first year nursing/midwifery students at two campuses of Australian Catholic University, to investigate their learning preferences and the effect demographic background has on these preferences. We designed a survey to collect demographic data and incorporated the VARK (visual, aural, read-write and kinaesthetic) questionnaire to investigate the students' preferred learning modes. The kinaesthetic score of our students was the highest (7.34+/-2.67), significantly differing from the other three modes ( $p < 0.001$ ). Demographic factors such as gender and age group did not influence mean scores of each sensory modality. The predominant preference was quadmodal utilising all four learning styles. The distribution of students preferring to learn by unimodal, bimodal, trimodal and quadmodal styles varied between demographic groupings. The rural students had significantly higher visual and kinaesthetic scores compared to their metropolitan counterparts. Students attending the rural campus had higher visual and read-write scores. Visual and aural scores were significantly lower for students from non-English speaking backgrounds. These findings have significant teaching and research implications.

Janta, H., Lugosi, P., Brown, L., & Ladkin, A. (2012). Migrant networks, language learning and tourism employment. *Tourism Management*, 33(2), 431-439. doi: 10.1016/j.tourman.2011.05.004

This paper examines the relationship between migrants' social networks, the processes of language acquisition and tourism employment. Data collected using

netnography and interviews are used to identify the strategies that Polish workers in the UK use to develop their language skills. The paper highlights the roles played by co-workers, co-nationals and customers in migrants' language learning, both in the physical spaces of work and the virtual spaces of internet forums. It also shows how migrant workers exchange knowledge about the use of English during different stages of their migration careers: prior to leaving their country of origin and getting a job, during their employment and after leaving their job. Implications for academic inquiry and human resource management practice are outlined. (C) 2011 Elsevier Ltd. All rights reserved.

Jo, I. H. (2011). Effects of role division, interaction, and shared mental model on team performance in project-based learning environment. *Asia Pacific Education Review*, 12(2), 301-310. doi: 10.1007/s12564-010-9142-9

The purpose of this study was to investigate the cognitive mechanism of project-based learning teams of college students on the basis of the Shared Mental Model (SMM) theory. The study participants were 237 female college students in Korea organized into 51 project teams. To test the study hypotheses, a structural equation modeling was employed. The major study findings are as follows: (1) As hypothesized, member interaction was a strong predictor both for team-related and for task-related SMM. (2) The level of the team's division of labor reduced the member interactions. (3) Team-related and task-related SMMs were positively associated with team performance. The theoretical and practical implications based on these results are discussed.

Jones, J. M., Papadakos, J., Bennett, C., Blacker, S., Catton, P., Harth, T., . . . Jusko-Friedman, A. (2011). Maximizing your Patient Education Skills (MPES): A multi-site evaluation of an innovative patient education skills training course for oncology health care professionals. *Patient Education and Counseling*, 84(2), 176-184. doi: 10.1016/j.pec.2010.07.039

Objective: To evaluate the acceptability and relevance of the Maximizing your Patient Education Skills (MPES) course and to determine whether it significantly improved knowledge regarding patient education (PE) theory, self-assessed PE competencies, and PE skills using case based vignettes. Methods: 1-Group, multi-site, pre-post-intervention. Participants completed a pre-assessment (T1), participated in the 4-h MPES course, and then a 3-month post-assessment (T2). A focus group was conducted with sub-set of participants. Results: 98 (75%) of participants completed both time points. Participants were highly satisfied with MPES and found it to be relevant. Results showed that MPES had a significant impact on all of our outcome measures. Conclusion: Findings from this study show that oncology HCPs knowledge of patient education theory, self-assessed competencies and skills can improve after participating in a brief problem-focused and interactive workshop. Practice implications: Given the evidence that well-planned education and support can contribute to a number of positive health outcomes and the evidence that HCPs may lack the skills to teach and support patients and their families effectively, these results suggest that MPES course may be of value to oncology professionals. Efforts to further develop this course

include exploring alternative funding models and using different learning platforms. (C) 2010 Elsevier Ireland Ltd. All rights reserved.

Jordi, R. (2011). Reframing the Concept of Reflection: Consciousness, Experiential Learning, and Reflective Learning Practices. *Adult Education Quarterly*. 61(2) 181–197\*

The concept of reflection is common to a range of learning theories and therefore carries various meanings and differing significance. Within theories of adult education, reflection is predominantly conceptualized as the rational analytical process through which human beings extract knowledge from their experience. This article critiques this cognitive bias. However, the author argues that a perspective of embodied experiential learning should not give preference to the body over the mind as a source of knowledge. Nor should researchers reject reflection as an exclusively cognitive process. Reflective practices can facilitate a learning dialogue between our implicit embodied experience and conceptual aspects of our consciousness. The author illustrates this with the example of the theory and practice of Gendlin's *Focusing*. In conclusion, the author proposes a set of elements, characteristic of individual and collective human experiential learning, that can provide a framework for a more expansive and integrative conceptualization of reflection.

Jung, Y., Hwang, S., Ahn, S., Sim, S., Han, H. & Choi, H. (2012). Efficient teaching behavior in lecture-style instruction of dental hygiene. *Journal of Korean society of Dental Hygiene* 01/2012; 12(1). DOI: 10.13065/jksdh.2012.12.1.189 \*

**ABSTRACT** Objectives : The purpose of this study was to examine what teaching behavior would have a good effect on learners in lecture-style instruction in the department of dental hygiene. Methods : The subjects in this study were 650 students who were in the three-year department of dental hygiene at four colleges in Gyeonggi Province and Chungcheong Province. After a survey was conducted, frequency analysis and ANOVA were utilized to analyze the collected data. The findings of the study were as follows. Results : The students put the highest value on knowledge among the factors of teaching behavior irrespective of their academic year, academic standing and learning style, followed by skills and attitude. Out of every subfactor, they set the highest value on a sense of humor regardless of their academic year, academic standing and learning style, and put the lowest value on the attitude factor such as enthusiasm. There were differences among the students in evaluation of the factors of teaching behavior according to academic year, and the students whose academic year was higher set a higher value on the factors of teaching behavior. There were no differences according to their academic standing and learning style. Conclusions : The dental hygiene students viewed the knowledge factor as the effective factor of teaching behavior, and regarded a sense of humor as the best subfactor. Although the attitude factor like enthusiasm is important, it seemed that the students hoped for the kind of instruction that would be delightful, intriguing and clearly convey what to learn

Jurse, M. (2011). A MARKET PERSPECTIVE OF ALIGNING UNIVERSITY BUSINESS EDUCATION IN TRANSITION COUNTRIES WITH THE EMERGING GLOBALISATION OF HIGHER EDUCATION. *Transformations in Business & Economics*, 10(2), 104-124.

The purpose of this article is to explore the implications of higher education globalisation and institutional changes in Europe in terms of their influences on the position of public business education in their local setting in Central and Eastern Europe. We analyse key institutional developments that frame the emerging European Higher Education Area and synthesize their influences on higher education in transition countries. With increased importance of knowledge for competitiveness of European businesses the traditional 'public good' paradigm is being replaced by a 'marketable goods' view. As university business schools in transition countries are particularly exposed to competition in the business education market and serve as key business knowledge providers to future generations of managers, we present a consistent model for the requisitely holistic and strategic management of business education institutions that enables managers to better align their institution with the challenges of an increasingly competitive market in business education.

## K

Kablan, Z. (2012). The Effects of Level of Cognitive Learning and Concrete Experience on Teacher Candidates' Lesson Planning and Application Skills. *Egitim Ve Bilim-Education and Science*, 37(163), 239-253.

This is a research based on a relational survey model that determines the effects of the theoretical and applied studies on skill of the principles and methods course on teacher candidates. The research was carried out according to two basic aims. The first aim is to determine the effects of the theoretically-oriented cognitive learning, which is acquired based on instructors' lecture, and the level of concrete experience provided by microteaching applications, which are adopted from Kolb's learning model, on the skills of lesson plan preparation and application. The other aim is to test the mediating effect of the skill of lesson plan preparation on the relationship between the application of lesson plan and cognitive learning with concrete experience. The research used the scores of 96 teachers who were sophomores at the department of Teaching Mathematics at Primary School at Kocaeli University. As a result of the research, while it was found that, in terms of regression value, lesson plan preparation was affected more by theoretical learning; and lesson plan applications were affected more by concrete experience, it was also found that lesson plan preparation skill is an important mediating variable.

Kangas, M., & McDonald, S. (2011). Is it time to act? The potential of acceptance and commitment therapy for psychological problems following acquired brain injury. *Neuropsychological Rehabilitation*, 21(2), 250-276. doi: 10.1080/09602011.2010.540920

Behaviour therapies have a well-established, useful tradition in psychological treatments and have undergone several major revisions. Acceptance and

Commitment Therapy (ACT) and mindfulness-based approaches are considered a third wave of behavioural therapies. Emerging evidence for ACT has demonstrated that this paradigm has promising effectiveness in improving functionality and well-being in a variety of populations that have psychological disturbances and/or medical problems. In this review we first evaluate traditional cognitive behavioural therapy (CBT) interventions used to manage psychological problems in distressed individuals who have sustained an acquired brain injury (ABI). We provide an overview of the ACT paradigm and the existent evidence base for this intervention. A rationale is outlined for why ACT-based interventions may have potential utility in assisting distressed individuals who have sustained a mild to moderate ABI to move forward with their lives. We also review emerging evidence that lends preliminary support to the implementation of acceptance and mindfulness-based interventions in the rehabilitation of ABI patient groups. On the basis of existent literature, we recommend that it is an opportune time for forthcoming research to rigorously test the efficacy of ACT-based interventions in facilitating ABI patient groups to re-engage in living a valued and meaningful life, in spite of their neurocognitive and physical limitations. The promising utility of testing the efficacy of the ACT paradigm in the context of multimodal rehabilitation programmes for ABI populations is also addressed.

Kanthan, R., & Senger, J. L. B. (2011). An appraisal of students' awareness of "self-reflection" in a first-year pathology course of undergraduate medical/dental education. *Bmc Medical Education*, 11. doi: 10.1186/1472-6920-11-67

Background: Self-reflection and reflective practice are increasingly considered as essential attributes of competent professionals functioning in complex and ever-changing healthcare systems of the 21(st) century. The aim of this study was to determine the extent of students' awareness and understanding of the reflective process and the meaning of 'self-reflection' within the contextual framework of their learning environment in the first-year of their medical/dental education. We endorse that the introduction of such explicit educational tasks at this early stage enhances and promotes students' awareness, understanding, and proficiency of this skill in their continuing life-long health professional learning. Methods: Over two years, students registered in first-year pathology at the University of Saskatchewan were introduced to a self-reflection assignment which comprised in the submission of a one-page reflective document to a template of reflective questions provided in the given context of their learning environment. This was a mandatory but ungraded component at the midterm and final examinations. These documents were individually analyzed and thematically categorized to a "5 levels-of-reflection-awareness" scale using a specially-designed rubric based on the accepted major theories of reflection that included students' identification of: 1) personal abilities, 2) personal learning styles 3) relationships between course material and student history 4) emotional responses and 5) future applications. Results: 410 self-reflection documents were analyzed. The student self-awareness on personal learning style (72.7% level 3+) and course content (55.2% level 3+) were well-reflected. Reflections at a level 1 awareness included identification of

a) specific teaching strategies utilized to enhance learning (58.4%), b) personal strengths/weaknesses (53%), and c) emotional responses, values, and beliefs (71.5%). Students' abilities to connect information to life experiences and to future events with understanding were more evenly distributed across all 5 levels of reflection-awareness. Conclusions: Exposure to self-reflection assignments in the early years of undergraduate medical education increases student awareness and promotes the creation of personal meaning of one's reactions, values, and premises in the context of student learning environments. Early introduction with repetition to such cognitive processes as practice tools increases engagement in reflection that may facilitate proficiency in mastering this competency leading to the creation of future reflective health professionals.

Kark, R. (2011). Games Managers Play: Play as a Form of Leadership Development. *Academy of Management Learning & Education*, 10(3), 507-527. doi: 10.5465/amle.2010.0048

In recent years, organizations have expended considerable effort and resources to develop and improve managers' leadership skills through various forms of play. I explore the role of play in leadership development processes. Drawing on theories of leader and leadership development and theories of play, I develop a conceptual framework, suggesting that play can contribute to different components of leader and leadership development processes (i.e., leadership identity, cognitive abilities, and behavioral skills). Furthermore, the role of creating safe play spaces in leadership development processes is highlighted. The discussion examines the implications and applications of play for leadership development processes, points to the dangers of misuse of play, and outlines directions for further empirical research.

Karpova, E., Jacobs, B., Lee, J. Y., & Andrew, A. (2011). Preparing Students for Careers in the Global Apparel Industry: Experiential Learning in a Virtual Multinational Team-Based Collaborative Project. *Clothing and Textiles Research Journal*, 29(4), 298-313. doi: 10.1177/0887302x11421809

The study investigated the learning experiences and outcomes of students participating in a virtual team-based multinational collaboration project. The participants in the project were 172 undergraduate students enrolled in three apparel programs located in three different countries: Australia, South Africa, and the United States. To explore student learning experiences and outcomes, 66 anonymous reflective essays were analyzed. As a result of the interpretive analysis, the three topical areas emerged: Discovering New Knowledge, Acquiring New Skills, and Personal Development. Results indicate that participation in the unique learning experience helped students acquire new knowledge and skills, become more mature, and, ultimately, feel better prepared to enter the global apparel industry. Based on our findings, we propose three components that are necessary for a successful preparation of students for the careers in the global apparel industry: (a) obtaining both general and industry-specific knowledge, (b) acquiring professional skills, and (c) personality growth and development.

Kayes, A. B. & Kayes, D. C. (2011). *The Learning Advantage: Six Practices of Learning Directed Leadership*.

Keskitalo, T. (2011). 'Teachers' conceptions and their approaches to teaching in virtual reality and simulation-based learning environments. *Teachers and Teaching*, 17(1), 131-147. doi: 10.1080/13540602.2011.538503

This research article focuses on virtual reality (VR) and simulation-based training, with a special focus on the pedagogical use of the Virtual Centre of Wellness Campus known as ENVI (Rovaniemi, Finland). In order to clearly understand how teachers perceive teaching and learning in such environments, this research examines the concepts of teaching and learning, pedagogical models and methods as well as the educational tools used by ENVI teachers (n = 8). Data were collected through thematic interviews and analysed using the content analysis method. This interview study indicates that teachers saw ENVI's use in education as indisputably beneficial, because it has brought authenticity to teaching and provided students with experiential learning opportunities. ENVI has also made possible the integration of theoretical and practical knowledge. Teachers had widely accepted their role as facilitators of student learning but held widely varied conceptions of learning. Teachers' underlying conceptions become evident in their student-centred approach to teaching and in their utilisation of problem-based learning. However, their use of pedagogical models was not consistent or well defined which has been the case in previous research. Although teachers still need education and support to use a variety of pedagogical models, the results of this study suggest that teachers are moving in the direction of adopting student-centred approaches. So far, this research has offered a starting point for developing a pedagogical model for VR and simulation-based learning environments. As well, it offers useful insights regarding teaching, especially for healthcare teachers, teacher educators, instructor trainers, designers and researchers.

Keskitalo, T., Pyykko, E., & Ruokamo, H. (2011). Exploring the Meaningful Learning of Students in Second Life. *Educational Technology & Society*, 14(1), 16-26.

This study reports a case study in which a pedagogical model, namely the Global Virtual Education (GloVED) model, which is based on the teaching-studying-learning process (TSL process) and the characteristics of meaningful learning, is developed and used to evaluate students' meaningful learning experiences during the Global Virtual Collaboration Project (GVCP) course in spring 2009. During the course, using collaboration technologies, global student (N = 54) teams solved a creative design task. The data were collected and analyzed using various methods. The results suggest that the GVCP course supported the process characteristics of meaningful learning and its outcomes, although the individual, critical, and interactive characteristics were not fully realized. In addition, Second Life (SL) did not contribute to the realization of the goal-oriented, collaborative, conversational, and immersive characteristics. Several implications can be drawn from the results with respect to creative design.



Kibbe, D. L., Hackett, J., Hurley, M., McFarland, A., Schubert, K. G., Schultz, A., & Harris, S. (2011). Ten Years of TAKE 10!(R): Integrating physical activity with academic concepts in elementary school classrooms. *Preventive Medicine*, 52, S43-S50. doi: 10.1016/j.ypmed.2011.01.025

Objective. Current literature supports the link between physical activity (PA) or fitness and a child's ability to achieve academically; however, little structured activity time is incorporated into elementary school classrooms. This paper explores the impact of a classroom-based PA program, TAKE 10!, and health-academic integration through existing state and federal policy and programming. Methods. Evidence from journal articles, published abstracts, and reports were examined to summarize the impact of TAKE 10! on student health and other outcomes. This paper reviews 10 years of TAKE 10! studies and makes recommendations for future research. Results. Teachers are willing and able to implement classroom-based PA integrated with grade-specific lessons (4.2 days/wk). Children participating in the TAKE 10! program experience higher PA levels (13%>), reduced time-off-task (20.5%), and improved reading, math, spelling and composite scores ( $p < 0.01$ ). Furthermore, students achieved moderate energy expenditure levels (6.16 to 6.42 METs) and studies suggest that BMI may be positively impacted (decreases in BMI z score over 2 years [ $P < 0.01$ ]). Conclusion. TAKE 10! demonstrates that integrating movement with academics in elementary school classrooms is feasible, helps students focus on learning, and enables them to realize improved PA levels while also helping schools achieve wellness policies. (C) 2011 Published by Elsevier Inc.

Kinchin, I. M., & Miller, N. L. (2012). 'Structural transformation' as a threshold concept in university teaching. *Innovations in Education and Teaching International*, 49(2), 207-222. doi: 10.1080/14703297.2012.677655 \*

In an attempt to reveal potential threshold concepts in the field of higher education pedagogy, groups of university teachers (in the UK and in Panama) were encouraged to develop personal reflection upon their conceptions of teaching. This was initiated through concept mapping activities. It was hoped that this would help participants to address the perceived differences of teaching between their disciplines whilst coming to recognise the generic factors that may be applicable to teaching across the university context. Consideration of emergent personal models allowed the authors to identify common themes across the disciplines and to align this to established learning theories that may act as a baseline for comparison. The emergent generic model was a modification of Kolb's learning cycle in which two learning cycles (one for the student and one for the teacher) are linked by the shared concrete experience of the classroom and considered in the context of knowledge structures. The transformation of the morphology of these knowledge structures (oscillating between linear and hierarchical) is seen as fundamental to the successful negotiation of the cycle. The participants' recognition of this structural transformation is proposed as a threshold concept for the evolution of university teaching. Personal models are described here in relation to the double Kolb cycle to illustrate the potential of this

approach to stimulate discussion about university teaching that may encourage a transformation in perspective from delivery and receipt of content towards structural transformation of content.

Kisby, B., & Sloam, J. (2012). Citizenship, Democracy and Education in the UK: Towards a Common Framework for Citizenship Lessons in the Four Home Nations. *Parliamentary Affairs*, 65(1), 68-89. doi: 10.1093/pa/gsr047

Citizenship has become a major topic for debate and the subject of public policy in recent years, as academics and policy-makers across the Western world have tried to understand and respond to what is widely seen as a weakening of democracy. In the UK, the increasing alienation of citizens from electoral politics has manifested itself in a sharp fall in electoral turnout, membership of political parties and levels of public trust in the political class. In this context, citizenship education provides an opportunity to address the demand-side of political participation by helping a diverse citizenry make sense of a complex political world and by strengthening democracy through the promotion of active citizenship. This article explores the differences between the approaches to citizenship education that have been adopted in England, Wales, Scotland and Northern Ireland and, in so doing, highlights policy lessons that can be drawn from these varied experiences. It argues that the evidence suggests a common framework for citizenship education across the four home nations based on four key principles-political literacy, experiential learning, appropriate institutional structures and supply-side measures-would help promote active involvement by citizens in forms of political participation.

Klasnja-Milicevic, A., Vesin, B., Ivanovic, M., & Budimac, Z. (2011). E-Learning personalization based on hybrid recommendation strategy and learning style identification. *Computers & Education*, 56(3), 885-899. doi: 10.1016/j.compedu.2010.11.001

Personalized learning occurs when e-learning systems make deliberate efforts to design educational experiences that fit the needs, goals, talents, and interests of their learners. Researchers had recently begun to investigate various techniques to help teachers improve e-learning systems. In this paper, we describe a recommendation module of a programming tutoring system - Protus, which can automatically adapt to the interests and knowledge levels of learners. This system recognizes different patterns of learning style and learners' habits through testing the learning styles of learners and mining their server logs. Firstly, it processes the clusters based on different learning styles. Next, it analyzes the habits and the interests of the learners through mining the frequent sequences by the AprioriAll algorithm. Finally, this system completes personalized recommendation of the learning content according to the ratings of these frequent sequences, provided by the Protus system. Some experiments were carried out with two real groups of learners: the experimental and the control group. Learners of the control group learned in a normal way and did not receive any recommendation or guidance through the course, while the students of the experimental group were required to

use the Protus system. The results show suitability of using this recommendation model, in order to suggest online learning activities to learners based on their learning style, knowledge and preferences.

Kneck, A., Klang, B., & Fagerberg, I. (2011). Learning to live with illness: experiences of persons with recent diagnoses of diabetes mellitus. *Scandinavian Journal of Caring Sciences*, 25(3), 558-566. doi: 10.1111/j.1471-6712.2010.00864.x

Background: The process of learning to live with an illness is complex. By better understanding the learning process for persons with diabetes in the early stage of the illness, the role of the health care can be shown. Aim: To reach an understanding of how learning to live with diabetes is experienced in the first 2 months after diagnosis. Method: A qualitative descriptive design was used, and interviews were conducted. Thirteen participants with a recent diagnosis of diabetes were included and asked to narrate about their experience of living with diabetes. Qualitative inductive content analysis was used. Findings: Four themes emerged: 'taken over by a new reality', 'the body plays a role in life', 'different ways of learning' and 'the healthcare service as a necessary partner'. Conclusion: People with short-term experience of the illness gained knowledge through personal resources such as their own experience and self-reflection. The learning process includes an inner dialogue between the self, the body and the life. Participants were concerned with grasping a new reality and understanding a different self and body where lifestyle changes and uncertainty were present. When health care was accessible and sensitive to their needs, those with short-term experience of diabetes chose the staff as key players in the early stages of their life with diabetes.

Knowles, M. S., Holton III, E. F., & Swanson, R. A. (2012). *The adult learner*. Routledge.

" A great update of a classic. Should be required reading for anyone involved with adult learning in schools, businesses and communities." Sam Stern, Professor & Dean, School of Education, Oregon State University, USA How do you tailor education to the learning

Knoop, H. H. (2011). *Education in 2025: How Positive Psychology can Revitalize Education*.

Koc, M. (2011). Let's make a movie: Investigating pre-service teachers' reflections on using video-recorded role playing cases in Turkey. *Teaching and Teacher Education*, 27(1), 95-106. doi: 10.1016/j.tate.2010.07.006

This study examined the potential consequences of using student-filmed video cases in the study of classroom management in teacher education. Pre-service teachers in groups were engaged in video-recorded role playing to simulate classroom memoirs. Each group shared their video cases and interpretations in a class presentation. Qualitative data collection techniques were used to gather their experiences. Reflection papers written by 97 juniors were analyzed through content analysis and triangulated by group videos and case analysis reports. The

results suggest that having pre-service teachers develop and analyze video cases can improve motivation, learning, empathy, and the construction of professional identity. (C) 2010 Elsevier Ltd. All rights reserved.

Kock, M., & Paramythis, A. (2011). Activity sequence modelling and dynamic clustering for personalized e-learning. *User Modeling and User-Adapted Interaction*, 21(1-2), 51-97. doi: 10.1007/s11257-010-9087-z

Monitoring and interpreting sequential learner activities has the potential to improve adaptivity and personalization within educational environments. We present an approach based on the modeling of learners' problem solving activity sequences, and on the use of the models in targeted, and ultimately automated clustering, resulting in the discovery of new, semantically meaningful information about the learners. The approach is applicable at different levels: to detect pre-defined, well-established problem solving styles, to identify problem solving styles by analyzing learner behaviour along known learning dimensions, and to semi-automatically discover learning dimensions and concrete problem solving patterns. This article describes the approach itself, demonstrates the feasibility of applying it on real-world data, and discusses aspects of the approach that can be adjusted for different learning contexts. Finally, we address the incorporation of the proposed approach in the adaptation cycle, from data acquisition to adaptive system interventions in the interaction process.

Kolb, A. Y. & Kolb, D. A. (2011). *Learning Style Inventory Version 4.0* Hay Resources Direct. 116 Huntington Avenue, Boston, MA 02116  
[www.haygroup.com/leadershipandtalentondemand](http://www.haygroup.com/leadershipandtalentondemand). \*

Kontra, C., Goldin-Meadow, S., & Beilock, S. L. (2012). Embodied Learning Across the Life Span. *Topics in Cognitive Science*, 4(4), 731-739. doi: 10.1111/j.1756-8765.2012.01221.x

Developmental psychologists have long recognized the extraordinary influence of action on learning (Held & Hein, 1963; Piaget, 1952). Action experiences begin to shape our perception of the world during infancy (e.g., as infants gain an understanding of others goal-directed actions; Woodward, 2009) and these effects persist into adulthood (e.g., as adults learn about complex concepts in the physical sciences; Kontra, Lyons, Fischer, & Beilock, 2012). Theories of embodied cognition provide a structure within which we can investigate the mechanisms underlying actions impact on thinking and reasoning. We argue that theories of embodiment can shed light on the role of action experience in early learning contexts, and further that these theories hold promise for using action to scaffold learning in more formal educational settings later in development.

Kop, R., Fournier, H., & Mak, J. S. F. (2011). A Pedagogy of Abundance or a Pedagogy to Support Human Beings? Participant Support on Massive Open Online Courses. *International Review of Research in Open and Distance Learning*, 12(7), 74-93.

This paper examines how emergent technologies could influence the design of learning environments. It will pay particular attention to the roles of educators and

learners in creating networked learning experiences on massive open online courses (MOOCs). The research shows that it is possible to move from a pedagogy of abundance to a pedagogy that supports human beings in their learning through the active creation of resources and learning places by both learners and course facilitators. This pedagogy is based on the building of connections, collaborations, and the exchange of resources between people, the building of a community of learners, and the harnessing of information flows on networks. This resonates with the notion of emergent learning as learning in which actors and system co-evolve within a MOOC and where the level of presence of actors on the MOOC influences learning outcomes.

Kostolanyova, K., Sarmanova, J., & Takacs, O. (2011). Classification of Learning Styles for Adaptive Education. *New Educational Review*, 23(1), 199-212.

We live in a society in which information and communications technologies (ICT) are becoming a driving force for its development. E-learning is obviously a part of this. The basic thought for creation of an adaptive e-learning environment is respecting and supporting differing learning styles of students, by which it is then possible to prepare a learning environment that is more effective, with enhanced user-friendliness and quality. This paper describes a draft adaptive education model and the results of the first part of the solution definition of learning styles, pilot testing on students and an outline of further research in the area of teaching styles of teachers.

Kotsou, I., Nelis, D., Gregoire, J., & Mikolajczak, M. (2011). Emotional Plasticity: Conditions and Effects of Improving Emotional Competence in Adulthood. *Journal of Applied Psychology*, 96(4), 827-839. doi: 10.1037/a0023047

This study aimed to investigate (a) whether it is possible to increase emotional competence (EC) in adulthood; (b) whether this improvement results in better mental, physical, and social adjustment; (c) whether this improvement can be maintained 1 year later; and (d) whether these benefits are accompanied by a reduction in stress-hormone secretion (i.e., cortisol). One hundred and thirty-two participants were randomly assigned to an EC-enhancing intervention (in group format) or to a control group. Participants in the intervention group underwent a specifically designed 15-hr intervention targeting the 5 core emotional competencies, complemented with a 4-week e-mail follow-up. Results reveal that the level of emotional competencies increased significantly in the intervention group in contrast with the control group. This increase resulted in lower cortisol secretion, enhanced subjective and physical well-being, as well as improved quality of social and marital relationships in the intervention group. No significant change occurred in the control group. Peer reports on EC and quality of relationships confirmed these results. These data suggest that emotional competencies can be improved, with effective benefits on personal and interpersonal functioning lasting for at least 1 year. The theoretical implications of these results as well as their practical implications for the construction and the development of effective emotional competencies interventions are discussed.

Krakowka, A. R. (2012). Field Trips as Valuable Learning Experiences in Geography Courses. *Journal of Geography*, 111(6), 236-244. doi: 10.1080/00221341.2012.707674

Field trips have been acknowledged as valuable learning experiences in geography. This article uses Kolb's (1984) experiential learning model to discuss how students learn and how field trips can help enhance learning. Using Kolb's experiential learning theory as a guide in the design of field trips helps ensure that field trips contribute to internalizing relevant geographical theory and concepts. Three types of field trips are presented: an informal survey of a neighborhood, a more formal scavenger hunt, and a virtual field trip using Google Earth.

Krupnik, T. J., Shennan, C., Settle, W. H., Demont, M., Ndiaye, A. B., & Rodenburg, J. (2012). Improving irrigated rice production in the Senegal River Valley through experiential learning and innovation. *Agricultural Systems*, 109, 101-112. doi: 10.1016/j.agsy.2012.01.008

Research facilitating farmer-researcher collaboration and experiential learning may provide the missing element to tailor crop management recommendations to meet farmers' needs. We tested different crop management systems for irrigated rice in three seasons of adaptive research trials in three locations in the middle Senegal River Valley. Our objectives were to assess the agronomic and socio-economic viability of Recommended Management Practices (RMPs) compared to the System of Rice Intensification (SRI) and Farmers' Practices (FPs). During the 2008 dry season, RMP and SRI significantly increased yields over FP by 2.3 and 2.6 t ha<sup>-1</sup> across sites. Farmers analyzed their experiences in post-experiment meetings. They appreciated SRI's yield and water-saving potential, but found it labor demanding, especially for weed management requirements that coincided with horticultural activities. Conversely, farmers described RMP's elevated herbicide rate as costly, and indicated that because of poorly functioning agro-chemical markets, herbicide volumes larger than typically used in FP might be difficult to reliably source. To modify management systems to fit farmers' needs and assets, we collaboratively developed a fourth, 'Farmer Adapted Practice' (FAP) that blended RMP and SRI. FAP used intermittent irrigation during the late vegetative stage, recommended crop density, intermediate seedling age, and a single round of mechanical weeding followed by localized herbicide application. Farmers compared FAP against the initial management systems in the subsequent seasons. Though no yield differences were found between RMP, SRI and FAP, each yielded significantly more (+1.0, +1.1 and +1.5 t ha<sup>-1</sup>) than FP. FAP also reduced labor requirements without increasing weed biomass compared to RMP or SRI, and used 40% and 10% less herbicide than RMP and FP, respectively. Cumulative distribution functions showed that FAP increased net profit potential and decreased economic risk. Prior to the 2009 dry season trials, the Senegalese state eliminated herbicide subsidies, doubling their cost. RMP, SRI and FAP yielded 2.9, 3.0 and 3.1 t ha<sup>-1</sup> more than FP. FAP again reduced weeding labor and herbicide requirements while lowering production risk across sites. This study demonstrates the value-added outcomes that result from research that facilitates farmer-researcher collaboration to learn from, innovate and tailor management systems to fit local circumstances. (C) 2012 Elsevier Ltd. All rights reserved.

Ku, D. T., & Chang, C. S. (2011). THE EFFECT OF ACADEMIC DISCIPLINE AND GENDER DIFFERENCE ON TAIWANESE COLLEGE STUDENTS' LEARNING STYLES AND STRATEGIES IN WEB-BASED LEARNING ENVIRONMENTS.

*Turkish Online Journal of Educational Technology*, 10(3), 265-272.

This paper explores students' learning styles in relation to learning strategies in web-based learning environments, and in particular, how academic discipline and gender differences affect learning styles and learning strategies in web-based learning for college students in Taiwan. The results show that regardless of learning strategy, academic discipline or gender, the visual type learner is the most dominate learning style for web learners. In addition, sensing learners have significantly lower scores in the dimension of anxiety than moderate learners, which indicates that sensing learners feel uneasy in a web-based learning atmosphere, and its related activities. The study also finds that sequential learners are more highly motivated than moderate and global learners, and female learners have higher motivation than male learners in web learning situations. Moreover, students in colleges of liberal arts are less active in web-based learning, as compared with other colleges. Future directions and other related issues are also discussed.

Kucuk, M. (2012). THE RELATIONSHIP BETWEEN ONLINE LEARNERS' LEARNING STYLES AND LEARNING STRATEGIES. *Hacettepe Universitesi Egitim Fakultesi Dergisi-Hacettepe University Journal of Education*(42), 287-298.

Aim of this study is to determine the relationship between students' learning styles and learning strategies in an online learning environment. Data regarding students' learning styles were collected by using the Kolb Learning Styles Inventory. Data related to students' learning strategies were gathered by using Learning Strategies Scale, developed by the researcher based on Weinstein and Mayer's (1986) classification. Analyses of the survey data included both descriptive and inferential statistics including means, standard deviations, Independent sample t-Test, One Way ANOVA, eta correlation coefficient and reliability estimates for the whole sample. Findings of the research show that the use of learning strategies is not related to learning styles. Online learners use learning strategies at sufficient level.

Kuhnen, U., van Egmond, M. C., Haber, F., Kuschel, S., Ozelsel, A., Rossi, A. L., & Spivak, Y. (2012). Challenge me! Communicating in multicultural classrooms. *Social Psychology of Education*, 15(1), 59-76. doi: 10.1007/s11218-011-9169-8

The current study investigated the value of Socratic classroom communication (e. g., critical debate and challenging each other on content matters) among students from various cultures (clustered into Western Europeans, Eastern Europeans and Non-Europeans) and from members of faculty at an international university in Germany. Students from Western cultures where Socratic communication had been valued in the school systems reported a greater ease of engaging in the respective communication style than did Eastern European and Non-European students. Furthermore, we assessed how strongly the faculty valued the respective

kinds of behavior. The results show that overall students underestimated the extent to which Socratic communication behavior was esteemed by members of faculty. In addition, faculty members perceived themselves to be more explicit about their pedagogical principles than they were perceived by students. Finally, the easier it was for students to show Socratic classroom communication, the more academically satisfied they were and the better their grades. The results are discussed with regard to practical implications and the internationalization of universities.

Kurilovas, E., & Zilinskiene, I. (2012). Evaluation of Quality of Personalised Learning Scenarios: An Improved MCEQLS AHP Method. *International Journal of Engineering Education*, 28(6), 1309-1315.

The aim of the paper is to investigate and present a comprehensive scientific model and a novel method of consecutive four steps application of Analytic Hierarchy Process (AHP) for the expert evaluation of the quality of learning scenarios. The paper pays a special attention to learning scenarios suitability to particular learner groups (i.e. learning styles). Solution of learning scenarios quality evaluation and optimisation problems could help educational institutions to select suitable learning scenarios for the particular learner groups. Several well-known scientific principles are applied to create a comprehensive quality model (criteria system) for evaluating learning scenarios. The research results will be implemented in iTEC a four-year, pan-European research and development project focused on the design of the future classroom funded by EU 7FP. Several practical examples of iTEC learning scenarios have been evaluated against the proposed model and method. The research results have shown that a novel method of four steps application of AHP both for establishing weights and ratings (values) of the quality criteria is suitable to solve learning scenarios multiple criteria evaluation and optimisation tasks for particular learning styles.

Kwok, L. F., & Chan, K. S. (2012). Building an e-Portfolio with a learning plan centric approach. *Journal of Zhejiang University-Science C-Computers & Electronics*, 13(1), 37-47. doi: 10.1631/jzus.C1100073

A portfolio records achievements in the personal growth process. A personal development e-Portfolio assists an individual in planning his/her development path and reflecting upon his/her own learning. In this article, we propose an approach to constructing a personal development portfolio. An abstract information model is presented to support such a portfolio. The information model is proposed based upon and according to IMS standards. The use of this approach is illustrated by way of a prototype e-Portfolio system. The usage scenario and limitations of such a portfolio are also discussed.

Kyprianidou, M., Demetriadis, S., Tsiatsos, T., & Pombortsis, A. (2012). Group formation based on learning styles: can it improve students' teamwork? *Etr&D-Educational Technology Research and Development*, 60(1), 83-110. doi: 10.1007/s11423-011-9215-4\*



This work explores the impact of teacher-led heterogeneous group formation on students' teamwork, based on students' learning styles. Fifty senior university students participated in a project-based course with two key organizational features: first, a web system (PEGASUS) was developed to help students identify their learning styles and distribute them to heterogeneous groups. Second, group facilitation meetings were introduced as a technique to help students reflect on their weak/strong traits and employ appropriate roles in their group. The study research questions focused mainly on students' attitudes regarding the learning style-based group formation approach. By applying qualitative research method students' views were recorded about the impact of styles awareness and group heterogeneity on group collaboration and possible benefits and drawbacks related to the style-based grouping approach. Evaluation data revealed that students gradually overcame their initial reservations for the innovative group formation method and were highly benefited since styles heterogeneity within the group emphasized complementarities and pluralism in students' ways of thinking. Overall, this work provides evidence that the adoption of learning styles theories in practice can be facilitated by systems for automated group formation and supportive group facilitation meetings that help avoiding the trivial and discouraging approach of using learning styles to simply label students.

## L

Lacks, D. J., Sankaran, R. M. & Ketlogetswe, C. (2011). Experiential learning and global perspective in an engineering core course. Unpublished paper Department of Chemical Engineering CWRU\*

Lambrechts, F., Bouwen, R., Grieten, S., Huybrechts, J. P., & Schein, E. H. (2011). Learning to Help Through Humble Inquiry and Implications for Management Research, Practice, and Education: An Interview With Edgar H. Schein. *Academy of Management Learning & Education*, 10(1), 131-147.

For more than 50 years, Edgar H. Schein, the Sloan Fellows Professor of Management Emeritus at the Massachusetts Institute of Technology's Sloan School of Management, has creatively shaped management and organizational scholarship and practice. He is the author of 15 books, including *Process Consultation Revisited*, *Organizational Culture and Leadership*, *Career Anchors*, *Organizational Psychology*, *Career Dynamics*, and *Helping*, as well as numerous articles in academic and professional journals. Novelty, clarity, and relevance have always been the guiding principles of his work. In this interview, Schein moves on from his key formative learning experiences to focusing on humble inquiry as the key to building and maintaining the helping relationship. Comprised of both a helper's attitude and behavior, humble inquiry embodies "accessing one's ignorance" and becoming open to what the helper and the helped may learn from each other through observation, genuine empathic questioning, careful listening, and suspension of judgment. Schein not only identifies several challenges within management research, practice, and education, but also offers provocative recommendations to those involved.

Lamonica, C. C. (2011). Journal Keeping: How to Use Reflective Writing for Learning, Teaching, Professional Insight, and Positive Change. *Review of Higher Education*, 34(3), 516-518.

Larsen, S. C., Foulkes, M., Sorenson, C. J., & Thompson, A. (2011). Environmental learning and the social construction of an exurban landscape in Fremont County, Colorado. *Geoforum*, 42(1), 83-93. doi: 10.1016/j.geoforum.2010.10.003

Across the rural American West, the restructuring of rural capitalism has transformed production landscapes into those increasingly structured by the development and consumption of natural and cultural amenities. This project used principles from symbolic interactionism, ethnographic methods, and the analytical framework of regional political ecology to understand the role of environmental learning in negotiating the new management regime associated with amenity-based capitalism in rural Fremont County, Colorado. The study found that most amenity residents participate regularly in social learning about the environment through a variety of interpersonal and organizational behaviors. In addition, they are responding collectively to environmental risks and opportunities associated with wildfire, noxious weeds and invasive grass species, prospective uranium mining, and restoration of cultural-landscape features. Ultimately, the practices of environmental learning concern how private properties and assets will be managed relative to the social construction of the environment as an amenity for personal consumption. Conservation and management prospects in this and other rural areas in the postindustrial world can be enhanced by understanding the microsociology of exurban geographies and by engaging the social forms and processes related to this distinctive landscape construction. (c) 2010 Elsevier Ltd. All rights reserved.

Lau, K., Beckman, S. L., & Agogino, A. M. (2012). Diversity in Design Teams: An Investigation of Learning Styles and their Impact on Team Performance and Innovation. *International Journal of Engineering Education*, 28(2), 293-301. \$

In this paper, we examine the role of diversity in design team performance, and discuss how diversity factors affect the dynamics and success of a design team. In particular, we focus on diversity in learning styles, as defined by Kolb's Experiential Learning Theory. We also consider other demographic factors, such as discipline and gender. We present data gathered over two semesters of a multidisciplinary, project-based graduate level design course offered at the University of California at Berkeley. The data were captured through a series of surveys administered during the semester, first to collect diversity information on learning styles and standard demographics, and then to assess team performance as students reflected on their team interactions. We examine and compare the overall learning style breakdown of students in the class, along with an analysis of the teams. The results of our analyses offer insights into how students with different learning styles appear to contribute to design team performance. We provide recommendations that will help inform design educators on how to

enhance overall team performance and innovation, with an understanding of learning style differences.

Lee, V., Ridzi, F., Lo, A. W., & Coskun, E. (2011). A healthcare case study of team learner style and change management. *Journal of Organizational Change Management*, 24(6), 830-852. doi: 10.1108/09534811111175788 \*

Purpose. - The purpose of this paper is to explore the learner styles of a healthcare institution transition team and its respective members within a change management context. In particular we focus on the role of learner style in the success of change efforts within a team setting. Design/methodology/approach - This paper presents a case study that employs a questionnaire survey, non-participant observation, and semi-structured interviews as part of a larger study of healthcare change management. Findings - Findings suggest that a mix of learning styles is ideal for successful healthcare change management. Specifically, this limited study suggests a learner ratio that favors convergers and assimilators over divergers and accommodators may be the most effective staffing strategy for change leadership teams in a healthcare environment. Originality/value - Managing change in healthcare has been researched from a process perspective but few studies examine the individual team members' learner styles and the impact of these learning styles over time. Implications for human resources and change implementation are discussed.

Leijen, A., Valtna, K., Leijen, D. A. J., & Pedaste, M. (2012). How to determine the quality of students' reflections? *Studies in Higher Education*, 37(2), 203-217. doi: 10.1080/03075079.2010.504814 \*

This article discusses some of the ambiguities related to the concept of reflection in education, and presents an alternative approach for determining the focus and quality of students' reflection. Accordingly, the focus of reflection can vary from a concrete technical aspect of an experience to the broader societal context of that experience, and the quality of reflection can be described through successive stages of argumentation: describing, justifying, evaluating and discussion. The developed coding schema for determining the focus and quality of reflection was pilot tested on reflection fragments written by a small sample of tertiary dance students.

Lekan, D. A., Corazzini, K. N., Gilliss, C. L., & Bailey, D. E. (2011). CLINICAL LEADERSHIP DEVELOPMENT IN ACCELERATED BACCALAUREATE NURSING STUDENTS: AN EDUCATION INNOVATION. *Journal of Professional Nursing*, 27(4), 202-214. doi: 10.1016/j.profnurs.2011.03.002

Nursing faculty members are responsible for assuring competence and safety in the preparation of prelicensure students who are preparing to deliver care in diverse settings. The growing complexity of care and the rapid expansion of knowledge have challenged the adequacy of traditional educational approaches. Proposed solutions have encouraged closer integration of classroom and clinical teaching. This article describes an integrated instructional approach to developing clinical leadership competencies in a cohort of accelerated, second-degree,

baccalaureate nursing students. Fifty-six students completed an intensive clinical experience in long-term care settings in which they used evidence on improving care for persons with heart failure to practice the principles of delegation and supervision with nursing staff. The pre- and postassessments indicated improvement in heart failure knowledge and increased readiness for delegation and supervision of certified nursing assistants. As one component of the learning experience, the students completed reflection journals. The entries in the students' journals revealed five themes: (a) low leadership self-efficacy, (b) managing the credibility gap, (c) flexibility in communication strategies, (d) RN accountability in delegation and supervision, and (e) knowledge dissemination with diverse nursing staff. Students and faculty judged the learning experience to be successful and supported the experience for future cohorts of students. This report is one example of how innovative learning experiences could be developed to increase the "real-world" aspects of clinical care within a multidisciplinary team context for the entry-level learner.

Lenchus, J., Issenberg, S. B., Murphy, D., Everett-Thomas, R., Erben, L., Arheart, K., & Birnbach, D. J. (2011). A blended approach to invasive bedside procedural instruction. *Medical Teacher*, 33(2), 116-123. doi: 10.3109/0142159x.2010.509412

Objective: This study assessed the impact of a blended, standardized curriculum for invasive bedside procedural training on medical knowledge and technical skills for Internal Medicine residents. Methods: The investigators developed a curriculum in procedural instruction and performance for Internal Medicine house staff, and implemented the program at a tertiary care academic medical center with a primary affiliation with a US medical school. The investigators chose procedures recommended for technical competence by the American Board of Internal Medicine: lumbar puncture, thoracentesis, paracentesis, central venous catheter insertion, and knee arthrocentesis. The program included: (1) assessment of baseline medical knowledge and technical proficiency on mannequins, (2) video instruction of procedure, (3) faculty-led discussion of critical concepts, (4) faculty demonstration of the procedure on mannequin, (5) individual practice on simulators, (6) post-intervention knowledge evaluation, and (7) post-intervention skills evaluation. The performance achieved during the initial skills evaluation on a mannequin was compared to the performance achieved on the first patient subsequent to the instructional portion. Results: All participants with complete data demonstrated a statistically significant pre-intervention to post-intervention improvement ( $p < 0.05$ ) in comprehensive medical knowledge and procedural skills. Conclusion: A blended, standardized curriculum in invasive bedside procedural instruction can significantly improve performance in participants' medical knowledge and technical skills.

Leong, H. E. W. (2012). *Learning styles of aviation students* Swineburne University Ph. D thesis\*

In this study, the researchers oversaw the distribution, data acquisition, and analysis of the Kolb Learning Style Inventory (LSI) and a short demographic questionnaire of students enrolled in either Bachelor of Aviation or Bachelor of

Aviation/Bachelor of Business course at Swinburne University of Technology (SUT). As there has not been any published research conducted in Australia with regards to the learning styles of student pilots; the researchers, over the period of one week, administered the Kolb LSI and the demographic questionnaire to the students during their break while they were attending classes at Oxford Aviation Academy (OAA). With the cultural aspect of Australia being similar to that of the USA based on Kanske's research, a comparison between aviation students of both countries were made to see whether the predominant learning styles, with regards to the aviation students, were the same. The analysis of the data obtained from the Australian aviation students produced results which suggest this population has a predominant assimilator and converger learning styles which are consistent to that of the USA aviation students. The findings, however, differ from the study conducted with the Chinese aviation students based on Gao's research, where it was suggested assimilator and diverger were the predominant learning styles. An assumption can be made suggesting that cultural aspect may play a role in determining the learning styles of the aviation students as it can be seen the cultural aspects between Australia and China are different but similar to USA. These results may be useful in further research to allow better understanding of the predominant learning styles of aviation students which in turn, allow for the development of better flight training programmes to cater to those learning styles.

Leung, F. H., & Ratnapalan, S. (2011). A framework to teach self-reflection for the remedial resident. *Medical Teacher*, 33(3), e154-e157. doi: 10.3109/0142159x.2011.543199

Background: Regardless of the area of deficiency, be it in knowledge, skills or attitudes, residents requiring remediation are rarely self-identified. This illustrates a diminished ability for self-reflection. Self-reflection is a cornerstone of adult education. During the remediation process, the remediation curriculum needs to emphasize self-reflection. Aims: aEuro integral How can one structure self-reflection in a remediation curriculum?? Methods: aEuro integral This article describes how to adapt and apply environmental scanning for remedial residents. Results: aEuro integral Environmental scanning is a rigorous and well-developed business approach that can be adapted for personal continuous quality improvement to foster self-reflection in medical trainees. There are often already existing tools which can form the foundation for regular reflection in medical education using an environmental scanning structure. Conclusions: aEuro integral Environmental scanning can be thought of as a structured approach to internal and external reflections.

Levers, N. (2012). Learning Style Inventory and Cooking Together for Family Meals Program. Unpublished paper—EBLS research grant.\*

This report explores learning styles and its role in nutrition intervention programs. In particularly, we focus on Cooking Together for Family Meals, which is a six-week program whose long-term goal is to prevent childhood obesity by allowing parents and their children to learn about healthy eating and cooking. Nine nutrition educators who have facilitated Cooking Together for Family Meals

Programs completed the Kolb's Learning Style Inventory, where they discovered their own learning styles. Understanding learning styles of the nutrition educators can provide us with insight on teaching strategies utilized by educators in the Cooking Together for Family Meals Program. This can have various implications for future research on creating effective nutrition intervention programs that are able to accomplish their goals of providing information to participants concerning healthy eating habits.

Li, L., Lee, H., & Law, R. (2012). Technology-mediated management learning in hospitality organisations. *International Journal of Hospitality Management*, 31(2), 451-457. doi: 10.1016/j.ijhm.2011.07.003

This study examines the role of information and communication technology (ICT) applications in management learning and development in hospitality organisations. Managers who search for authentic social knowledge are most likely to use learning management systems, company intranets, email applications and search engines. Managers who look for personal knowledge are most likely to select search engines, online audio or video communication applications, telephone conferencing and customer online community websites. This study provides evidence that e-learning practices in management development do not fully support managers' learning. The paper lastly offers solutions to address this mismatch. (C) 2011 Elsevier Ltd. All rights reserved.

Li, L. Y., Zheng, Y. L., & Zheng, F. L. (2011). Key Issues for Personalized Learning Service Provision in Ubiquitous Learning Environments. In H. Zhang, G. Shen & D. Jin (Eds.), *Advanced Research on Automation, Communication, Architectonics and Materials, Pts 1 and 2* (Vol. 225-226, pp. 925-928).

Learning itself is substantially ubiquitous, while real ubiquitous learning needs can only be supported by appropriate learning technologies. Technology enhanced personalized learning service is indispensable for ubiquitous learning. This paper discusses several key issues for personalized learning service provision in ubiquitous learning environments, including learner modeling, context management, ontology adoption and service visualization.

Li, S. T. T., Paterniti, D. A., Tancredi, D. J., Co, J. P. T., & West, D. C. (2011). Is Residents' Progress on Individualized Learning Plans Related to the Type of Learning Goal Set? *Academic Medicine*, 86(10), 1293-1299. doi: 10.1097/ACM.0b013e31822be22b

Purpose To determine the types of learning goals residents select for their individualized learning plans (ILPs) and the relationship between goal type and progress toward achieving that goal. Method Pediatric and combined pediatric residents at 46 U. S. training programs completed a Web-based survey on ILPs in 2008-2009, describing their most important learning goal and the goals on which they made the most and least progress. Using iterative inductive review, responses were categorized into seven types (six corresponding with the Accreditation Council for Graduate Medical Education general competencies). Descriptive statistics and regression models were used to assess the relationship between goal

type and progress made. Results Of 1,739 eligible residents, 992 (57%) completed the survey; 668 (38%) had previously completed an ILP and described their learning goals. Residents were more likely to report medical knowledge (MK) (53.7%) and patient care (PC) (25.9%) goals as most important and less likely to report professionalism (1.5%) and systems-based practice (SBP) (1.0%) goals as most important. Compared with progress on MK goals, residents reported significantly greater progress on PC (odds ratio [OR]: 2.20; 95% confidence interval [CI]: 1.57-3.09) and practice-based learning and improvement teaching (OR: 2.99; 95% CI: 1.59-5.63) goals and less progress on SBP goals (OR: 0.16; 95% CI: 0.05-0.56). Conclusions Residents most commonly identified MK and PC learning goals as the most important. Residents made more progress on goals related to everyday tasks, such as PC and teaching, compared with goals less integrated in everyday training, such as SBP.

Li, M., Mobley, W. H. & Kelly, A. (2012). When Do Global Leaders Learn Best to Develop Cultural Intelligence? An Investigation of the Moderating Role of Experiential Learning Style.. Submitted to AMLE

Cultural intelligence is believed to be an important quality for global leaders. To understand how this quality can be developed from international experience, the present study employs experiential learning theory to analyze the learning process. It hypothesizes that the extent to which the length of overseas work experience contributes to the development of cultural intelligence varies depending on the executive's learning styles. Analyses of data collected from 294 international executives and graduate business students in China and Ireland indicated that the positive relationship between the length of overseas experience and cultural intelligence is strengthened when global executives have a divergent learning style, not when they have an assimilative, convergent or accommodative learning style.

Li, Y. S., Chen, H. M., Yang, B. H., & Liu, C. F. (2011). An exploratory study of the relationship between age and learning styles among students in different nursing programs in Taiwan. *Nurse Education Today*, 31(1), 18-23. doi: 10.1016/j.nedt.2010.03.014

The purpose of this study was to identify the relationship between learning styles and age among nursing students in a two-year, a five-year associate degree of nursing (ADN) program, and a two-year bachelor of science in nursing (BSN) program in Taiwan. The Chinese version of the Myers-Briggs Type Indicator (MBTI) Form M was used to measure individual preferences in four dichotomous dimensions of Jungian theory: extraversion/introversion, sensing/intuition, thinking/feeling, and judging/perceiving. The study sample included 331 nursing students. The analysis of the data revealed that the most common learning styles were introversion, sensing, thinking, and judging (ISTJ) and introversion, sensing, feeling, and judging (ISFJ). The findings indicated that the SJs comprised 43.0% of the participating nursing students. SJs are highly preferred in the field of nursing. However, the ages of nursing students were not significantly related to their learning styles. The findings suggested that the participating nursing students were homogeneous. We recommend the use of a large sample for further studies. The awareness and understanding of individual differences is of great importance

in tailoring each learning style to benefit educators and learners, thereby enhancing nursing education. (C) 2010 Elsevier Ltd. All rights reserved.

Lim, L. (2011). A comparison of students' reflective thinking across different years in a problem-based learning environment. *Instructional Science*, 39(2), 171-188. doi: 10.1007/s11251-009-9123-8

Problem-based learning (PBL) is a constructivist approach to learning which is believed to promote reflective thinking in students. This study investigated how students in one particular institution developed in their reflective thinking habits- Habitual Action, Understanding, Reflection, and Critical Reflection-as they went through the daily practice of PBL. A 16-item questionnaire measuring the four levels of reflective thinking habits was administered to four cohorts of students: an incoming cohort, first-years, second-years, and third-years. First-year students rated themselves higher on Reflection and Critical Reflection, while third-years reported the highest levels of Habitual Action. Discriminatory and scatterplot analysis on the third year cohort revealed that while a proportion of students (47%) reported higher levels of Habitual Action with lower levels of Reflection, there was a small subgroup who also reported higher levels of both Habitual Action and Reflection. Overall, the results showed that PBL does promote the development of reflective thinking, particularly for first-year students, but that this development is not sustained consistently after that. This pointed to other possible factors that could hinder students' development of reflective thinking in PBL.

Lindblom-Ylanne, S., Nevgi, A., & Trigwell, K. (2011). Regulation of university teaching. *Instructional Science*, 39(4), 483-495. doi: 10.1007/s11251-010-9141-6

The aims of the present study are twofold: firstly, to explore dimensions in the regulation of teaching in a multidisciplinary sample of university teachers, and secondly, to analyse factors related to the regulation of university teaching. Seventy-three university teachers representing several disciplines participated in the study. These teachers volunteered to be interviewed. Before the interviews, teachers were asked to fill in the Approaches to Teaching Inventory (Trigwell and Prosser 2004). Then they were asked about their own study experiences, the teaching traditions of their disciplines and the teaching cultures of their departments and the effect these had on them as teachers. Three different groups emerged of almost equal size from the analyses of the transcripts, each reflecting qualitatively different ways to regulate teaching. The groups were labelled External regulation, Self-regulation as a reaction to own bad experiences and Self-regulation through constructing one's own approach to teaching through reflection. The factors related to variation in regulation included previous study experience, cultures of the discipline, teaching experience and approaches to teaching.

Lindsey, P. (2011). Abstract Teaching for a Concrete World: A Lesson from Plato. *Political Science and Politics* 44(3): 605-610

This article argues that instructors should introduce students to abstract concepts



only after they have provided concrete illustrations of them. The advantages of working from the concrete to the abstract are twofold: (1) students have an easier time conceptualizing abstractions from within a particular context, and (2) such a context provides them with a greater motivation to do so. In an effort to mirror the pedagogical approach I defend, I begin by reviewing the manner in which Plato introduces the concept of justice to his readers in Book I of the *Republic*. I then examine the common model of teaching abstract concepts, demonstrate how an effective alternative differs from this model and review the education theories that support the alternative model.

Liu, Y., Xu, J. & Weitz, B. A. (2011). The Role of Emotional Expression and Mentoring in Internship Learning. *Academy of Management Learning & Education*, 2011, Vol. 10, No. 1, 94–110.\*

We examine the proactive role of interns in fostering positive internship experiences and how such experiences may bring about beneficial outcomes for both interns and sponsoring organizations. The model suggests that interns' emotional expressions (i.e., emotional masking and emotional sharing) and social activities influence the degree to which they learn and receive mentoring from their supervisors during the internship, which further influence interns' job satisfaction, affective commitment to the internship sponsor, and career attitude. The results, based on a sample of 167 college student interns working in the retail industry, indicate that emotional sharing is positively related to both learning and mentoring, while emotional masking is negatively related to learning. In addition, intern social activity is positively related to mentoring. We also found that the levels of learning and mentoring received are significantly related to intern job satisfaction, affective commitment to the internship sponsor, and a positive attitude toward the industry they interned with as a potential future career. Practical implications for the design and implementation of internship programs are discussed.

Liu, Z. F., & Wang, M. J. (2011). *A Model for Designing Computer-Assisted Games for Immersive Learning*.

In this paper, we propose a new model (PAIR) for designing computer-assisted games for immersive learning. This model is generated based on the influential game theories of Malone and Lepper[1], and on our research and analysis of the characteristics of immersive learning. Findings of this study seem to predict that computer games will be widely used in education in the near future. And the PAIR (Prop, Actor, Interaction, Rewards and Punishments) model for designing games can help to improve the qualities of immersive teaching.

London, M., & Hall, M. J. (2011). UNLOCKING THE VALUE OF WEB 2.0 TECHNOLOGIES FOR TRAINING AND DEVELOPMENT: THE SHIFT FROM INSTRUCTOR-CONTROLLED, ADAPTIVE LEARNING TO LEARNER-DRIVEN, GENERATIVE LEARNING. *Human Resource Management*, 50(6), 757-775. doi: 10.1002/hrm.20455

Traditional instruction is adaptive—that is, instructor-driven, face-to-face and/or online training to teach skills and knowledge and convey information, policies, and procedures. In contrast, generative learning is learner-driven, collaborative, and problem-focused. Web 2.0 technologies can support both types of learning but are especially valuable for generative learning. This article reviews learning processes and Web 2.0 capabilities, describes two case examples, outlines ways to design Web 2.0 training applications, and discusses the changing role of learning professionals from delivering structured, one-way adaptive learning to designing and facilitating generative learning opportunities. The article concludes with ideas for corporate education and research on Web 2.0-based learning processes, including utilizing the technology to track and improve learning. (C) 2011 Wiley Periodicals, Inc.

## M

MacNab, B., Brislin, R., & Worthley, R. (2012). Experiential cultural intelligence development: context and individual attributes. *International Journal of Human Resource Management*, 23(7), 1320-1341. doi: 10.1080/09585192.2011.581636

Cultural intelligence (CQ) represents advancement in the area of international human resources management and cross-cultural training. An experiential approach to CQ training is developed and analyzed. A diverse, multicultural group of over 370 participated. General self-efficacy and contextual aspects related to Contact Theory were found to be significant to training outcomes in CQ development. In crafting the most effective CQ training and education, organizations and international human resources staff can benefit from understanding individual and contextual influences. Our experiential approach to CQ education appears to hold promise and adds to the literature by producing a specific approach.

MacNab, B. R., & Worthley, R. (2012). Individual characteristics as predictors of cultural intelligence development: The relevance of self-efficacy. *International Journal of Intercultural Relations*, 36(1), 62-71. doi: 10.1016/j.ijintrel.2010.12.001

Cultural intelligence represents a promising development in the field of cross-cultural management. While foundational models and predictors of cultural intelligence have been proposed, there remains a need for more empirical research in cultural intelligence education and development. Theory relates cultural intelligence, and the development of this capacity, to a number of important considerations, including individual attributes and experiences. This research effort examines a multi-cultural group of over 370 managers and management students, testing theoretical relations between individual characteristics (i.e. general self-efficacy, international travel experience, management and work experience) with cultural intelligence development (meta-cognitive, motivation and behavior aspects). An experiential approach to cultural intelligence education is summarized. The findings suggest that general self-efficacy holds a key relation to predicting successful development of cultural intelligence capacities. (C) 2010 Elsevier Ltd. All rights reserved.

Magnier-Watanabe, R., Benton, C., & Senoo, D. (2011). A study of knowledge management enablers across countries. *Knowledge Management Research & Practice*, 9(1), 17-28. doi: 10.1057/kmrp.2011.1

Knowledge has been long cited as a strategic asset and a source of competitive advantage for organizations. However, the creation of knowledge is a complex process that is influenced by several factors beyond the typical practice of knowledge management (KM). In this research, we assess the effects of leadership, Ba (shared context in motion), organizational culture, organizational control, and work style on KM defined in terms of the SECI process of socialization, externalization, combination, and internalization. On the basis of data gathered from a questionnaire survey of a Japanese pharmaceutical company and its subsidiaries in the United States, France, and China, we compare how the aforementioned organizational factors influence the processes of KM in these organizations. The results show that organizational factors affect KM practices differently in each of the targeted countries, and suggest that KM activities need to be tailored to the organizational idiosyncrasies of each local office, without betraying the global vision of the corporation. *Knowledge Management Research & Practice* (2011) 9, 17-28. doi: 10.1057/kmrp.2011.1

Mahdjoubi, L., & Akplotsyi, R. (2012). The impact of sensory learning modalities on children's sensitivity to sensory cues in the perception of their school environment. *Journal of Environmental Psychology*, 32(3), 208-215. doi: 10.1016/j.jenvp.2012.02.002

Learning style models recognised that individuals differ in the sense learning modality of stimuli from which they best absorb, retain and process new information. The effect of sensory learning modalities on individual children's sensitivity to sensory cues has so far been neglected. This paper reports on a study that sought to establish whether individual differences in children's sensitivity to sensory cues in their perception of their school environmental features is influenced by their sensory learning modalities. Participants included Key Stage 1 and 2 pupils (N=151) from four primary schools in South Gloucestershire, UK. The study used a child-friendly Visual, Auditory and Kinaesthetic questionnaire to establish children's learning style modality. All children, independent of their learning style category, were exposed to three types of sensory cues, consisting of photo-safari, speech frequency and Global Positioning System. The analysis revealed that children's sensitivity to sensory cues in their perception of school environmental features varied significantly between the three sensory learning modalities: visual, auditory and kinaesthetic. The implications of these findings on research, policy and practice are discussed. (C) 2012 Elsevier Ltd. All rights reserved.

Maiden, B., & Perry, B. (2011). Dealing with free-riders in assessed group work: results from a study at a UK university. *Assessment & Evaluation in Higher Education*, 36(4), 451-464. doi: 10.1080/02602930903429302

Potential employers require graduates to be able to demonstrate competent teamwork skills in initiating ideas and solving problems cooperatively. Teamwork

is prevalent in educational institutions and often included as a way of enriching learning and assessment. Whilst group working can provide a rich opportunity for cooperative learning, its assessment can be the cause of much anxiety amongst students. This paper examines the phenomenon of 'free-riding' and explores methods of managing potential abuse. Six approaches were trialled in a UK university business school on modules of study involving assessed group work and the views of students and tutors analysed. Findings from the study indicate that students (like academics) value teamwork even when it is assessed. Any method to moderate 'free-riding' is appreciated by students.

Malam, L., & Grundy-Warr, C. (2011). Liberating learning: Thinking beyond the grade' in field-based approaches to teaching. *New Zealand Geographer*, 67(3), 213-221. doi: 10.1111/j.1745-7939.2011.01213.x

This paper is positioned within current debates on education development and the value of fieldwork as a pathway to fostering a nuanced, sophisticated and empathetic world view among students. Here, we focus on one form of field-based teaching within geography, that is, intensive field studies courses taught abroad. We draw on our experience as cofacilitators of a six-week intensive field course conducted in various parts of Thailand. The course we discuss in this paper was focused on teaching students both applied research skills (critical engagement, ethnographic research methods and ethical research practice) and substantive content (the social, cultural, political and economic aspects of Thailand from a geographer's perspective). We argue that the value of field studies lies in the ability of such a course to help students enhance and deepen broad, generalisable skills such as problem solving; ethical research practice; critical engagement with complex social issues; and independent research skills.

Malakooti, B. (2012). Decision making process: typology, intelligence, and optimization. *Journal of Intelligent Manufacturing*, 23(3), 733-746. doi: 10.1007/s10845-010-0424-1

Decision making is concerned with evaluating and/or ranking possible alternatives of action. In this paper, we develop a model for the process of decision making. Understanding the decision process can provide insights into how humans make decisions, understand their decision making approaches, and how they differ from each other. We believe that decision makers who are conscious of their decision process types can make more effective and balanced decisions. In this paper, we present a new decision process model based on the following four dimensions where each dimension is defined by two opposing types: Information Processing (Concrete and Abstract), Alternative Generation (Adaptive and Constructive), Alternative Evaluation (Moderate and Bold), and Decision Closure (Organized and Flexible). Furthermore, an approach for assessing each of the four decision process types by a mathematical function is presented. In a much boarder scope than decision making, these assessed functions can be used to evaluate and rank alternatives. The decision process model can also be used in conjunction with multiple criteria decision making and multiple objective optimization. The model can also be used to explain the reasons that the classical decision making models fail to describe real decision

makers' behavior, and mistakenly label such behavior as irrational. The proposed decision process model can be used for developing new behavioral, rational, and intelligent decision making theories and approaches. Extensions of this work may include group decision making, organizational decision making, team formation, and risk behavior analysis. Experimental results of over four hundred engineering students are reported. A web site has been developed for users (<http://car.cwru.edu/decision/>).

Malkki, K. (2012). Rethinking Disorienting Dilemmas Within Real-Life Crises: The Role of Reflection in Negotiating Emotionally Chaotic Experiences. *Adult Education Quarterly*, 62(3), 207-229. doi: 10.1177/0741713611402047\*

This study elaborates on how a disorienting dilemma, a life-event crisis, may trigger reflection. The study comprised an analysis of interviews with involuntarily childless women, who were in the process of negotiating emotionally chaotic experiences. The implications for Jack Mezirow's theory of transformative learning are explored. Compared with the more often discussed role of reflection in facilitated contexts, the analysis shows differences in the role of reflection in this nonfacilitated context, where it appears to enable meaning making in a chaotic situation that was not understandable from within existing meaning frameworks. Furthermore, disorienting dilemmas are manifested in various emotional experiences, indicating that one's relation to these emotions-as opposed to the nature of the emotion-becomes essential with regard to triggering reflection. Last, the social dimension appears as a second-wave trigger of reflection, as one's changed assumptions are found to collide with views of significant others.

Malkki, K., & Lindblom-Ylänne, S. (2012). From reflection to action? Barriers and bridges between higher education teachers' thoughts and actions. *Studies in Higher Education*, 37(1), 33-50. doi: 10.1080/03075079.2010.492500 \*

Within higher education, reflection has been seen as a prerequisite to quality teaching and developing as a teacher. However, little empirical research exists concerning the link between teacher reflection and action, which defines the extent to which the teacher's reflection-based views are channelled to the benefit of the students. This article focuses on this link, as manifested through interviews with 76 university teachers. The findings shed light on practical challenges and obstacles along higher education teachers' path from reflection to practice, and indicate that, despite the strong emphasis on reflection, it is far from being a self-evident tool for developing a teacher's practice. Besides the pedagogical perspective, this link also appears essential from the viewpoint of the teacher experiencing teaching as rewarding. Issues that arise when theories of learning and reflection are applied to the context of the development of university teacher are considered.

Mann, K. V. (2011). Theoretical perspectives in medical education: past experience and future possibilities. *Medical Education*, 45(1), 60-68. doi: 10.1111/j.1365-2923.2010.03757.x

Context Pedagogical practices reflect theoretical perspectives and beliefs that people hold about learning. Perspectives on learning are important because they influence almost all decisions about curriculum, teaching and assessment. Since Flexner's 1910 report on medical education, significant changes in perspective have been evident. Yet calls for major reform of medical education may require a broader conceptualisation of the educational process. Past and current perspectives Medical education has emerged as a complex transformative process of socialisation into the culture and profession of medicine. Theory and research, in medical education and other fields, have contributed important understanding. Learning theories arising from behaviourist, cognitivist, humanist and social learning traditions have guided improvements in curriculum design and instruction, understanding of memory, expertise and clinical decision making, and self-directed learning approaches. Although these remain useful, additional perspectives which recognise the complexity of education that effectively fosters the development of knowledge, skills and professional identity are needed. Future perspectives Socio-cultural learning theories, particularly situated learning, and communities of practice offer a useful theoretical perspective. They view learning as intimately tied to context and occurring through participation and active engagement in the activities of the community. Legitimate peripheral participation describes learners' entry into the community. As learners gain skill, they assume more responsibility and move more centrally. The community, and the people and artefacts within it, are all resources for learning. Learning is both collective and individual. Social cognitive theory offers a complementary perspective on individual learning. Situated learning allows the incorporation of other learning perspectives and includes workplace learning and experiential learning. Viewing medical education through the lens of situated learning suggests teaching and learning approaches that maximise participation and build on community processes to enhance both collective and individual learning.

Manning, M. L., & Grosso, D. (2011). Doctor of Nursing Practice Students Advocating for Health Care Access, Quality, and Reform: From the Virtual Classroom to Capitol Hill. *Journal of Nursing Education*, 50(1), 14-20. doi: 10.3928/01484834-20101029-05

The potential for doctor of nursing practice students to inform and influence the national health care reform movement inspired faculty teaching an online Health and Social Policy course to create an assignment combining comparative effectiveness research with a trip to Capitol Hill to meet with congressional representatives. Preparing for and participating in such an assignment can present challenges for online doctoral students already busy with family and professional responsibilities. However, from both faculty and student perspectives, the lasting value and professional growth are immeasurable. Course details and the theoretical concepts of experiential education are presented, as well as trip logistics and evaluation.

Markovic, S., & Jovanovic, N. (2012). Learning style as a factor which affects the quality of e-learning. *Artificial Intelligence Review*, 38(4), 303-312. doi: 10.1007/s10462-011-9253-7\*

With the aid of the Internet, many organizations and schools have adopted the idea of applying the e-learning system, which is considered as one of the most important services provided by the Internet. The purpose of this paper is to investigate the factors affecting the acceptance and use of e-learning system. There are a number of implicit and explicit frameworks designed to inform e-learning practice. Some of them suggest key components that influence the quality of the e-learning experience: technology, pedagogy, organizational context and creativity. Instructor feedback and student learning styles, significantly affect the perceived learning outcomes of e-learning students. Namely, quality of education will significantly be enhanced if instructors modify their teaching styles to accommodate the learning styles of all students in their classes. When the teacher creates the lesson plan, it is desirable that he or she puts as many activities as possible which will reflect different learning styles. Whereas, students have diverse backgrounds, abilities, and knowledge bases, teachers who are able to use various instructional strategies have been shown to be more effective than those who just use single strategies.

Martinez-Moyano, I. J., Conrad, S. H., & Andersen, D. F. (2011). Modeling behavioral considerations related to information security. *Computers & Security*, 30(6-7), 397-409. doi: 10.1016/j.cose.2011.03.001

The authors present experimental and simulation results of an outcome-based learning model for the identification of threats to security systems. This model integrates judgment, decision-making, and learning theories to provide a unified framework for the behavioral study of upcoming threats. (C) 2011 Elsevier Ltd. All rights reserved.

Martinez, L. V., & Perez, M. E. D. (2011). E-ACTIVITIES IN RURALNET'S VIRTUAL CONTEXT: SATISFACTION OF THE STUDENTS WITH DIFFERENT LEARNING STYLES. *Educacion Xx1*, 14(1), 223-243.

In the virtual subject Education in the rural area (Ruralnet), - subject that pertains to the grade of Pedagogy of the University of Oviedo and offered in the Virtual Shared Campus of the G9-, different formative e-activities of individual character were formulated (studies of cases, conceptual maps, mental maps, etc.) and also a collaborative activity (Gameproyect) according to the different learning styles of students. After its implementation, which lasted three consecutive academic years - (2005/2006, 2006/2007, 2007/2008) - students were asked about their level of satisfaction in relation with e-activities. The sample of study was formed by students with a reflexive and theoretical style. The study sample consisted mostly of students with reflective and theoretical styles and also, although in a smaller degree, of students with pragmatic and active styles. However, it was determined that a majority of the learners showed a high level of satisfaction with the online teaching received, which was specially significative in the case of students with a cognitive style pragmatic and reflective type. The development of mental maps e-activity was the most highly rated by those with pragmatic and active styles, showing preferences for e-activities based on the graphic and visual representation of content, with images, colors, etc.

Martins, C., Couto, P., Fernandes, M., Bastos, C., Lobo, C., Faria, L., & Carrapatoso, E. (2011). PCMAT - Mathematics Collaborative Learning Platform. In J. B. Perez, J. M. Corchado, M. N. Moreno, V. Julian, P. Mathieu, J. CanadaBago, A. Ortega & A. F. Caballero (Eds.), *Highlights in Practical Applications of Agents and Multiagent Systems* (Vol. 89, pp. 93-100).

The aim of this paper is to present an Educational Adaptive Hypermedia Tool, PCMAT, Based on Progressive Assessment and adapted to the student model and learning style. The adaptation of the application is based on progressive self-assessment (exercises, tasks, etc.). The learning platform was already implemented, tested and evaluated in learning processes in Basic Schools. Also, the paper defines and evaluates the characteristic of the User Model to be used in the Student Modeling.

Matsuo, M. (2011). The Role of Sales Beliefs in Facilitating Experiential Learning: An Empirical Study of Japanese Salespeople. *Psychology & Marketing*, 28(4), 309-329. doi: 10.1002/mar.20393

The purposes of this research were to examine developmental experience at different career stages and to clarify the role of sales beliefs in promoting experiential learning of salespeople. By applying the theoretical framework of expertise research and cognitive psychology, data from Japanese real estate salespeople were analyzed. Results suggest that (1) experiential learning is activated in the later stage (from 6 to 10 years) of a career, and (2) salespeople who balance customer and goal achievement orientations learn from others in the early stage (from 1 to 5 years) of their careers. A discussion of the theoretical and managerial implications is presented. (C) 2011 Wiley Periodicals, Inc.

McCloskey, E. M. (2012). Global Teachers: A Model for Building Teachers' Intercultural Competence Online. *Comunicar*(38), 41-49. doi: 10.3916/c38-2012-02-04

Foreign language ability, global awareness, and intercultural communication skills are increasingly recognized as essential dimensions of productive participation in the emerging economic, civic, political and social arenas of the 21st century. Consequently, these skills are being promoted more intentionally than ever across the spectrum of K16 education. This newly articulated set of objectives for today's students implies a concomitant set of competencies in educators. These competencies have not traditionally been a focus of professional development efforts in the United States, and little is known about how best to cultivate these competencies in educators. These competencies can be understood in terms of Byram's (1997) model of intercultural communicative competence (ICC). The principles of ICC development point to online learning as a potentially powerful lever in cultivating teachers' own competencies in this arena. A review of studies of intercultural learning, technologically-mediated intercultural learning and online teacher professional development is offered to suggest how these three domains might overlap. A synthesis of the findings across these literatures suggests a set of principles and educational design features to promote the



building of teachers' intercultural competencies. A key finding reveals the unique affordances of networked technologies in online learning opportunities to support the development of intercultural competencies in teachers across all subject areas.

McCracken, H. & Guthrie, K.L. (2011). Experience as the foundation for authentic learning. *E-Mentor* 3(40): \*

McGivney, M. S., Hall, D. L., Stoehr, G. P., & Donegan, T. E. (2011). An Introductory Pharmacy Practice Experience Providing Pharmaceutical Care to Elderly Patients. *American Journal of Pharmaceutical Education*, 75(8).

Objective. To develop, integrate, and assess an introductory pharmacy practice experience (IPPE) in providing pharmaceutical care to patients at senior centers (Silver Scripts). Design. First-year pharmacy students learned and practiced the pharmaceutical care process in the classroom to prepare for participation in the Silver Scripts program, in which the students, under faculty mentorship, conducted comprehensive medication reviews for senior citizens attending senior centers in Pittsburgh, Pennsylvania. Assessment. Students, preceptors, and senior center staff members indicated the experience was positive. Specifically, first-year students felt they gained benefit both from an educational standpoint and in their own personal growth and development, while staff contacts indicated the patients appreciated the interaction with the students. Conclusion. The Silver Scripts experience is a model for linking classroom experiences and experiential learning. The cycle of experiencing, reflecting, and learning has provided not only a meaningful experience for our P1 students but also a worthwhile focused review of seniors' medication use. This experience could be used as a model for other colleges and schools of pharmacy and their communities.

McLawhon, R., & Cutright, M. (2012). Instructor Learning Styles as Indicators of Online Faculty Satisfaction. *Educational Technology & Society*, 15(2), 341-353.

The purpose of this study was to determine the relationship between instructor learning style/preference and online faculty job satisfaction. Learning style was assessed using the Readiness for Education At a Distance Indicator (READI) now called Smarter Measure. Online faculty job satisfaction was assessed using the National Study of Postsecondary Faculty (NSOPF) job satisfaction questions. Analysis of variance was used to determine whether there was a difference in satisfaction based on individual instructor learning preference(s). The sample population (N=110) consisted of online faculty members in one large community college district. A significant difference in satisfaction with equipment and facilities was found based on instructor learning preference. Implications and recommendations for future practice and research are presented, including considerations for international application.

McManus, F., Van Doorn, K., & Yiend, J. (2012). Examining the effects of thought records and behavioral experiments in instigating belief change. *Journal of Behavior Therapy and Experimental Psychiatry*, 43(1), 540-547. doi: 10.1016/j.jbtep.2011.07.003

Objective: While the efficacy and effectiveness of CBT protocols are well established, much less is known about the comparative contribution of the various techniques within CBT. The present study examined the relative efficacy, in comparison to a control condition, of two central techniques in CBT: thought records (TRs) and behavioral experiments (BEs). Method: A mixed within and between participants design was used to compare the efficacy of a single session TR and a single session BE intervention with a control intervention, in a non-clinical sample. Ninety one participants were randomly allocated to one of the three conditions. Results: The overall pattern of results suggests that both TR and BE had a beneficial therapeutic impact in comparison to the control condition on beliefs, anxiety, behavior and a standardized measure of symptoms. There was evidence of a small advantage of the BE over the TR intervention in that the target belief changed earlier and change generalized to beliefs about others as well as the self. Conclusions: The findings confirm the utility of both TR and BE interventions and point to BEs as more useful in effecting belief change in that the change in the BE condition occurred sooner and generalized further. (C) 2011 Elsevier Ltd. All rights reserved.

Metin, M., Yilmaz, G. K., Birisci, S., & Coskun, K. (2011). The investigating high school students' learning styles with respect to the different variables: A sample from Turkey. *Energy Education Science and Technology Part B-Social and Educational Studies*, 3(4), 589-604

The aim of this study is to investigate high school students' learning styles in terms of gender, grade level, type of school, graduation type of mother and father variables. The study was carried out at spring semester of 2010 with 660 high school students who were chosen as a sample from the cities of Artvin and Trabzon, in Turkey. "Kolb Learning Style Inventory" was used as a data collection. tool. The inventory was used to determinate the students' learning styles as divergent, assimilator, convergent, and accommodator and the information sheet for demographic factors such as gender, grade level, school type, education of mother and father was used to collect information from students. The data were analyzed by using frequency, percent value, mean scores, standard deviation, independent samples t-test and one-way ANOVA. The results show that the dominant learning style among the students is accommodator and it is followed by divergent learning style. There was not significantly difference between students' learning style and gender except for "Active Experimentation (AE) and AE-RO", grade level "except for Concrete Experience (CE)", school type, education of mother "expert for Reflective Observation (RO)" and education of father.

Miller, D. (2011). The Dyslexic Researcher: A Call to Broaden Our Portals. *Academy of Management Learning & Education*, 10(2), 340-350.

For years now our profession has selected its members, at least in part, on the basis of standardized tests, such as GMAT or GRE, thereby discriminating against dyslexics and others with disadvantages who do poorly on such tests. Relying on a growing body of empirical evidence and some inspiring examples, I identify

some of the unusual benefits of dyslexia for a career in research and teaching, and, more generally, issue a call to base recruiting decisions on candidates' relevant strengths rather than irrelevant weaknesses. I also suggest how we can improve graduate and faculty recruitment and development practices to better harvest the unique human and knowledge capital of dyslexics in their careers as academics.

Mitchinson, A., Gerard, N. M., Roloff, K. S., & Burke, W. W. (2012). Learning Agility: Spanning the Rigor-Relevance Divide. *Industrial and Organizational Psychology-Perspectives on Science and Practice*, 5(3), 287-290. doi: 10.1111/j.1754-9434.2012.01446.x\*

Modi, N. (2012). Learning Styles and the Prospective Ophthalmologist. Unpublished research report EBLs research grant.\*

**Purpose:** Understanding the learning styles of individual trainees may enable trainers to tailor an educational program and optimise learning. Surgical trainees have previously demonstrated a tendency toward particular learning styles. We seek to understand better how learning styles might relate to learning how to perform cataract surgery.

**Methods:** The Kolb Learning Style Inventory was administered to a group of thirty junior doctors. They were asked to perform a series of tasks using the EyeSi virtual reality cataract surgery simulator. All completed a standard introductory programme to eliminate the learning curve. They then had four attempts on the level 4 forceps module binocularly. Total score, odometer movement (mm), corneal area injured (mm<sup>2</sup>), lens area injured (mm<sup>2</sup>) and total time taken (seconds) recorded.

**Results:** Mean age was 27.5 years with age ranging from 19 to 52. No significant correlation was found between any learning style and performance on the EyeSi cataract surgery simulator.

**Conclusion:** There is a predominant learning style amongst surgical residents. There is however no demonstrable learning style that results in a better (or worse) performance on the EyeSi surgery simulator, and implicitly therefore in learning and performing cataract surgery.

Mohr, A. T., Holtbrugge, D., & Berg, N. (2012). Learning style preferences and the perceived usefulness of e-learning. *Teaching in Higher Education*, 17(3), 309-322. doi: 10.1080/13562517.2011.640999

This paper uses data gathered from 953 students to investigate in how far individuals' preferences for a particular learning style are associated with the perceived usefulness of e-learning. Our findings reveal the effect of individuals' learning styles as well as their gender and professional experience on the perceived usefulness of different forms of e-learning. The study's findings enhance our understanding of the usefulness of different e-learning tools from a learner perspective and thus have implications for curriculum design. The study also contributes to the empirical basis on the relevance of learning styles in the design of virtual learning environments.

Mone, E., Eisinger, C., Guggenheim, K., Price, B., & Stine, C. (2011). Performance Management at the Wheel: Driving Employee Engagement in Organizations. *Journal of Business and Psychology*, 26(2), 205-212. doi: 10.1007/s10869-011-9222-9

Based on a study conducted in a large corporation (XINC, a pseudonym) and other research, it appears that performance management can be used to increase levels of employee engagement. We begin this article with a discussion of employee engagement, define engaged employees as those who feel involved, committed, passionate, and empowered, and demonstrate those feelings in work behavior. We then discuss an expanded view of performance management, conceptualizing it as five major activities that serve to organize relevant behaviors shown to be either direct or indirect predictors of employee engagement in the study at XINC. These major activities include setting performance and development goals, providing ongoing feedback and recognition, managing employee development, conducting mid-year and year-end appraisals, and building a climate of trust and empowerment. In turn, we briefly discuss how each of these major activities contributes to employee engagement, suggest which activities benefit from further research, and recommend possible studies. Although there is evidence for performance management as a driver of employee engagement, we conclude there is a need for additional research that clarifies for managers which of these activities have the strongest impact on employee engagement.

Morris, M. H., Kuratko, D. F., Schindehutte, M., & Spivack, A. J. (2012). Framing the Entrepreneurial Experience. *Entrepreneurship Theory and Practice*, 36(1), 11-40. doi: 10.1111/j.1540-6520.2011.00471.x

Building on affective events theory (AET), an experiential perspective for conceptualizing entrepreneurship is introduced. As a lived experience, entrepreneurship represents a cumulative series of interdependent events that takes on properties rooted in affect and emotion. Unique characteristics of entrepreneurial experiences are examined. The entrepreneur is presented as actor in an unscripted temporal performance who continually encounters novelty. A model and set of propositions are presented linking pre-venture experience, key events, experiential processing, learning, affective outcomes, and decision making. It is argued that the entrepreneur and venture emerge as a function of ongoing experience, with the venture creating the entrepreneur as the entrepreneur creates the venture.

Mukhopadhyay, S., Smith, S., & Cresswell, J. (2011). Lifelong learning in obstetrics and gynaecology: how theory can influence clinical practice. *Journal of Obstetrics and Gynaecology*, 31(6), 476-479. doi: 10.3109/01443615.2011.587050

Lifelong learning refers to the systematic acquisition, renewal, updating and completion of knowledge. It is synonymous with the term 'self-directed learning'. This is a new educational strategy meant to consolidate knowledge in a fashion that is reproducible for a lifetime with successful application to both known and unknown clinical exercises. The development of lifelong learning is based on the

principles of andragogy (autonomy and independence in one's learning activities), reflection and learning from experience. This paper deals with the development of these theories culminating in the advent of self-directed learning. Evidence to support experiential, reflective and self-directed learning is provided, including the use of rating scales. An example from obstetrics is used to highlight the application of these principles. There are barriers to adopting a new educational paradigm, however, lifelong learning remains an excellent tool for continuous professional development.

## N

Narli, S., Ozgen, K., & Alkan, H. (2011). In the context of multiple intelligences theory, intelligent data analysis of learning styles was based on rough set theory. *Learning and Individual Differences*, 21(5), 613-618. doi: 10.1016/j.lindif.2011.07.012\*

The present study aims to identify the relationship between individuals' multiple intelligence areas and their learning styles with mathematical clarity using the concept of rough sets which is used in areas such as artificial intelligence, data reduction, discovery of dependencies, prediction of data significance, and generating decision (control) algorithms based on data sets. Therefore, first multiple intelligence areas and learning styles of 243 mathematics prospective teachers studying at a state university were identified using the "Multiple Intelligence Inventory for Educators" developed by Armstrong and the "Learning Styles Scale" developed by Kolb. Second, the data was appropriated for rough set analysis and we identified potential learning styles that a student can have based on the learning style s/he already has. Certainty degrees of the learning style sets were  $\alpha(R)(D)$  congruent to 0.717,  $\alpha(R)(C)$  congruent to 0.618,  $\alpha(R)(AS)$  congruent to 0.699,  $\alpha(R)(AC)$  congruent to 0.461, and these sets were found to be rough sets. Finally, decision rules were identified for multiple intelligences and learning styles. (C) 2011 Elsevier Inc. All rights reserved.

Naug, H. L., Colson, N. J., & Donner, D. G. (2011). Promoting Metacognition in First Year Anatomy Laboratories Using Plasticine Modeling and Drawing Activities: A Pilot Study of the "Blank Page" Technique. *Anatomical Sciences Education*, 4(4), 231-234. doi: 10.1002/ase.228

Many first year students of anatomy and physiology courses demonstrate an inability to self-regulate their learning. To help students increase their awareness of their own learning in a first year undergraduate anatomy course, we piloted an exercise that incorporated the processes of (1) active learning: drawing and plasticine modeling and (2) metacognition: planning, monitoring, reaction, and reflection. The activity was termed "blank page" because all learning cues were removed and students had to create models and diagrams from reflection and recall. Two hundred and eighty-two students responded to a questionnaire reporting qualitative feedback on the exercise. Based on student responses, the "blank page" activity was a positive learning experience and confirmed a need to teach metacognitive skills. From this pilot study, we established that drawing or

plasticine modeling is an excellent vehicle for demonstration of the metacognitive processes that enable self-regulation: a known predictor of academic success. *Anat Sci Educ* 4: 231-234.

Newman, M. (2012). Calling Transformative Learning Into Question: Some Mutinous Thoughts. *Adult Education Quarterly*, 62(1), 36-55. doi: 10.1177/0741713610392768\*

The author identifies six flaws that commonly occur in explanations of transformative learning, and suggests that transformative learning may not exist as an identifiable phenomenon. He proposes that we abandon the term transformative learning, and adopt the straightforward term good learning. Good learning, he argues, has nine aspects.

Newson, T. A., & Delatte, N. J. (2011). Case methods in civil engineering teaching. *Canadian Journal of Civil Engineering*, 38(9), 1016-1030. doi: 10.1139/111-023

There have been significant changes in undergraduate civil engineering curricula in the last two decades. Key issues for university curriculum committees are selection and transference of appropriate skills and attributes for students to succeed in the industry. Despite significant changes occurring in teaching theories, civil engineering education still relies heavily on deductive instruction. Case-based teaching is one of the most widespread forms of inductive learning and this paper describes the differences between two of the most familiar types: 'case-histories' and 'case-studies'. These methods are presented using the Kansas City Hyatt Regency walkway collapse as an exemplar. The benefits of using this approach are improved retention of knowledge, better reasoning and analytical skills, development of higher-order skills, greater ability to identify relevant issues and recognize multiple perspectives, higher motivation and awareness of non-technical issues. Many of these outcomes are part of the expected attributes of civil engineers outlined by professional bodies.

Newswander, L. K., & Newswander, C. B. (2012). Encouraging Cognitive Flexibility and Interdisciplinarity in Public Administration Programs. *Administration & Society*, 44(3), 285-309. doi: 10.1177/0095399711413073\*

In response to the increased complexity that comes from a shift away from government and toward governance, public administration programs need to adjust their traditional curriculum and encourage interdisciplinarity perspectives in students. Given the proper mind-set, administrators can be better prepared to face the challenges of governance in a highly integrated, real-life setting by having the capacity to integrate competing viewpoints, which includes a reintroduction of interdisciplinary theories, methods, and best practices to the classroom. Cognitive flexibility-the ability for an individual to understand, appreciate, and make use of various epistemological approaches-offers a theoretical perspective to guide practical pedagogy and practice.

Ng, Pin, Pinto, James, Williams, Susan K., (2011). The Effects of Learning Styles on Course Performance: A Quantile Regression Analysis *Academy of Educational Leadership Journal* 15(1):15-30\*

As faculty, one of our goals is to provide the best possible learning environment for our students. In order to create an ideal learning environment, it is important to understand our students' different learning styles (Coffield, Moseley, Hall, & Ecclestone, 2004; Dunn, Griggs, Gorman, & Beasley, 1995). Students "preferentially focus on different types of information, tend to operate on perceived information in different ways, and achieve understanding at different rates" (Felder, 1993, p. 286). Acknowledging that students have different learning styles then behooves the instructor to utilize a variety of teaching strategies in order to engage students of all learning styles (Buxeda & Moore, 1999). All students will then have opportunities to use their preferred learning style and opportunities to improve their less-preferred learning style (Hawk & Shah, 2007). Having incorporated a variety of learner-centered and integrative teaching strategies into a business statistics course, we wanted to know if a student's learning-style had an effect on their course performance. It is important to design a course that allows students of all learning styles to succeed. As noted by Felder, "Students whose learning styles are compatible with the teaching style of a course instructor tend to retain information longer, apply it more effectively, and have more positive post-course attitudes toward the subject than do their counterparts who experience learning/teaching style mismatches," (Felder, 1993, p. 286). If the results of our study had shown a relationship between the overall course score and a student's learning style, then additional components could have been designed into the course or students could have been appropriately advised about how best to adapt to the teaching style that does not match their preferred learning style (Campbell, 1991; Coffield, et al. 2004).

To accomplish this analysis, we collected student performance data on the various components of the course (quizzes, exams and projects), attributes of student learning styles, achievement on pre- and post-assessment, and attendance in the course. We analyzed the data using ordinary least squares regression analysis and quantile regression (Koenker & Bassett, 1978). Quantile regression allowed investigation of a more complete picture of student performance over the entire student population distribution. For example, a least squares regression analysis for course score with learning styles as the independent variables estimated the mean effect of learning styles on course performance. Quantile regression, however, provided information about the performance of, for example, the lower performing 25% of the class. The significant factors that affected performance for the lower 25% could have been different from the significant factors that affected the performance for the top performing 25% and this difference could only be discovered using quantile regression. Thus, quantile regression provided information about the entire distribution of course performance that the ordinary least squares regression did not provide. We found that learning style was insignificant in determining a student's overall course score for the entire group of students. This provided some evidence that the design of the course did not favor students with any particular learning style. For small cohorts of students, learning styles were statistically significant in determining exam average. That is, some students experienced either a disadvantage or advantage by their learning style for the exam course component, as elaborated in more detail in the Results section.

However, for the overall course performance, a student with a particular learning style was neither advantaged nor disadvantaged.

Ng, S. K. K., Chow, C. K. M., & Chu, D. W. K. (2011). The Enhancement of Students' Interests and Efficiency in Elementary Japanese Learning as a Second Language through Online Games with Special Reference to Their Learning Styles. In R. Kwan, C. McNaught, P. Tsang, F. L. Wang & K. C. Li (Eds.), *Enhancing Learning through Technology: Education Unplugged: Mobile Technologies and Web 2.0* (Vol. 177, pp. 305-318).

The introduction of online games in the implementation of Japanese language education at the elementary level is both desirable and challenging. It meets various demands from the population amongst many learners of Japanese language as a second language who are motivated mainly through playing online games but without any knowledge of Japanese language and also underlines some practical issues which involve the actual operations in Japanese classrooms, with respect to the possible outcomes realized through second language acquisition. In this paper, authors attempt to relate Fleming's model of VARK with its applications in different learning styles in elementary Japanese learning. They are illustrated with two different kinds of online games in each of the VARK strategies, namely visual, aural, read/write and kinesthetic. Above all, this article can as well be a reference for those Japanese teachers who are struggling in conducting elementary Japanese lessons in a more pleasant way as perceived by the learners.

Nicholls, J., & Philip, R. (2012). Solo life to Second Life: the design of physical and virtual learning spaces inspired by the drama classroom. *Ride-the Journal of Applied Theatre and Performance*, 17(4), 583-602. doi: 10.1080/13569783.2012.727628

This paper explores the design of virtual and physical learning spaces developed for students of drama and theatre studies. What can we learn from the traditional drama workshop that will inform the design of drama and theatre spaces created in technology-mediated learning environments? The authors examine four examples of spaces created for online, distance and on-campus students and discuss the relationship between the choice of technology, the learning and teaching methods, and the outcomes for student engagement. Combining insights from two previous action research projects, the discussion focuses on the physical space used for contemporary drama workshops, supplemented by Web 2.0 technologies; a modular online theatre studies course; the blogging space of students creating a group devised play; and the open and immersive world of Second Life, where students explore 3D simulations of historical theatre sites. The authors argue that the drama workshop can be used as inspiration for the design of successful online classrooms. This is achieved by focusing on students' contributions to the learning as individuals and group members, the aesthetics and mise-en-scene of the learning space, and the role of mobile and networked technologies. Students in this environment increase their capacity to become co-creators of knowledge and to achieve creative outcomes. The drama workshop



space in its physical and virtual forms is seen as a model for classrooms in other disciplines, where dynamic, creative and collaborative spaces are required.

Nogueira, D. R., Espejo, M. M., Reis, L. G. & Voese, S. B. (2012). Learning styles and performance in distance education: An empirical study of accounting students. *Repec* 6(1): 49-65\*

The objective of the present study is to verify whether the performance of distance education students in the disciplines General Accounting and Management Accounting, as well as in the overall Accounting module, differs

according to their learning style. The survey was conducted among 109 students in a distance education course and used learning style as the independent variable (verified by Kolb's LSI), and the average grade received in the subjects general accounting and management accounting and the Accounting module as the dependent variable (average between the grades in general and management accounting). Reliability tests were conducted (Cronbach's alpha) on Kolb's LSI instrument, along with tests for data normality. Furthermore, we performed descriptive statistical analysis and tests for differences of means (Kruskal-Wallis and ANOVA) to answer the research question. The results show that most students have an assimilating style (44%) and (34%) are divergent. These indicate that it was not possible to establish that learning styles cause a difference in the performance of students. Therefore, one cannot affirm that any one learning style showed higher performance on average than other styles in the distance course. Considering the small number of observations, the conclusions should not be generalized.

Niu, H. J., & Wang, Y. D. (2011). What is professional? An experiential learning theory perspective of sales engineer competencies in the semiconductor industry. *African Journal of Business Management*, 5(5), 1734-1748.

The position of sales engineer is an important and specialized job in the high-tech industry. Sales engineers are responsible for getting orders from clients, which is critical for a firm's survival. In order to complete his or her job targets, a sales engineer needs two abilities - technical knowledge and interpersonal skills. This study focuses on the semiconductor industry and examines by job analysis, the competency of sales engineers using the experiential learning theory. The study found fourteen abilities, including judgment, networking, relationship building and maintaining etc., are necessary for this kind of work. Three personality traits, namely goal orientation, initiation, and service orientation are also required. Comparatively, the required abilities and personality traits vary across streams in the industry, with "relationship building" being the most important ability. This exploratory study can provide new ideas for research and a useful practical direction for the selection and training of sales engineers.

## O

O'Sullivan, H., van Mook, W., Fewtrell, R., & Wass, V. (2012). Integrating professionalism into the curriculum: AMEE Guide No. 61. *Medical Teacher*, 34(2), E64-E77. doi: 10.3109/0142159x.2012.655610

Professional values and behaviours are intrinsic to all medical practice, yet remain one of the most difficult subjects to integrate explicitly into a curriculum. Professionalism for the twenty-first century raises challenges not only to adapting the course to changing societal values but also for instilling skills of ongoing self-directed continuous development in trainees for future revalidation. This Guide is

based on the contemporary available literature and focuses on instilling Professionalism positively into both undergraduate and postgraduate training deliberately avoiding the more negative aspects of Fitness to Practise. The literature on Professionalism is extensive. An evidence-based approach has been taken throughout. We have selected only some of the available publications to offer practical advice. Comprehensive reviews are available elsewhere (van Mook et al. 2009a-g). This Guide takes a structured stepwise approach and sequentially addresses: (i) agreeing an institutional definition, (ii) structuring the curriculum to integrate learning across all years, (iii) suggesting learning models, (iv) harnessing the impact of the formal, informal and hidden curricula and (v) assessing the learning. Finally, a few well-evaluated case studies for both teaching and assessment have been selected to illustrate our recommendations.

O'Toole, P., & Talbot, S. (2011). Fighting for Knowledge: Developing Learning Systems in the Australian Army. *Armed Forces & Society*, 37(1), 42-67. doi: 10.1177/0095327x10379731

This article reports on an investigation that contributes to the understanding of social and organizational learning in the military. Data were collected through a series of focus groups with over 150 Army personnel in the Australian Army. Analysis revealed that perceived learning opportunities were shaped, enabled, and constrained by a variety of social, cultural, structural, and process-related imperatives. This was manifested through two learning systems: (1) a formal learning system directly managed by the organization and (2) an informal system that was fostered through strong social networks and driven by the organizational culture. From this investigation, we posit a social theory of learning, which encompasses sharing knowledge and experience through social interaction. This article concludes by arguing that the learning systems approach taken in this article is a useful and practical method of evaluating the organizational learning mechanisms in a military organization.

Ozgen, K., & Alkan, H. (2012). The Relationship between Secondary School Pre-Service Mathematics Teachers' Skills in Problem Solving Dimensions and their Learning Style Characteristics. *Kuram Ve Uygulamada Egitim Bilimleri*, 12(2), 1173-1181.

The present study examined the potential relationship between 1st and 5th year secondary school pre-service mathematics teachers' skills in understanding, method, modelling, verification, and extension dimensions of problem solving and their learning style characteristics. The data consisted of the skills pre-service teachers demonstrated in the solution process of open-ended problems. For this purpose, a graded scoring rubric was developed specific to each problem. Regarding the relationship between problem solving dimensions and the characteristics of McCarthy's learning styles, it was assumed that type 1 learners' skills were more dominant in the understanding dimension, type 2 learners' skills in the method and modelling dimensions, type 3 learners' skills in the verification dimension, and type 4 learners' skills in the extension dimension. On the basis of this assumption, problem-solving skills and learning style characteristics were associated and interpreted. The results obtained suggested that 5th year pre-

service teachers were better in representing the skills pertaining to type 1 and type 2 learning styles, while 1st year pre-service teachers were better in representing the skills pertaining to type 1 learning style only. On the other hand, it was observed that a great majority of the pre-service teachers had a low level of the skills pertaining to type 3 and type 4 learning styles.

Ozgen, K., & Bindak, R. (2012). EXAMINING STUDENT OPINIONS ON COMPUTER USE BASED ON THE LEARNING STYLES IN MATHEMATICS EDUCATION. *Turkish Online Journal of Educational Technology*, 11(1), 79-93.

The purpose of this study is to identify the opinions of high school students, who have different learning styles, related to computer use in mathematics education. High school students' opinions on computer use in mathematics education were collected with both qualitative and quantitative approaches in the study conducted with a survey model. For this purpose, 388 high school students were included in the study. A learning style inventory, questionnaire form and interview questions were used as the data collection instruments. Frequency, percentages and chi-square analysis were used in the analysis of quantitative data and content analysis was used in analyzing the qualitative data. The results of the study showed that students with a diverger and accommodator learning styles have more positive opinions regarding computer use in the mathematics education compared to the students with assimilator and converger learning style.

## P

Papadomarkaki , E. (2011). Distance Education of Interventional Cardiologists on Radiation Protection. Examination of Learning Styles and Specifications of E -learning Model. Ms theses in Greek\*

The present M.Sc. Thesis seeks the way that interventional cardiologists in Greece learn in order to be used in a possible design of e-learning courses on radiation protection issues. Radiation protection, i.e. the prevention of negative biological effects of professionals that work with ionizing radiation, is a subject of interest for the previous group of doctors and a subject of priority according to the International Atomic Energy Commission guidelines. Concerning the way of learning of the target group, Kolb's learning style was adopted as measured by the instrument KLSI v.3.1. Besides, educational needs, learning attitudes, preferences and beliefs of potential learners are investigated.

The educational research of the present thesis is both qualitative and quantitative. For the former, four constructed interviews took place while for the latter an appropriate questionnaire was used. The response of the target group was poor (18 responses from 250 recipients). Despite this fact is in agreement with relevant surveys, it has to be taken into account from the beginning of any future relevant initiatives. Quantitative results show that the majority of the respondents has computer experience and internet access and agrees to participate to an online course. They also characterize this type of course as a good initiative. Respondents have restricted experience on distance learning and inadequate background in radiation protection. The potential learners mainly seek education

based on personal support by a tutor with expertise and on high quality educational material that refers to problems emerged from their experience. They also want to immediately put into practice what they learn and recognize the importance of the bidirectional feedback between student and tutor in the educational procedure. Concerning communication, the sample seems to be neutral.

The preferences of the potential learners refer to features of the experiential learning. Kolb's learning style of the population was found predominantly assimilating (39%) in contrast to the convergent style that is reported for groups of doctors in literature. Based on the previous two learning styles, a symbolic learning environment is proposed for an effective course that can be ensured through e-learning by following an appropriate instructional design model that includes analysis, design, development, implementation and evaluation (ADDIE model).

Park, C. L., Perry, B., & Edwards, M. (2011). Minimising attrition: strategies for assisting students who are at risk of withdrawal. *Innovations in Education and Teaching International*, 48(1), 37-47. doi: 10.1080/14703297.2010.543769

This paper explores strategies aimed at minimising attrition by encouraging persistence among online graduate students who are considering withdrawal. It builds upon earlier studies conducted by a team of researchers who teach online graduate students in health care at Athabasca University. First, in 2008-2009, Park, Boman, Care, Edwards, and Perry reviewed assumptions held related to attrition of online learners and defined key terms such as persistence and attrition. Next, Perry, Boman, Care, Edwards, and Park explored factors that influenced online students' decisions to withdraw. Reported in this paper are strategies related to course design, course delivery, and programme organisation that could reduce attrition rates. An additional section of the paper focuses on strategies to ease the re-integration of students who have withdrawn and subsequently want to return to their studies. Rovai's Composite Persistence Model and Harter and Szurminski's Project Assuring Student Success (PASS) programme are used as a framework for analysis and for generation of recommended strategies.

Passarelli A. M. & Kolb D. A. (2012). Using Experiential Learning Theory to Promote Student Learning and Development in Programs of Education Abroad. In Michael Vande Berg, Michael Page, & Kris Lou (Eds.) *Student Learning Abroad*. Sterling, VA: Stylus\*

Passarelli A. M. & Kolb D. A. (2011). The learning way—Learning from experience as the path to lifelong learning and development. In London, M. (Ed.), *Handbook of lifelong learning*. Chapter 6 70-90 N.Y.: Oxford University Press

Lifelong learning requires the ability to learn from life experiences. This chapter describes the theory of experiential learning whereby knowledge is generated from experience through a cycle of learning driven by the resolution of dual dialectics of action/reflection and experience/abstraction. We provide an overview of stylistic preferences that arise from patterns of choosing among these modes of

learning, as well as the spaces in which learning occurs. Movement through these modes and spaces link one experience to the next creating a learning spiral that guides growth and development through a lifetime. Lifelong learning is also shaped by an individual's learning identity, the extent to which one believes he or she *can* learn, and learning relationships, connections that promote movement through the learning spiral. Strategies for enhancing the learning process are provided for each of these topics.

Pedersen, P. U., Tewes, M., & Bjerrum, M. (2012). Implementing nutritional guidelines - the effect of systematic training for nurse nutrition practitioners. *Scandinavian Journal of Caring Sciences*, 26(1), 178-185. doi: 10.1111/j.1471-6712.2011.00912.x

Introduction: Approximately 40% of patients admitted to hospitals are undernourished. Implementing nutritional guidelines might reduce the incidence of malnutrition, and it requires education and training for the hospital staff. Aim: It was hypothesised that a training programme focusing on the staff behaviour would increase the identification of eating difficulties, improve patients' knowledge about appropriate food choices and increase the number of snacks eaten between meals and thereby to reduce the risk of undernutrition. Methods: A pre- and post-test design was used to evaluate the effect of the training programme for nurses. The training was conducted in five modules over 1 year and combined nutritional issues with issues on implementation and theories of planned change. The programme was based on experimental learning theories and the steps of look, think and act. The effect on the patients was measured by a patient questionnaire. Results: After implementing the guidelines, more patients discussed their eating difficulties with the staff, received relevant assistance during the meal and were served the type of food they had ordered and could chew. The patients' knowledge of appropriate food choices from the menu increased, suggesting that the nutritional intake of the patients had improved. Conclusion: Our findings suggest that a strategy based on the principles of experimental learning theory and the phases in the look, think and act model facilitated the implementation of nutritional guidelines in a hospital setting.

Pennington, D. D. (2011). Collaborative, cross-disciplinary learning and co-emergent innovation in eScience teams. *Earth Science Informatics*, 4(2), 55-68. doi: 10.1007/s12145-011-0077-4

Collaborative eScience research teams are impeded by difficulties defining problems that provide research opportunities for all participants. Problem formulation occurs early in the collaboration process when the demand for ideas is high. However, cross-disciplinary linkages and integrated conceptual frameworks from which strong interdisciplinary ideas emerge do not evolve until later. The process of co-creating interdisciplinary research ideas is fundamentally a learning problem; participants from different disciplines must learn enough about each other's research interests to construct an integrated conceptual framework from which joint problems of interest can be created. However, participants rarely have the conceptual background needed to easily understand research topics in other disciplines; hence methods for enabling rapid learning in

these situations are needed. Team interactions that more effectively generate interdisciplinary ideas can be enabled based on a better understanding the process of cross-disciplinary, collaborative learning. This article postulates several models of collaborative learning in these settings and discusses the implications for orchestrating team activities to achieve better outcomes.

Petriglieri, G., Wood, J. D., & Petriglieri, J. L. (2011). Up Close and Personal: Building Foundations for Leaders' Development Through the Personalization of Management Learning. *Academy of Management Learning & Education*, 10(3), 430-450. doi: 10.5465/amle.2010.0032\*

Courses that aim to foster reflection and personal development in the service of leaders' development are increasingly popular within MBA curricula and executive education portfolios. We explore the process through which these courses enrich their institutional context and enhance students' ongoing development and practice of leadership. Through an inductive, qualitative study of the Personal Development Elective, an offering within the leadership curriculum of an international MBA that gives students the option to work with a psychotherapist, we develop a model of how the interplay between the regressive and holding features of an intensive management program foster the personalization of management learning. The personalization process, we posit, allows management education to provide the foundations for leaders' development by transforming potentially regressive experiences into material for participants' personal learning, experimentation, and growth.

Petty, N. J., Scholes, J., & Ellis, L. (2011). Master's level study: learning transitions towards clinical expertise in physiotherapy. *Physiotherapy*, 97(3), 218-225. doi: 10.1016/j.physio.2010.11.002

Background Evidence suggests that practitioners who successfully complete a UK Master's level course, accredited by the Manipulation Association of Chartered Physiotherapists (MACP), enhance their clinical practice and demonstrate attributes of clinical expertise. What remains unclear is the process by which practitioners change and enhance their practice. Greater understanding of the learning process would help to inform programme design and delivery, and enhance the quality of the educational experience and impact for practitioners. Objective To explain the learning process experienced by physiotherapists on completion of an MACP-approved Master of Science (MSc) course. Design A naturalistic inquiry was conducted using a single theory-seeking case study. Dimensional analysis was used to develop a substantive theory of the learning transition. Participants Twenty-six semi-structured interviews were carried out with 11 alumni from one MACP-approved MSc programme. Results The learning transition was from uncritical practice knowledge with routine, therapist-centred clinical practice to critical understanding of practice knowledge that enabled patient-centred practice and the capability to learn in, and from, practice. This development towards clinical expertise was primarily facilitated by critical evaluation of practice knowledge, particularly through mentorship in clinical practice. This highly challenging experience was helped by high levels of support

from the mentor. The learning transition varied between participants and depended on a host of moderating factors. Conclusion This is the first documented theoretical explanation of how physiotherapists enhance their clinical practice and develop attributes of clinical expertise within an MACP-approved MSc course. This explanatory theory may be of value for educational programmes that seek to facilitate practitioners' development towards clinical expertise. This study also offers a novel model of learning transition that may be applicable to other educational settings. (C) 2010 Chartered Society of Physiotherapy. Published by Elsevier Ltd. All rights reserved.

Pittaway, L., & Thorpe, R. (2012). A framework for entrepreneurial learning: A tribute to Jason Cope. *Entrepreneurship and Regional Development*, 24(9-10), 837-859. doi: 10.1080/08985626.2012.694268

This paper explains Dr Jason Cope's work on entrepreneurial learning, and illustrates his approach and how it can be applied to deepen understanding of, and practice in, entrepreneurship education. It begins with a biography of Cope, which summarizes his academic life and offers a timeline for his publications. This paper then explores his philosophical position, before dividing his research into three main phases. In the first, it examines and explains his early work into experiential learning; reflective learning; learning from crises and the role social influences play in entrepreneurial learning. In the second, developments stemming from his PhD are explored. Here, ideas in relation to entrepreneurial learning and the links he makes to transformative learning and double-loop learning are discussed. Finally, in the third part, Cope's entrepreneurial learning framework is explained and key contributing concepts are introduced. This part examines how Cope's theoretical framework was used to undertake research and subsequently to explain how entrepreneurs learn from failure. In the final sections of this paper, the practical implications of his contribution to entrepreneurship education are presented, in the contexts both of higher education and of the development of students, and then for entrepreneurs themselves.

Pittaway, L., Rodriguez-Falcon, E., Aiyegbayo, O., & King, A. (2011). The role of entrepreneurship clubs and societies in entrepreneurial learning. *International Small Business Journal*, 29(1), 37-57. doi: 10.1177/0266242610369876

This article focuses on the role of student entrepreneurship clubs and societies. It explores their impact on student learning in order to understand the extent to which such activities simulate entrepreneurial learning. The article reports three studies conducted between 2006-2007, which explored three different forms of clubs: entrepreneurship clubs; SIFE (Students In Free Enterprise) teams; and investment clubs. Data from 10 unstructured interviews, a series of telephone interviews and an e-mail postcard are reported. The results show that students' motivations for engaging in clubs vary and that they differ between different types of clubs. In terms of entrepreneurial learning students' engagement in clubs and societies provides enhanced opportunities for 'learning by doing' through action and experience. The data show that increased action leads to reflective practice and that social learning is important. The article highlights the capacity of

entrepreneurship education to simulate entrepreneurial learning, illustrating the value of entrepreneurship clubs and societies and explaining why students engage in them.

Pless, N. M., Maak, T., & Stahl, G. K. (2011). Developing Responsible Global Leaders Through International Service-Learning Programs: The Ulysses Experience. *Academy of Management Learning & Education*, 10(2), 237-260.

A new challenge in executive education is to develop responsible global business leaders. We describe "Project Ulysses," an integrated service-learning program which involves sending participants in teams to developing countries to work in cross-sector partnerships with NGOs, social entrepreneurs, or international organizations. In order to understand how Ulysses participants learn from their experiences while abroad, we interviewed 70 participants and content-analyzed the learning narratives that they produced. We found evidence of learning in six areas: responsible mind-set, ethical literacy, cultural intelligence, global mind-set, self-development, and community building. We also identified a number of processes through which learning occurred at the cognitive, affective, and behavioral levels, including the process of resolving cultural and ethical paradoxes; constructing a new life-world, that is, developing a new perspective of self and the world; and making sense of the emotions experienced while on assignment. The results of a post-program survey confirm the long-term effectiveness of Ulysses in developing and enhancing competencies that are critical for responsible global leadership. We discuss the implications for theory building on responsible leadership and helping organizations leverage the potential of international service-learning programs for developing responsible global leaders.

Poldner, E., Simons, P. R. J., Wijngaards, G., & van der Schaaf, M. F. (2012). Quantitative content analysis procedures to analyse students' reflective essays: A methodological review of psychometric and edumetric aspects. *Educational Research Review*, 7(1), 19-37. doi: 10.1016/j.edurev.2011.11.002

Reflective essays are a common way to develop higher education students' reflection ability. Researchers frequently analyse reflective essays based on quantitative content analysis procedures (QCA). However, the quality criteria that should be met in QCA are not straightforward. This article aims to: (1) develop a framework of quality requirements for QCA; and (2) explore the extent to which QCA studies of students' reflective essays meet these quality requirements. First, a methodological review of psychometric and edumetric criteria for QCA is conducted, resulting in a framework with required quality criteria. Second, 18 studies were selected in which QCA was used to analyse students' reflective essays. These studies were scrutinised using the developed framework. The results showed that none of the selected studies met all requirements. It is concluded that QCA procedures for analysing students' reflective essays need improvement and that the developed framework can be used to improve and evaluate these procedures. (C) 2011 Elsevier Ltd. All rights reserved.



Prajapati, B., Dunne, M., Bartlett, H., & Cubbidge, R. (2011). The influence of learning styles, enrolment status and gender on academic performance of optometry undergraduates. *Ophthalmic and Physiological Optics*, 31(1), 69-78. doi: 10.1111/j.1475-1313.2010.00798.x

Purpose: This cross-sectional study was designed to determine whether the academic performance of optometry undergraduates is influenced by enrolment status, learning style or gender. Methods: Three hundred and sixty undergraduates in all 3 years of the optometry degree course at Aston University during 2008-2009 were asked for their informed consent to participate in this study. Enrolment status was known from admissions records. An Index of Learning Styles ([http://www4.nscu.edu/unity/lockers/users/f/felder/public/Learning-Style s.html](http://www4.nscu.edu/unity/lockers/users/f/felder/public/Learning-Style%20s.html)) determined learning style preference with respect to four different learning style axes; active-reflective, sensing-intuitive, visual-verbal and sequential-global. The influence of these factors on academic performance was investigated. Results: Two hundred and seventy students agreed to take part (75% of the cohort). 63% of the sample was female. There were 213 home non-graduates (entrants from the UK or European Union without a bachelor's degree or higher), 14 home graduates (entrants from the UK or European Union with a bachelor's degree or higher), 28 international non-graduates (entrants from outside the UK or European Union without a bachelor's degree or higher) and 15 international graduates (entrants from outside the UK or European Union with a bachelor's degree or higher). The majority of students were balanced learners (between 48% and 64% across four learning style axes). Any preferences were towards active, sensing, visual and sequential learning styles. Of the factors investigated in this study, learning styles were influenced by gender; females expressed a disproportionate preference for the reflective and visual learning styles. Academic performance was influenced by enrolment status; international graduates (95% confidence limits: 64-72%) outperformed all other student groups (home non graduates, 60-62%; international non graduates, 55-63%) apart from home graduates (57-69%). Conclusion: Our research has shown that the majority of optometry students have balanced learning styles and, from the factors studied, academic performance is only influenced by enrolment status. Although learning style questionnaires offer suggestions on how to improve learning efficacy, our findings indicate that current teaching methods do not need to be altered to suit varying learning style preferences as balanced learning styles can easily adapt to any teaching style

Prat, N. (2012). TEACHING INFORMATION SYSTEMS WITH CASES: AN EXPLORATORY STUDY. *Journal of Computer Information Systems*, 52(3), 71-81.

The case method is widely used in management education. In information systems (IS), it is particularly appropriate for management-oriented courses. Many case sources are available, along with several different case types (e.g. long vs. short or mini-case, traditional discussion vs. role playing ...) and question types (e.g. analysis questions, action questions). The instructor is often left to wonder what case teaching approach (case type and questions type) is the most appropriate to stimulate students' involvement and learning. This research explores the effect of the case method on students' involvement and learning, in an IS management

course. We experiment with different case teaching approaches, and examine the students' participation, satisfaction and learning, in conjunction with their learning styles. Among the empirical results, we find that some case teaching approaches are more adapted to particular types of learning styles.

Prichard, J. S., Bizo, L. A., & Stratford, R. J. (2011). Evaluating the effects of team-skills training on subjective workload. *Learning and Instruction*, 21(3), 429-440. doi: 10.1016/j.learninstruc.2010.06.003

This study evaluated the impact of a team-skills training intervention on students' subjective experience of workload when working in collaborative groups. Three cohorts of students (N = 295) taking an undergraduate degree unit were compared across three successive years, in which presence or absence of training was varied. Students in trained groups reported lower levels of subjective workload than those in untrained groups and also performed better across a range of academic exercises. This effect was moderated by whether students were regrouped half-way through the academic year. Results are discussed in terms of theories of team-skill acquisition and issues in skill transferability caused by regrouping. (C) 2010 Elsevier Ltd. All rights reserved.

Proost, K., van Ruysseveldt, J., & van Dijke, M. (2012). Coping with unmet expectations: Learning opportunities as a buffer against emotional exhaustion and turnover intentions. *European Journal of Work and Organizational Psychology*, 21(1), 7-27. doi: 10.1080/1359432x.2010.526304

This study investigated the buffering role of learning opportunities in the process leading from unmet expectations to turnover intentions, via emotional exhaustion. In a sample of 420 teachers in elementary education, the results of a mediated moderation analysis showed a significant positive relationship between unmet expectations and turnover intentions, via emotional exhaustion. Learning opportunities were found to buffer for the relationship between unmet expectation and emotional exhaustion in the sense that this relationship was weaker when learning opportunities were high. Also the mediated relationship between unmet expectations and turnover intentions via emotional exhaustion was weaker when learning opportunities were high. Theoretical and practical implications are discussed.

## Q

Quinn, L. (2012). Understanding resistance: an analysis of discourses in academic staff development. *Studies in Higher Education*, 37(1), 69-83. doi: 10.1080/03075079.2010.497837

Using social realist theory and critical discourse analysis, this article examines a

number of discourses which construct academic staff attitudes to teaching and learning in their disciplines. It seeks to explain academics' resistance to engaging in activities aimed at professionalising academic practice. The research described in the article identified four overarching sets of discourses - disciplinary, student deficit, skills and performativity - which represent contradictory positions to academic staff development activities. Understanding this resistance might enable institutions to create ideational contexts in which these discourses, which have a constraining influence, can be critiqued and possibly replaced by discourses which create enabling conditions for staff development activities in higher education.

## R

Raine, D., & Symons, S. (2012). Problem-based learning: undergraduate physics by research. *Contemporary Physics*, 53(1), 39-51. doi: 10.1080/00107514.2011.615162

Problem-based learning (PBL) is an established pedagogy in many areas of education for the professions. Although there is an awareness of PBL in many departments of physics in the UK and many claim to include PBL-like instruction to some degree, it has made rather less impact in the physical sciences. This paper describes the aims of PBL and how these are implemented based on our experiences in Physics at the University of Leicester. It is not our purpose to discuss here the parochial details of this programme which are partly historical and adapted to local conditions. (The interested reader can find them on our web site.) Rather we look at general aspects of PBL in Physics in the light of our experience and that of others. In addition to numerous examples of PBL problems, our discussion includes the educational and philosophical underpinnings of PBL, the nature of the 'problem' in PBL, issues in facilitation and assessment as well as a brief review of the published evaluations of PBL. Space constraints mean we do not discuss the process of change management.

Ramirez, B. U. (2011). The sensory modality used for learning affects grades. *Adv Physiol Educ* 35: 270–274, 2011; doi:10.1152/advan.00010.2011.\*

Second-year undergraduated students from 2008, 2009, and 2010 cohorts were asked to respond a questionnaire to determine their learning style preferences, the VARK questionnaire (where V is visual, A is aural, R is reading-writing, and K is kinesthetic), which was translated into Spanish by the author. The translated questionnaire was tested for wording comprehension before its application in the actual study. Using the results of the VARK questionnaire, students were classified as unimodal or multimodal and according to the first preferred sensory modality used for learning as V, A, R, or K learners. Multiple-choice questions (MCQs) and problems that required simple arithmetic calculations (arithmetic-type questions) were applied to the students. The relation between the main sensory modality used for learning and the grades obtained in each question type was analyzed both in unimodal and multimodal students. It was found that R unimodal

students performed significantly better in arithmetic questions than A and K unimodal students ( $P \leq 0.001$  by a Bonferroni multiple comparison test after ANOVA). R unimodal students also performed better than R multimodal students in arithmetic questions ( $P \leq 0.02$  by a Mann-Whitney  $U$ -test). However, no differences were observed after MCQs in either unimodal or multimodal students with different first sensory modalities used for learning. When MCQ scores between unimodal and multimodal students were compared, no differences were detected. It was concluded that the sensory learning style used for learning affects student outcome when students receive arithmetic questions but not when MCQs are applied.

Raemer, D., Anderson, M., Cheng, A., Fanning, R., Nadkarni, V., & Savoldelli, G. (2011). Research Regarding Debriefing as Part of the Learning Process. *Simulation in Healthcare*, 6, S52-S57. doi: 10.1097/SIH.0b013e31822724d0

Introduction: Debriefing is a process involving the active participation of learners, guided by a facilitator or instructor whose primary goal is to identify and close gaps in knowledge and skills. A review of existing research and a process for identifying future opportunities was undertaken. Methods: A selective critical review of the literature on debriefing in simulation-based education was done. An iterative process of analysis, gathering input from audience participants, and consensus-based synthesis was conducted. Results: Research is sparse and limited in presentation for all important topic areas where debriefing is a primary variable. The importance of a format for reporting data on debriefing in a research context was realized and a "who, when, where, what, why" approach was proposed. Also, a graphical representation of the characteristics of debriefing studies was developed (Sim-PICO) to help guide simulation researchers in appropriate experimental design and reporting. Conclusion: A few areas of debriefing practice where obvious gaps that deserve study were identified, such as comparing debriefing techniques, comparing trained versus untrained debriefers, and comparing the effect of different debriefing venues and times. A model for publication of research data was developed and presented which should help researchers clarify methodology in future work. (Sim Healthcare 6:S52-S57, 2011)

Rayner, S. (2011). Researching style: Epistemology, paradigm shifts and research interest groups. *Learning and Individual Differences*, 21(3), 255-262. doi: 10.1016/j.lindif.2010.11.020

This paper identifies the need for a deliberate approach to theory building in the context of researching cognitive and learning style differences in human performance. A case for paradigm shift and a focus upon research epistemology is presented, building upon a recent critique of style research. A proposal for creating paradigm shift is made, utilising theories of distributed cognition and the frameworking of a model for pragmatic research methodology. The proposition entails setting up a series of Research Interest Groups (RIGS) to operate within and beyond the European Learning Styles Information Network (ELSIN). The approach is aimed at realising further integration and application of theories of

knowledge management, educational and organisational psychology in a pragmatic research methodology for use in style research. (C) 2010 Elsevier Inc. All rights reserved.

Ristori C. A. et. al. (2011). Athletic Training Student Learning Style. *international journal of Athletic Therapy & training* march 2011 33-37\*

Roberts, D. C. (2011). Rumination to Reflection: The Quest to Re-Visit Entrepreneurial Learning. *Proceedings of the 10th European Conference on Research Methodology for Business and Management Studies* 614-620 ISBN 978-1-908272-02-7

The purpose of this paper is to explain and explore the research methods used to investigate the professional practice of an entrepreneur. It tracks the initial research into specific cases during the career to date, and then moves on to explain how the use of these research methods emerged as the research developed. The paper also details the challenges faced by the retrospective researcher investigating his own career, and how the development of a research framework supported the research. Literature about entrepreneurial learning argues that critical incidents (often traumatic episodes that last for sustained periods of time) are a key to entrepreneurial learning (Cope, 2003). As a practitioner researching his own entrepreneurial experience a retrospective review of critical incidents was undertaken with the objective of understanding the particular learning from critical incidents and how this learning influenced subsequent practice. As the research and reflection progressed it emerged that a number of critical incident's that were highlighted, whilst affording potential transformational learning opportunities, merely taught the entrepreneur 'what not to do'. These incidents did not result in profound experiential learning that made a significant positive impact of future activities; they merely acted as focal points for blame, rationalisation, and rumination. Further analysis of the data revealed that there were two distinct categories of learning that occurred around these critical events. This learning was compared to single and double loop learning (Argyris and Schon, 1978). Double loop learning resulted in profound changes and improvement of practice; single loop learning resulted in rumination, rationalisation and blame. The research was then further developed with a new framework to revisit and reflect upon these critical incidents with the intention of exploring and realising double loop learning opportunities.

Roberts, J. W. (2012). *Beyond learning by doing: Theoretical Currents in Experiential Education*. New York, NY: Routledge.

Roberts, D., & Greene, L. (2011). The theatre of high-fidelity simulation education. *Nurse Education Today*, 31(7), 694-698. doi: 10.1016/j.nedt.2010.06.003

High-fidelity simulation is a useful mechanism to aid progression, development and skill acquisition in nurse education. However, nurse lecturers are daunted by sophisticated simulation technology. This paper presents a new method of introducing human patient simulation to students and educators, whilst seeking to demystify the roles, responsibilities and underpinning pedagogy. The analogy of

simulation as theatre outlines the concepts of the theatre and stage (simulation laboratory); the play itself (Simulated Clinical Experience, SCE); the actors (nursing students); audience (peer review panel); director (session facilitator); and the production team (technical coordinators). Performing in front of people in a safe environment, repeated practice and taking on a new role teaches students to act, think and be like a nurse. This in turn supports student learning and enhances self confidence. (C) 2010 Elsevier Ltd. All rights reserved.

Robles, J., Cox, C. D., & Seifert, C. F. (2012). The Impact of Preceptor and Student Learning Styles on Experiential Performance Measures. *American Journal of Pharmaceutical Education*, 76(7).

Objectives. To identify preceptors' and students' learning styles to determine how these impact students' performance on pharmacy practice experience assessments. Methods. Students and preceptors were asked to complete a validated Pharmacist's Inventory of Learning Styles (PILS) questionnaire to identify dominant and secondary learning styles. The significance of "matched" and "unmatched" learning styles between students and preceptors was evaluated based on performance on both subjective and objective practice experience assessments. Results. Sixty-one percent of 67 preceptors and 57% of 72 students who participated reported "assimilator" as their dominant learning style. No differences were found between student and preceptor performance on evaluations, regardless of learning style match. Conclusion. Determination of learning styles may encourage preceptors to use teaching methods to challenge students during pharmacy practice experiences; however, this does not appear to impact student or preceptor performance.

Robison, E. S. (2012). *Influence of learning style and learning flexibility on clinical judgment of pre-licensure nursing students within a human patient computer simulation environment*. Doctorate of Education Dissertation University of West Florida

Nursing education is experiencing a transition in how students are exposed to clinical situations. Technology, specifically human patient computer simulation, is replacing human exposure in clinical education (Nehring, 2010b). Kaakinen and Arwood (2009) discuss the need to apply learning theories to instructional designs involving simulation for successful learner-centered outcomes. Developing effective teaching strategies using technology to support enhancing student performance outcomes requires a paradigm shift from traditional, clinical-based models.

The purpose of this study was to begin to close research gaps and support development of evidence-based practice in implementing simulation by examining prelicensure nursing students' learning styles and flexibilities relative to clinical judgment performance. A convenience sample ( $N = 51$ ) was obtained from students enrolled in a state college located in the Southeastern portion of the United States. The study incorporated a nonexperimental correlation design.

Experiential learning theory ascribed by D. A. Kolb (1984) provided the overarching conceptual framework for the study's research question: how do the individual and combined influences of learning style and learning flexibility (independent variables) of a prelicensure nursing student within a human patient computer simulation environment relate to clinical judgment (dependent variable)? Two instruments were used in data collection: the Kolb Learning Style Inventory-Version 4 to examine the independent variables, and the Lasater Clinical

Judgment Rubric<sup>®</sup> to examine the dependent variable. The Pearson product-moment correlation and linear regression procedures were used for statistical analyses.

The study's findings indicated learning style significantly influenced a prelicensure nursing student's clinical judgment within a human patient computer simulation environment. When the learning style variables were entered into a regression model, the variance in clinical judgment was influenced by the way an individual reflects and transforms the experience. The study's findings did not indicate a significant relationship between learning flexibility and clinical judgment. Based on the findings, a prelicensure nursing student's learning style may influence clinical judgment within a human patient computer simulation environment. Further research is recommended to examine the relationship of clinical judgment and learning style from a developmental perspective throughout the nursing program curriculum and explore the role of learner flexibility in supporting varied instructional design approaches.

Roessger, K. M. (2012). Toward an Interdisciplinary Perspective: A Review of Adult Learning Frameworks and Theoretical Models of Motor Learning. *Adult Education Quarterly*, 62(4), 371-392. doi: 10.1177/0741713612436598 \*

Researchers have yet to agree on an approach that supports how adults best learn novel motor skills in formal educational contexts. The literature fails to adequately discuss adult motor learning from the standpoint of adult education. Instead, the subject is addressed by other disciplines. This review attempts to integrate perspectives across disciplines to enhance understanding of adult motor learning. The review suggests a disciplinary disconnect but finds several potential integrations: (a) a unifying framework between representational motor learning models and reflective practice; (b) the applicability of modeling approaches to experiential frameworks; (c) the relationship between chaining, motor programs, variability of practice, and analogy learning to "doing" and "action" in experiential learning; and (d) the role of embedded motor learning approaches within situated environments. Research should continue to examine how aspects of didactic approaches affect the effectiveness of the modeling approach and how situated learning environments naturalistically use motor learning approaches.

Rofo, J. S. (2011). the 'IR model': a schema for pedagogic design and development in international relations distance learning programmes. *European Political Science*, 10(1), 103-117. doi: 10.1057/eps.2010.25

This article looks at the design, development and delivery of the IR Model. The Using social realist theory and critical discourse analysis, this article examines a number of discourses which construct academic staff attitudes to teaching and learning in their disciplines. It seeks to explain academics' resistance to engaging in activities aimed at professionalising academic practice. The research described



in the article identified four overarching sets of discourses - disciplinary, student deficit, skills and performativity - which represent contradictory positions to academic staff development activities. Understanding this resistance might enable institutions to create ideational contexts in which these discourses, which have a constraining influence, can be critiqued and possibly replaced by discourses which create enabling conditions for staff development activities in higher education.

IR Model brings together best-practice in learning design and appreciation of e-learning in producing a distance learning programme in International Relations delivered 100 per cent online via a Virtual Learning Environment (Blackboard). The results of the IR Model are notable increases in student attainment over campus-based counterparts and an enhanced student experience, as well as being stimulating for academic teachers.

Rogers, L. (2011). Developing simulations in multi-user virtual environments to enhance healthcare education. *British Journal of Educational Technology*, 42(4), 608-615. doi: 10.1111/j.1467-8535.2010.01057.x

Computer-based clinical simulations are a powerful teaching and learning tool because of their ability to expand healthcare students' clinical experience by providing practice-based learning. Despite the benefits of traditional computer-based clinical simulations, there are significant issues that arise when incorporating them into a flexible, co-operative and collaborative learning environment. Unlike traditional technologies; immersive multi-user virtual environments such as Second Life can incorporate comprehensive learning materials with effective learning strategies, allowing healthcare students to obtain a simulated clinical experience in an immersive social environment. The purpose of this research was to investigate how a simulation could be optimised in Second Life to encourage teamwork and collaborative problem solving based on the habits, experiences and perceptions of nursing students towards Second Life as a simulation platform. The research was conducted by placing groups of nursing students in separate locations and exposing them to a series of clinical simulation developed in Second Life. The simulation involved a series of problem-based scenarios, which incorporated concepts of technical skills, patient interaction, teamwork and situational awareness. Using qualitative feedback from a series of evaluative case studies, the study determined good practices and issues involved with a virtual computer-based clinical simulation. A common theme which emerged from this research, which is discussed in this paper, was the student's ability to work in an artificial social structure where they could actively co-construct mental models of technical and interpersonal skills through experiencing human interaction in a computer-based simulated environment.

Romer, T. A. (2012). Imagination and Judgment in John Dewey's Philosophy: Intelligent transactions in a democratic context. *Educational Philosophy and Theory*, 44(2), 133-150. doi: 10.1111/j.1469-5812.2009.00623.x\*

In this essay, I attempt to interpret the educational philosophy of John Dewey in a way that accomplishes two goals. The first of these is to avoid any reference to

Dewey as a propagator of a particular scientific method or to any of the individualist and cognitivist ideas that is sometimes associated with him. Secondly, I want to overcome the tendency to interpret Dewey as a naturalist by looking at his concept of intelligence. It is argued that intelligent experience is the basic concept of education. I suggest how this concept should be understood. I propose to look at it as an interplay between the faculties of imagination and judgment.

Rose, G. (2011). Assessable Online Discussions to Support Postgraduate Student Learning in Transport Planning. *Transportation Research Record*(2211), 36-43. doi: 10.3141/2211-05

Web-based tools to support online discussion present opportunities to enhance student learning, particularly when students live at remote locations and do not have the benefit of face-to-face interaction with either their teacher or fellow students. Online discussions have also been shown to enhance student engagement in subjects taught in a face-to-face mode. The literature emphasizes the need, however, for further understanding of how these online discussions should be designed and moderated to support student learning. A case study of a distance education subject in transport planning and policy is used to illustrate how assessable online discussions can provide scaffolding to support student learning. Attention was paid to both the design of the discussion experience and how interaction between the participants was to be nurtured. Results from monitoring student activity in online discussions as part of the course offering during 3 years provide insight into the extent of student engagement and their perceptions of the value of these discussions in their learning.

Rose, J., & Paisley, K. (2012). White Privilege in Experiential Education: A Critical Reflection. *Leisure Sciences*, 34(2), 136-154. doi: 10.1080/01490400.2012.652505

Through narrative and critique, this critical analysis addresses the role and reification of privilege in the pedagogical processes of experiential education. Using whiteness as a critical and theoretical lens, we argue experiential education is a privileged pedagogy, aimed at maintaining the status quo and reproducing dominant power relations between racialized social groups. Participants, instructors, spaces, and activities often reflect the embedded whiteness of experiential education. We critically examine the use of challenge in experiential education and offer a language of possibility for future trajectories for experiential education which facilitates more just and equitable teaching and learning processes.

Ross, J. (2011). Traces of self: online reflective practices and performances in higher education. *Teaching in Higher Education*, 16(1), 113-126. doi: 10.1080/13562517.2011.530753 \*

This paper explores issues emerging from the question of how students and teachers negotiate issues of identity, authenticity, ownership, privacy and performativity in high-stakes online reflection in higher education. I examine in particular the notion of traces as both inscriptions and archives. Working online

amplifies the destabilising and disturbing effects of compulsory reflection, and the combination greatly complicates the humanist notions that legitimise their use: that there is a 'true self' which can be revealed, understood, recorded, improved or liberated through the process of writing about thoughts and experiences. Online reflective practices are implemented without acknowledgement of the difference being online makes, and issues of power in high-stakes reflection are disguised or ignored. These practices normalise surveillance of students' emotional and developmental expression, and produce rituals of confession and compliance.

Rudd, D. V. (2012). Your Students May Not Know Very Much About How They Prefer to Learn, Their Personality Traits, and their Value Systems! Should The Academy Being Doing Something About This? Unpublished paper Lebanon Valley College\*

About the same time that Frederick Taylor was encouraging the use of time and motion studies of workers physical capabilities as a tool for production optimization, psychometrics, then defined as “The art of imposing measurement and number to operations of the mind” began moving aggressively beyond its foundation in the measure of intelligence. Today, to quote the Psychometric Society, measurement and quantification is ubiquitous in modern society. Insight, defined as ‘asking oneself tough questions and giving honest answers,’ is one of the seven resiliencies Sybil Wolin, Ph.D., and Steven Wolin, M.D. and Project Resiliency have identified seven resiliencies that humans develop in varying patterns to help cope with and succeed in the wider world. Among the insights that college students should to have about themselves is some feel for their preferred learning styles, the major characteristics of their personality structures, and the nature of their current value system. The author collects unaided, self-reports from students in freshmen, sophomore and junior level marketing classes on these three elements of self-knowledge. Students are later offered the opportunity to voluntarily take the Kolb Learning Styles Inventory™, the DiSC™ Workplace personality profile, and, a Value Systems Profile to get measures of these characteristics. From a sample of 180 subjects from fall of 2009 through spring of 2012, only 13.9% self-reported primary and secondary learning style preferences matched the order shown in the measured results. In addition, less than twenty-five percent (25%) matched both major learning style preferences and 11.1% missing completely. From a sample of 131 students from fall of 2009 through spring of 2012, only about one-third (32%) of the self-reports matched the measured value systems profile results. From a sample of 30 students completing the DiSC™ personality profile, self-reports of primary and secondary personality trait matched the measured results in only 10% of the cases with 23% missing both traits. The author explains the conceptual use of the three self-reports (learning styles, personality structure, and value systems) in the formation of groups and proposes the formative use of individual assessments of this nature to assist students in knowing themselves.

## S

Sadideen, H., & Kneebone, R. (2012). Practical skills teaching in contemporary surgical education: how can educational theory be applied to promote effective learning?

*American Journal of Surgery*, 204(3), 396-401. doi: 10.1016/j.amjsurg.2011.12.020

BACKGROUND: Teaching practical skills is a core component of undergraduate and postgraduate surgical education. It is crucial to optimize our current learning and teaching models, particularly in a climate of decreased clinical exposure. This review explores the role of educational theory in promoting effective learning in practical skills teaching. METHODS: Peer-reviewed publications, books, and online resources from national bodies (eg, the UK General Medical Council) were reviewed. RESULTS: This review highlights several aspects of surgical education, modeling them on current educational theory. These include the following: (1) acquisition and retention of motor skills (Miller's triangle; Fitts' and Posner's theory), (2) development of expertise after repeated practice and regular reinforcement (Ericsson's theory), (3) importance of the availability of expert assistance (Vygotsky's theory), (4) learning within communities of practice (Lave and Wenger's theory), (5) importance of feedback in learning practical skills (Boud, Schon, and Endes' theories), and (6) affective component of learning. CONCLUSIONS: It is hoped that new approaches to practical skills teaching are designed in light of our understanding of educational theory. (C) 2012 Elsevier Inc. All rights reserved.

Sandberg, F. (2012). A Habermasian Analysis of a Process of Recognition of Prior Learning for Health Care Assistants. *Adult Education Quarterly*, 62(4), 351-370. doi: 10.1177/0741713611415835

This article discusses a process of recognition of prior learning for accreditation of prior experiential learning to qualify for course credits used in an adult in-service education program for health care assistants at the upper-secondary level in Sweden. The data are based on interviews and observations drawn from a field study, and Habermas's theory of communicative action is used for analysis. The main findings suggest that the students do not fully understand the assessment process or how their prior learning was transformed into credits. This reflects the teacher's strategic actions and the lack of mutual understanding. Examples are sketched about how the process could be developed using the theory of communicative action. From a Habermasian perspective, this process is also criticized as promoting an assimilation of lifeworld-grounded experiences to the system. This form of recognition of prior learning does not seem to satisfy important goals and ideals in adult education and learning.

Sanderson, H. (2011). Using Learning Styles in Information Literacy: Critical Considerations for Librarians. *Journal of Academic Librarianship*, 37(5), 376-385.

Librarians are using learning styles as a tool to engage students and enhance their teaching. However, a review of the literature reveals that learning styles theory is complex and problematic. It is important to base our practice on sound pedagogy. This critical examination of learning styles explores the issues surrounding them and what they can offer to information literacy.

Sandberg, J. A. C., Wielinga, B. J., & Christoph, L. H. (2012). The role of prescriptive models in learning. *Computers & Education*, 59(2), 839-854. doi: 10.1016/j.compedu.2011.11.021

The main research question in this article concerns the added value of a prescriptive model in a simulation/gaming environment: KM Quest. KM Quest is meant to support students in the acquisition of both declarative and procedural knowledge in the domain of Knowledge Management (KM). The prescriptive model (KM model) embedded in the KM Quest environment describes the different steps that need to be taken while solving Knowledge Management problems. The main assumption is that because of the KM model, students more easily acquire knowledge about KM and that they need to use their metacognitive skills to a lesser extent since the KM model partly takes over regulation of learning in a new domain. These hypotheses are investigated in an experiment with two conditions: a no-model versus a model condition. The results of 46 students (23 in each condition) show that students in both conditions acquire declarative and procedural knowledge. Students in the model condition acquire more procedural knowledge and more KM model-specific procedural knowledge than students in the no-model condition. The model condition students also outperform the no-model condition students on a transfer test. However, students in the model condition spent much more time in the learning environment than the students in the no-model condition. Some exploratory evidence is presented that suggests that the inclusion of a prescriptive model changes the nature of the regulation: it appears that students in the model condition spend much time on regulating the use of the KM model, while the regulation activities of the no-model students concerns the domain of KM itself.

Sardeshmukh, S. R., & Corbett, A. C. (2011). The Duality of Internal and External Development of Successors: Opportunity Recognition in Family Firms. *Family Business Review*, 24(2), 111-125. doi: 10.1177/0894486510391783

The study contributes to the family business literature by examining the intersection of succession and opportunities and extends an existing line of research on entrepreneurial behavior in family firms by examining opportunity perception by 119 family business successors. The authors investigate the successors' self-efficacy, education, and work experience, together with their perception of entrepreneurial opportunities. The results suggest that successors who perceive new opportunities balance and combine their family firm-specific human capital built through experience within the family firm with general human capital built through education and other work experience to generate new ideas leading to the entrepreneurial opportunity perception.

Savage, C. (2011). Overcoming inertia in medical education: Navigating change with adaptive reflection. Unpublished Ph. D. Dissertation. Karolinska Institute, Stockholm, Sweden\*

Savage, C., Amanalibi, S., Andersson, A., Lohr, S. C., Eliasson, Z., Eriksson, H., . . . Schwarz, U. V. (2011). Turning the tables: When the student teaches the professional - A

case description of an innovative teaching approach as told by the students. *Nurse Education Today*, 31(8), 803-808. doi: 10.1016/j.nedt.2010.11.023

Background: Is it possible to increase the value, meaningfulness, and relevance of a course experience by integrating it with the healthcare context? Students and teachers from a course on organization, learning and leadership sought to explore this possibility through a collaborative effort with nurses from an affiliated teaching hospital. Methods: Working as teachers, students created continuing nursing education (CNE) courses using the Adaptive Reflection process. The students and teachers then researched the experience in terms of: 1) content analysis of student self-reflections (discussion notes and logbooks) on the learning process, 2) a student self-assessed outcome achievement survey, and 3) perceived relevance of the CNE courses by the clinical nurse educators. Results: Thirteen nursing students created three CNE courses together with sixteen nurses. Each course consisted of multiple 20-minute long web-based modules with automatic formative feedback. In the process, students exceeded course outcome-levels, journeyed from chaos to confidence and experienced new ways of viewing the group and their own capabilities. Conclusions: The innovative design of the course moved the focus from student-centered learning to learning by contributing to health care. Working in a real world context, the content of the students' efforts and the skills they developed not only met course requirements, but were also aligned with the needs of the wards. This contribution was valued by the students and the RNs which enhanced students' feelings of self-confidence. Further research lies in testing the model in other contexts.

Sarikcioglu L, Senol Y, Yildirim FB, Hizay A. (2011). Correlation of the summary method with learning styles. *Adv Physiol Educ* 35: 290–294, 2011; doi:10.1152/advan.00130.2010.\*

Correlation of the summary method with learning styles. *Adv Physiol Educ* 35: 290–294, 2011; doi:10.1152/advan.00130.2010.—The summary is the last part of the lesson but one of the most important. We aimed to study the relationship between the preference of the summary method (video demonstration, question-answer, or brief review of slides) and learning styles. A total of 131 students were included in the present study. An inventory was prepared to understand the students' learning styles, and a satisfaction questionnaire was provided to determine the summary method selection. The questionnaire and inventory were collected and analyzed. A comparison of the data revealed that the summary method with video demonstration received the highest score among all the methods tested. Additionally, there were no significant differences between learning styles and summary method with video demonstration. We suggest that such a summary method should be incorporated into neuroanatomy lessons. Since anatomy has a large amount of visual material, we think that it is ideally suited for this summary method.

Salomão, C. S. (2011). **Women in small entrepreneurial firms: an analysis of learning styles and leadership styles**. 165 f. Dissertação (Mestrado) – Escola de Engenharia de São Carlos, Universidade de São Paulo, São Carlos, 2011.

This research objective is to study learning style and leadership style of women entrepreneurs of small businesses in the retail sector in the city of São Carlos. In last two decades, there was a significant increase in women entrepreneurs in Brazil and worldwide. Several researchers have paid attention on women. This work investigates learning and leadership styles, their interrelationships and their influence on small businesses. Women have particular ways of entrepreneurship, to outline strategies and to lead their followers. Generally, their emphasis is to relationships with employees, suppliers and customers. Their priorities, frequently, are not expressed in terms of monetary or of company's growth. For them, life quality is important. They manage their time and to reconcile work commitments with family tasks. To understand women learning and leadership styles helps to realize what kind of management skills could help them in their business. This research was a survey. It identified learning and leadership style of women entrepreneurs in small business context. To identify these styles and the key managerial skills of women, we used The Learning Style Inventory (LSI) and the Leadership Multifactor Questionnaire (MLQ) were used to identify learning styles, managements skills and leadership style. The survey results show: what learning styles and leadership styles are prevalent among the women studied, the relationships between learning style and leadership style of these women, and what are their main management skills.

Sawyer, T., Sierocka-Castaneda, A., Chan, D., Berg, B., Lustik, M., & Thompson, M. (2011). Deliberate Practice Using Simulation Improves Neonatal Resuscitation Performance. *Simulation in Healthcare*, 6(6), 327-336. doi: 10.1097/SIH.0b013e31822b1307

Introduction: Simulation will soon become the standard method of training in the Neonatal Resuscitation Program (NRP). Deliberate practice (DP) using simulation has been shown to improve performance in other areas of medicine. The objective of this study was to evaluate the effectiveness of DP using simulation on improving NRP performance. Methods: Using a pretest-posttest design, 15 teams of 2 residents participated in a series of 3 NRP simulations followed by a facilitated debriefing. Objective measures of NRP performance and time to complete critical tasks were evaluated on the first (pretest) and the third (posttest) simulations by blinded video review using a validated scoring instrument. Results: Improvements were seen in scores for overall NRP performance (pretest 82.5% vs. posttest 92.5%, mean difference 10% [95% CI, 1.5-18.5]; P = 0.024) and positive-pressure ventilation (pretest 73.3% vs. posttest 95.0%, mean difference 21.7% [95% CI, 0.8-42.5]; P = 0.043). Time to the vascular access

decreased by over 1 minute from baseline (pretest 404 second vs. posttest 343 second, mean difference -60.3 second [95% CI, -119.6 to -0.9];  $P = 0.047$ ) as did the time to first IV medication (pretest 452 second vs. posttest 387 second, mean difference -64.9 second [95% CI, -112.4 to -17.5];  $P = 0.011$ ). Conclusions: Our results suggest that DP using simulation is associated with improvements in NRP performance and support the use of DP using simulation in NRP training. (Sim Healthcare 6:327-336, 2011)

Schaefer, J. J., Vanderbilt, A. A., Cason, C. L., Bauman, E. B., Glavin, R. J., Lee, F. W., & Navedo, D. D. (2011). Literature Review Instructional Design and Pedagogy Science in Healthcare Simulation. *Simulation in Healthcare*, 6, S30-S41. doi: 10.1097/SIH.0b013e31822237b4

This article is a review of the literature focused on simulation as an educational intervention in healthcare. The authors examined the literature based on four key levels: (1) the validity and reliability of the simulator, (2) the validity and reliability of the performance evaluation tool, (3) the study design, and (4) the translational impact. The authors found that the majority of research literature in healthcare simulation does not address the validity and reliability of the simulator or the performance evaluation tool. However, there are well-designed research studies that address the translation into clinical settings and have positive patient safety outcomes.

Schein, E. et al (2011). Learning to Help Through Humble Inquiry and Implications for Management Research, Practice, and Education: An Interview With Edgar H. Schein. *Academy of Management Learning & Education*, 2011, Vol. 10, No. 1, 131–147.\*

For more than 50 years, Edgar H. Schein, the Sloan Fellows Professor of Management Emeritus at the Massachusetts Institute of Technology's Sloan School of Management, has creatively shaped management and organizational scholarship and practice. He is the author of 15 books, including *Process Consultation Revisited*, *Organizational Culture and Leadership*, *Career Anchors*, *Organizational Psychology*, *Career Dynamics*, and *Helping*, as well as numerous articles in academic and professional journals. Novelty, clarity, and relevance have always been the guiding principles of his work. In this interview, Schein moves on from his key formative learning experiences to focusing on humble inquiry as the key to building and maintaining the helping relationship. Comprised of both a helper's attitude and behavior, humble inquiry embodies "accessing one's ignorance" and becoming open to what the helper and the helped may learn from each other through observation, genuine empathic questioning, careful listening, and suspension of judgment. Schein not only identifies several challenges within management research, practice, and education, but offers recommendations.

Schellings, G. (2011). Applying learning strategy questionnaires: problems and possibilities. *Metacognition and Learning*, 6(2), 91-109. doi: 10.1007/s11409-011-9069-5

This article discusses measuring learning strategies by means of questionnaires. In 'multi-method' research, in which think-aloud measures are compared with



questionnaires, low or moderate correlations are found. A conclusion often drawn is that learners are not able to verbally report on their learning activities. Alternative explanations concern two other possibilities: first, that different learning strategies may be measured by the two methods; second, that the measuring methods may be aimed at different learning tasks. Keeping these prerequisites in mind, we constructed a task-specific questionnaire directly based on a taxonomy for coding think-aloud protocols in text studying. We found a higher correlation ( $r=.51$ ) between the questionnaire and think-aloud protocols than is regularly reported. A case-study, in which four students answered the questionnaire while thinking aloud, led to new insights into why a questionnaire may lead to somewhat different ratings of activities than the think-aloud method. Based on these results, task-specific questionnaires may be improved. Our studies involved a fair comparison between a questionnaire and think-aloud protocols. We cautiously conclude that if task-specific questionnaires are meticulously constructed and examined in new ways, they might become reasonably adequate alternatives for the labor-intensive think-aloud method in measuring learners' learning strategies.

Schneckenberg, D., Ehlers, U., & Adelsberger, H. (2011). Web 2.0 and competence-oriented design of learning-Potentials and implications for higher education. *British Journal of Educational Technology*, 42(5), 747-762. doi: 10.1111/j.1467-8535.2010.01092.x

This paper discusses the potential of learning technologies to foster competence development of students. It aims to improve understanding of pedagogical conditions that have to be met to establish a competence orientation in e-learning. We review the literature to summarise recent changes in e-learning, identify attributes of web 2.0 technologies, revisit the concept of competence and specify implications for the competence-oriented design of learning environments. By referring to Kolb's learning cycle, we illustrate this view with a case study on the use of Google Apps as collaborative learning environment and recommend how competence-oriented e-learning activities can be created. Our findings reinforce the position that web 2.0 tools enable a shift from a distributive to a more collaborative mode in e-learning. In particular, the ease of use and intuition of web 2.0 technologies allow creating learning environments, which realise activity-rich pedagogical models and facilitate competence development of students. The paper concludes that, despite the demand of firms for versatile graduates and the obvious potential of learning technologies to foster competence development of students, universities need to establish institutional strategies to make this pedagogical change happen.

Schubert, C. A., Mulvey, E. P., Loughran, T. A., & Losoya, S. H. (2012). PERCEPTIONS OF INSTITUTIONAL EXPERIENCE AND COMMUNITY OUTCOMES FOR SERIOUS ADOLESCENT OFFENDERS. *Criminal Justice and Behavior*, 39(1), 71-93. doi: 10.1177/0093854811426710

Social scientists have long recognized that individual experiences in particular settings shape behavior, and as a result, many service sectors regularly evaluate

client perceptions. This is not the case in the juvenile justice system. Using a sample of 519 serious juvenile offenders (92% male, ethnically diverse) from two sites, this study evaluated the impact of youth perceptions along eight dimensions of an institutional experience on recidivism following release, with recidivism measured as self-reported antisocial activity, rearrest, or a return to a facility. The authors demonstrated that more positive perceptions within and across dimensions of the juvenile setting reduce involvement in the outcomes assessed, even after controlling for individual characteristics and facility type. Implications for juvenile justice practice and policy are discussed.

Schultheiss, D. E., Watts, J., Sterland, L., & O'Neill, M. (2011). Career, migration and the life CV: A relational cultural analysis. *Journal of Vocational Behavior*, 78(3), 334-341. doi: 10.1016/j.jvb.2011.03.013

In response to the precarious and disadvantaged position of forced migrants in the United States and the UK, marked by unemployment, under employment and loss of career capital, this paper draws upon a relational cultural paradigm and a life design career model in order to understand migrant work life, shape the career intervention process and examine the implications for vocational practice. An innovative career intervention is introduced and discussed, the life CV. which has been used with refugees and asylum seekers in the UK within the context of relational paradigms that reflect the intertwined nature of people's relational and working lives. The paper argues that by engaging in the activities and meaning making associated with the creation of a life CV, different life perspectives and designs become possible and individuals are enabled to consider new ways of knowing themselves and presenting themselves to potential employers. (C) 2011 Elsevier Inc. All rights reserved.

Schultze, U., & Avital, M. (2011). Designing interviews to generate rich data for information systems research. *Information and Organization*, 21(1), 1-16. doi: 10.1016/j.infoandorg.2010.11.001

Information Systems (IS) publications that use interviews for data generation tend to provide very little insight into the research process and very few rely on a carefully chosen and well-articulated interviewing method. Given the wide variety of interviewing approaches available to qualitative researchers, it seems that the IS discipline is lagging behind and can easily enhance its methodological sophistication. In this paper, we address this opportunity by (i) highlighting the potential of interviewing as a means of generating data that provides insight into people's experiential life; (ii) discussing the various epistemological stances that can be taken to interviewing; (iii) introducing and illustrating three interviewing methods (i.e., appreciative, laddering and photo-diary interviewing); and (iv) juxtaposing these methods to identify the conditions under which they are most effective. (C) 2010 Elsevier Ltd. All rights reserved.

Schyns, B., Kiefer, T., Kerschreiter, R., & Tymon, A. (2011). Teaching Implicit Leadership Theories to Develop Leaders and Leadership: How and Why It Can Make a Difference. *Academy of Management Learning & Education*, 10(3), 397-408. doi:

10.5465/amle.2010.0015

Implicit leadership theories (ILTs) are lay images of leadership, which are individually and socially determined. We discuss how teaching implicit leadership theories contributes to developing leaders and leaderships by raising self- and social awareness for the contexts in which leadership takes place. We present and discuss a drawing exercise to illustrate different implicit leadership theories and discuss the implications for leaders and leadership, with a particular focus on how leaders claim, and are granted, leader identities in groups.

Scott, G. W., Goulder, R., Wheeler, P., Scott, L. J., Tobin, M. L., & Marsham, S. (2012). The Value of Fieldwork in Life and Environmental Sciences in the Context of Higher Education: A Case Study in Learning About Biodiversity. *Journal of Science Education and Technology*, 21(1), 11-21. doi: 10.1007/s10956-010-9276-x

Fieldwork is assumed by most practitioners to be an important if not essential component of a degree level education in the environmental sciences. However, there is strong evidence that as a result of a wide range of pressures (academic, financial and societal) fieldwork is in decline in the UK and elsewhere. In this paper we discuss the value of fieldwork in a higher education context and present the results of a case study which illustrates its value to student learning and the wider student experience. We used qualitative and quantitative methods to compare the impact of two learning tasks upon the affective and cognitive domains of students. We designed two tasks. One task that included fieldwork, and required students to collect organisms from the field and make labelled drawings of them, and one task that omitted the fieldwork and simply required drawing of specimens that the students had not collected. We evaluated the students' experience through structured and semi-structured questionnaires and written exercises. Students did not perceive the two tasks as being equivalent to one another. They reported that they enjoy fieldwork and value it (in the contexts of their learning at university, life-long learning, and in relation to their career aspirations) and felt that they learn more effectively in the field. Our students were better able to construct a taxonomic list of organisms that they had collected themselves, better able to recall the structural detail of these organisms and were better able to recall the detail of an ecological sampling methodology that they had personally carried out in the field rather than one that a tutor had described to them in a classroom setting. Our case study supports the growing body of evidence that fieldwork is an important way of enhancing undergraduate learning and highlights some key areas for future research.

Seikkula-Leino, J. (2011). The implementation of entrepreneurship education through curriculum reform in Finnish comprehensive schools. *Journal of Curriculum Studies*, 43(1), 69-85. doi: 10.1080/00220270903544685

How has entrepreneurship education been implemented in Finnish comprehensive schools. A two-part survey was undertaken in 43 municipalities with different educational and socio-economic backgrounds. The first part, in 2005, dealt with the local curriculum reform with a focus on the development of entrepreneurship education. The second part, in 2006, dealt with the implementation of

entrepreneurship education. Questionnaires were sent to the representatives of the education and business sectors in the municipalities. The research questions were: (1) What is the sense of responsibility for implementing entrepreneurship education? (2) What kind of knowledge is there about entrepreneurship education? The results indicate that an atmosphere of responsibility for implementing entrepreneurship education is developing, although teachers do not possess knowledge of how to implement entrepreneurship education in practice. To develop such new curricular fields, such as entrepreneurship education, one could develop partnership forms of curriculum reform in order to develop teachers' learning, school/work partnerships, and local curriculum work. Reforms need to be framed in practice-oriented terms, thus strengthening the realization of aims and contents.

Sellnow, T. L., Sellnow, D. D., Lane, D. R., & Littlefield, R. S. (2012). The Value of Instructional Communication in Crisis Situations: Restoring Order to Chaos. *Risk Analysis*, 32(4), 633-643. doi: 10.1111/j.1539-6924.2011.01634.x\*

This article explores the nature of instructional communication in responding to crisis situations. Through the lens of chaos theory, the relevance of instructional messages in restoring order is established. This perspective is further advanced through an explanation of how various learning styles impact the receptivity of various instructional messages during the acute phase of crises. We then summarize an exploratory study focusing on the relationship between learning styles and the demands of instructional messages in crisis situations. We conclude the article with a series of conclusions and implications.

Sense, A. J. (2011). The project workplace for organizational learning development. *International Journal of Project Management*, 29(8), 986-993. doi: 10.1016/j.ijproman.2011.01.012

This paper conceptually examines how and why projects and project teams may be conceived as highly generative episodic individual and team learning places that can serve as vehicles or agents to promote organizational learning. It draws on and dissects a broad and relevant literature concerning situated learning, organizational learning, learning spaces and project management. The arguments presented signal a movement towards a project workplace becoming more organizationally acknowledged and supported as a learning intense entity wherein, learning is a more conspicuous, deliberate and systematic social activity by project participants. This paper challenges conventional and limited organizational perceptions about project teams and their practices and discloses their extended value contributions to organizational learning development. (C) 2011 Elsevier Ltd. and TPMA. All rights reserved.

Sharma, S., Boet, S., Kitto, S., & Reeves, S. (2011). Interprofessional simulated learning: the need for "sociological fidelity". *Journal of Interprofessional Care*, 25(2), 81-83. doi: 10.3109/13561820.2011.556514

Shaughnessy, A. F. (2011) *Implementation and preliminary evaluation of clinical*

*blogging, a reflective exercise, in a family medicine residency.* Medical education Master's thesis. Tufts University family medicine residency at Cambridge Health Alliance.\*

Reflection is thought to be a valuable skill for physicians, yet many residency training programmes in the United States do not teach resident physicians this skill. The purpose of this study was to evaluate the implementation of a reflective exercise in a family medicine residency programme. Using the precepts of diffusion of an innovation, we introduced "clinical blogging," our term for reflective exercises over a period of months, first as a handwritten exercise and then as a computer-based exercise as part of a portfolio. Administrative support, opinion leaders, information sessions, and group processes were used to assure uptake by residents, who were given 15 minutes for blogging four mornings per week when they were training in our family medicine residency model office. Residents were not given specific direction for blogging, other than to do it when assigned.

Reflective ability was measured in residents using the Groningen Reflective Ability Scale at the beginning and end of the project. Also, self-reported attitudes toward blogging were assessed at the beginning and end of the project using a previously validated survey instrument. The study also explored the relationship between reflective ability and learning style.

Uptake among our residents (n=34) was quite variable, ranging from 0 to 31 blogs written per resident over a three-month period. A computer error prevented accurate recording of the date and time of when blogs were written. Scores on the attitude survey were very high at the beginning of the project (94 of a possible 15) and did not change at the end of the project. Highest percent agreement on the attitude questionnaire occurred for the statements that blogging "enhanced my reflective skills (73% agree/strongly agree), "promote critical thinking" (61%

agree/strongly agree), and “helps me identify areas where my knowledge is weak (agree/strongly agree). Only 15% of residents felt that clinical blogging helped them prepare for practice. Scores on the reflective ability scale were very high at the start of the project (90 out of a possible 115) and did not change following the establishment of blogging. Reflective ability was not different among high and low frequency bloggers. There was no correlation between results of the Groningen Reflective Ability Scale and the Kolb Learning Style Inventory. In follow-up interviews with representatives of low and high frequency blogging residents, it was clear that blogging is viewed by residents as a method of personal and professional self-development, though residents perceived a strong conflict between the need for self-development and their professional duties. Some residents had difficulty writing about emotional issues. Also, the way blogging was introduced, without clear requirements for how it should be done, only that it should be done, was difficult for residents accustomed to feedback about whether they were performing a task correctly.

Future research into our blogging exercise will focus on the content of blogs to determine how residents use the exercise. We will also change the designated time for blogging and perhaps give residents specific instructions on how to complete blogs.

Shaw, R. S. (2012). A study of the relationships among learning styles, participation types, and performance in programming language learning supported by online forums. *Computers & Education*, 58(1), 111-120. doi: 10.1016/j.compedu.2011.08.013 \*

This study is focused on the relationships among learning styles, participation types, and learning performance for programming language learning supported by an online forum. Kolb's learning style inventory was used in this study to determine a learner's learning type: 'Diverger', 'Assimilator', 'Converger', and 'Accommodator'. Social Learning Theory was also used to define four participation types. These types in turn were used to describe the learning associated with the use of online forums: 'Replier', 'Asker', 'Watcher', and 'No activity'. A total of 144 students participated in this experiment as part of a half semester ASP.NET programming language learning courses. The course contained an online forum for supporting the students' social activities and participation. In this study, 'learning score' and 'satisfaction' were used to measure learning performance. The results of this study were the following: (1) different learning styles were associated with significantly different learning scores and that the 'Accommodator' style was associated with superior learning scores; (2) participation types were also associated with significantly different learning

scores and that the 'Replier' type is associated with superior learning scores; (3) learning satisfaction is not significantly different among the different learning styles or different participation types, but the average is significantly higher than average values (3.5) of 7-point Likert scale; (4) there is no significant association between learning styles and participation types. Explanations and discussions of these results are offered. Based on the results of this study, we propose that programming language learning, supported with online forums and students' active participation, increases learning performance as measured by student learning scores.

Shein, P. P., & Chiou, W. B. (2011). TEACHERS AS ROLE MODELS FOR STUDENTS' LEARNING STYLES. *Social Behavior and Personality*, 39(8), 1097-1104. doi: 10.2224/sbp.2011.39.8.1097\*

We used modeling advantage, a concept developed by Chiou and Yang (2006), to examine the likelihood that students will identify with a particular teaching model over other competing models. In this research we examined the effects of 2 kinds of teaching styles on students' learning styles during the collaborative teaching of technical courses. Undergraduates in a 1-semester course (229 women, 264 men; M age = 20.8 years, SD = 1.5) were given pretests and posttests to investigate how their learning styles related to their teachers' learning styles. The findings showed that the learning styles of students were associated with their role models, which reinforced Chiou and Yang's previous work with undergraduates in different subject areas. After a semester, the learning styles of students became congruent with those of their role models. Implications and limitations of the study are discussed.

Shields, S. A., Zawadzki, M. J., & Johnson, R. N. (2011). The Impact of the Workshop Activity for Gender Equity Simulation in the Academy (WAGES-Academic) in Demonstrating Cumulative Effects of Gender Bias. *Journal of Diversity in Higher Education*, 4(2), 120-129. doi: 10.1037/a0022953

We report experimental evaluation of the Workshop Activity for Gender Equity Simulation in the Academy (WAGES-Academic), a brief, experiential simulation of the cumulative effects of unconscious bias in the academic workplace. We predicted that participants who played WAGES-Academic would demonstrate significantly increased knowledge and retention of gender equity issues in the academic workplace compared with participants in a control condition. Baseline information on general knowledge of workplace gender equity issues was obtained from 1,254 undergraduates. In the second phase, 144 were randomly assigned to complete either WAGES-Academic or a control task, and the immediate effects of the activities were measured. Participants were contacted 7-11 days later to complete an online measure of knowledge retention. Compared with a control condition, WAGES-Academic increased knowledge and retention. This effect occurred irrespective of prior level of sexist beliefs, participant gender, or whether the participant had been on the advantaged or disadvantaged team. Potential use and testing of WAGES-Academic with university faculty and administrators are discussed.

Shih, B. Y., Chang, C. J., Chen, Y. H., Chen, C. Y., & Liang, Y. D. (2012). Lego NXT information on test dimensionality using Kolb's innovative learning cycle. *Natural Hazards*, 64(2), 1527-1548. doi: 10.1007/s11069-012-0318-y \*

Recently, artificial intelligence has been successfully applied to hazard prevention. Lego has released a programmable module, which many educational organizations and micro-operation robots have used. This has given rise to a new topic of study, how to use Lego NXT in education. In this paper, we present an application of Lego NXT in the subject of mathematics. The principle is based on Kolb's innovative learning cycle that the user's active learning and cooperative learning concepts complete the whole process of learning experience. In order to compare the effectiveness of learning, we use an experimental group and a control group and give them pre- and posttests. In addition, we proposed the technology acceptance model to investigate users' degree of acceptance of Lego. The results show that our approach can improve the users' mathematical achievements and strengthen the users' intention to use.

Shih, C. Y. (2011). Learning from Writing Reflective Learning Journals in a Theory-based Translation Module Students' Perspectives. *Interpreter and Translator Trainer*, 5(2), 309-324.

This paper reports on an action research project intended to engage undergraduate translation students in learning translation theories. Students were guided to write reflective learning journal entries as part of their assessment in a translation theory-based module. Two questionnaires were designed to elicit data, mainly in terms of students' perception of translation theories, both at the beginning and at the end of the term, and students' experiences of writing reflective learning journals. The data suggests that most students seem to think of translation theories as guidelines, methods or techniques, both at the beginning and at the end of the term, even though they also claim that writing reflective learning journals changes the way they view translation theories to a certain extent and, consequently, helps them to learn these theories. This study demonstrates that with careful design and instruction, the educational value of learning journals can be successfully applied to a theory-based module within a subject area that is not traditionally practice- or vocation-oriented in higher education.

Shinnick, M. A., Woo, M., & Evangelista, L. S. (2012). PREDICTORS OF KNOWLEDGE GAINS USING SIMULATION IN THE EDUCATION OF PRELICENSURE NURSING STUDENTS. *Journal of Professional Nursing*, 28(1), 41-47. doi: 10.1016/j.profnurs.2011.06.006

Gains in knowledge and self-efficacy using human patient simulation (HPS) in the education of prelicensure nursing students have been reported. However, the predictors of improved learning outcomes using this teaching methodology are not known. Using a two-group (participated in HPS, did not participate in HPS), repeated-measures, experimental design, we examined the predictors of higher scores on a Knowledge Questionnaire in 162 students (age = 25.7 +/- 6.6, gender = 85.5% female) from four prelicensure cohorts at three nursing schools.



Statistical analysis consisted of t-tests, ANOVA and stepwise logistic regression. Covariates included age, gender, learning style, baseline critical thinking, baseline self-efficacy, group membership (control or experimental), and school. Membership in the experimental group was the only statistically significant independent predictor ( $P < .001$ ) of knowledge gains among the covariates entered into the regression analysis. Members of the control group were two times less likely than those in the experimental group to be in the higher scored group ( $P < .001$ ), yet this changed once the control group participated in HPS. Our findings show that HPS can independently improve test scores. This study provides evidence that HPS; is an effective teaching methodology for prelicensure nursing students regardless of age, learning style, or critical thinking ability.

Shyr, W. J. (2011). Integrating Bio-energy Laboratory Activities Into a Junior High School Classroom. *International Journal of Engineering Education*, 27(3), 585-590.

This study developed a bio-energy laboratory activity as well as an outline for evaluating student performance in the activity. The goal of the study was to design and implement a laboratory procedure and assist teachers in achieving the objectives of the activity. A total of 80 junior high school students went through a six-week laboratory activity. Students' understanding of bio-energy concepts was statistically increased after completing these activities, which effectively introduced students to bio-energy technology. The objective of the activities was for the students to gain an understanding of energy education, as well as a greater confidence in investigating, questioning and experimenting with renewable energy ideas.

Sidhu, M. S., Maqableh, W., Arham, A. H., Muslimen, A., & Tarlochan, F. (2011). An Analysis of Engineering Students Learning Style at UNITEN. *Technics Technologies Education Management-Ttem*, 6(2), 423-431.

This research was conducted on first year mechanical engineering students at University Tenaga Nasional (UNITEN). The aim of the study was to gain the students preferred learning style (using personality questionnaire) and to design new computer aided learning (CAL) packages that employs new visualization techniques. This paper first describes some theories of learning styles followed by an analysis and results of students preferred learning styles.

Singer, S. J., Hayes, J., Cooper, J. B., Vogt, J. W., Sales, M., Aristidou, A., . . . Meyer, G. S. (2011). A case for safety leadership team training of hospital managers. *Health Care Management Review*, 36(2), 188-200. doi: 10.1097/HMR.0b013e318208cd1d

Background: Delivering safe patient care remains an elusive goal. Resolving problems in complex organizations like hospitals requires managers to work together. Safety leadership training that encourages managers to exercise learning-oriented, team-based leadership behaviors could promote systemic problem solving and enhance patient safety. Despite the need for such training, few programs teach multidisciplinary groups of managers about specific behaviors that can enhance their role as leadership teams in the realm of patient safety. Purpose: The aims of this study were to describe a learning-oriented, team-

based, safety leadership training program composed of reinforcing exercises and to provide evidence confirming the need for such training and demonstrating behavior change among management groups after training. Methods: Twelve groups of managers from an academic medical center based in the Northeast United States were randomly selected to participate in the program and exposed to its customized, experience-based, integrated, multimodal curriculum. We extracted data from transcripts of four training sessions over 15 months with groups of managers about the need for the training in these groups and change in participants' awareness, professional behaviors, and group activity. Findings: Training transcripts confirmed the need for safety leadership team training and provided evidence of the potential for training to increase targeted behaviors. The training increased awareness and use of leadership behaviors among many managers and led to new routines and coordinated effort among most management groups. Enhanced learning-oriented leadership often helped promote a learning orientation in managers' work areas. Practice Implications: Team-based training that promotes specific learning-oriented leader behaviors can promote behavioral change among multidisciplinary groups of hospital managers.

Slavich, G. M. & Zimbardo, P. G. (2012). Transformational Teaching: Theoretical Underpinnings, Basic Principles, and Core Methods. *Educ Psychol Rev*  
DOI 10.1007/s10648-012-9199-6\*

Approaches to classroom instruction have evolved considerably over the past 50 years. This progress has been spurred by the development of several learning principles and methods of instruction, including active learning, student-centered learning, collaborative learning, experiential learning, and problem-based learning. In the present paper, we suggest that these seemingly different strategies share important underlying characteristics and can be viewed as complimentary components of a broader approach to classroom instruction called transformational teaching. Transformational teaching involves creating dynamic relationships between teachers, students, and a shared body of knowledge to promote student learning and personal growth. From this perspective, instructors are intellectual coaches who create teams of students who collaborate with each other and with their teacher to master bodies of information. Teachers assume the traditional role of facilitating students' acquisition of key course concepts, but do so while enhancing students' personal development and attitudes toward learning. They accomplish these goals by establishing a shared vision for a course, providing modeling and mastery experiences, challenging and encouraging students, personalizing attention and feedback, creating experiential lessons that transcend the boundaries of the classroom, and promoting ample opportunities for prelection and reflection. We propose that these methods are synergistically related and, when used together, maximize students' potential for intellectual and personal growth.

Smith, E. (2011). Teaching critical reflection. *Teaching in Higher Education*, 16(2), 211-223. doi: 10.1080/13562517.2010.515022 \*

Despite long-standing commitment to the notion of critical reflection across the

healthcare professions it is unusual for critical theory and practice to be taught as explicit subjects in healthcare higher education. There is evidence to show that reflective techniques such as critical portfolios and reflective diaries can help students to consolidate and assess their learning of a discipline and its practices. Yet, there are also known drawbacks of critical reflection, including over self-critical inspection and the infinite regress of reflection on action. This paper offers a theoretically informed model of critical reflection which encompasses different purposes (thinking, learning and assessment of self and social systems), together with different forms of reflection (personal, interpersonal, contextual and critical). Explicitly teaching critical reflection is a logical step towards students being able to recognise and negotiate complex ethical and professional issues. However, teaching critical reflection creates challenges for curricula design, assessment and professional development.

Smits, D. W., Verschuren, O., Gorter, J. W., Lindeman, E., Jongmans, M., & Ketelaar, M. (2011). Perceptions of Pediatric Physical Therapists and Physical Educators on Classifying Learning Styles of Children and Adolescents With Cerebral Palsy. *Physical & Occupational Therapy in Pediatrics*, 31(4), 403-412. doi: 10.3109/01942638.2011.578006

The purpose of this study was to examine professionals' perceptions on classifying learning styles in the context of teaching motor activities to children and adolescents with cerebral palsy (CP). The participants were 21 pediatric physical therapists (PPTs) and seven physical educators (PEs) in three schools for special education in The Netherlands. All participants were introduced to the key descriptions of two existing learning style instruments (Kolb's Learning Style Inventory and Myers-Briggs Type Indicator), applied them to children and adolescents with CP, and reported their perceptions in written surveys. This study had a mixed-methods design. Quantitative and qualitative data analyses showed that PPTs and PEs are mostly positive about the idea of classifying learning styles in the context of teaching motor activities to children and adolescents with CP, giving three main reasons: individual approach, professional communication, and treatment awareness. Additionally, qualitative data analysis showed that the key descriptions of the two learning style instruments were not feasible as classifications for children and adolescents with CP. It is therefore recommended that other learning style classification instruments should be explored and that possibly a new learning style classification instrument should be developed in the context of teaching motor activities to children and adolescents with CP.

Sodhi, M. K., & Cohen, H. L. (2012). The Manifestation and Integration of Embodied Knowing Into Social Work Practice. *Adult Education Quarterly*, 62(2), 120-137. doi: 10.1177/0741713611400302

Traditionally, research in both adult education and social work fields have focused on cognitive ways of knowing. Although both disciplines have acknowledged other ways of knowing, there has been minimal focus on noncognitive ways of knowing, including embodied knowing. The purpose of this qualitative study was to understand how social workers incorporated embodied

knowing into their social work practice. Ten social workers from a variety of settings were interviewed to understand how they learned to trust their bodies as a site of knowing and integrate embodied knowing into their social work practices. Using a feminist theoretical framework, findings indicated that participants embraced and trusted their embodied knowing as a valid source of knowledge. Participants identified internal reactions in social work interactions and described how they processed these somatic sensations to guide their practices. Implications for social work practitioners and social work and adult educators are discussed.

Song, Y. J., Wong, L. H., & Looi, C. K. (2012). Fostering personalized learning in science inquiry supported by mobile technologies. *Etr&D-Educational Technology Research and Development*, 60(4), 679-701. doi: 10.1007/s11423-012-9245-6

In this paper, we present a mobile technology-assisted seamless learning process design where students were facilitated to develop their personalized and diversified understanding in a primary school's science topic of the life cycles of various living things. A goal-based approach to experiential learning model was adopted as the pedagogical design to support the student's personalized learning process. We chose to report the student's inquiry into the life cycles of the spinach plant and the butterfly to pinpoint the how the student's personalized learning was fostered in the experiential learning. The learning process consisted of (a) in-class enculturation and question posing; (b) out-of-class field trip observation; (c) on site reflection after observation; (d) data collection and conceptualization of life cycles in the field trip; (e) the hands-on experimentation of growing the spinach plant and rearing a butterfly after the trip at home; (f) creation of animations and composition based on the hands-on experience individually either at home or in class to re-conceptualize the life cycles of the spinach plant and the butterfly, and (g) sharing and evaluation of their work in class. Each student was assigned a smartphone on a 1:1, 24 x 7 basis, which was used by individuals to mediate their seamless learning experience across multiple contexts. Through our analysis of the learning content, processes and products, we illuminate how the goal-based approach applied to mobile-assisted experiential learning facilitates students' personalized learning and helps them to fulfill their agency in such learning experiences.

Southers, B. et. al. (2012). Learning Style Assessment of Diagnostic Medical Imaging Students using Kolb's LSI 4. Poster presentation, International Society of Magnetic Resonance in Medicine (ISMRM) – Section for Magnetic Resonance Technologists (SMRT) Annual Conference, Melbourne, Australia\*

Learning styles refer to the way that individuals prefer to process new information. Research indicates differences in learners' approach to learning, and that a preference to a certain learning style does not equate to achieving optimum learning.<sup>1</sup> Learning styles have been attributed to certain allied health fields, such as physical therapy, occupational therapy, speech language pathology, dietetics, and radiography.<sup>2,3,4,5</sup> Kolb's Learning Style Inventory (K-LSI) is an assessment tool used to measure learners' preferred learning styles.

Within the Advanced Medical Imaging Technology (AMIT) baccalaureate program at the University of Cincinnati, in Cincinnati, OH, there are three medical imaging modality concentrations of study: Magnetic Resonance Imaging (MRI), Nuclear Medicine Technology (NMT), and Sonography. Within the Radiation Science baccalaureate program at UC, a fourth AMIT-affiliated medical imaging modality option is also available for select AMIT students - Computed Tomography (CT). The purposes of this study were to:

- 1) Assess and locate the predominant learning style preferences of students enrolled in the four above-listed medical imaging modalities using Kolb's LSI-4.0.
- 2) Assess and locate any correlation between preferred learning styles and medical imaging modality concentrations.

Spring, H. (2012). Learning and teaching in action. *Health Information and Libraries Journal*, 29(2), 172-176. doi: 10.1111/j.1471-1842.2012.00983.x

In this article, Kolb's cycle of learning is put forward as a useful theory to consult when planning information literacy or other teaching sessions. The learning cycle is contextualised and Kolb's and other theories are briefly explored. The author then considers how learning style theories can be utilised when planning teaching and learning activities. The use of planning tools is advocated and ideas for sessions are suggested. HS

Steck, L. W., Engler, J. N., Ligon, M., Druen, P. B., & Cosgrove, E. (2011). Doing Poverty: Learning Outcomes among Students Participating in the Community Action Poverty Simulation Program. *Teaching Sociology*, 39(3), 259-273. doi: 10.1177/0092055x11407347

This article discusses an application of the Lewinian/Kolb experiential learning model in the context of undergraduate participation in the Missouri Community Action Poverty Simulation (CAPS) program. CAPS is designed to simulate common, everyday experiences among people living in poverty as participants take on the roles of family members working to make ends meet. The creators of CAPS emphasize that "CAPS is not a game" but "a unique tool that community action agencies are able to use to educate everyone, from policy makers to community leaders, about the day to day realities of life with a shortage of money and an abundance of stress." The authors facilitated the CAPS program with two large groups of undergraduate students enrolled in sociology, gerontology, and psychology courses at a medium-sized private college in south-central Pennsylvania. The analysis examines the experiential learning outcomes of the students as they reflect on their participation in the simulation. Following participation in CAPS, the students demonstrated an increased awareness of the material conditions of everyday life among families living in poverty.

Stein, S. J., Shephard, K., & Harris, I. (2011). Conceptions of e-learning and professional development for e-learning held by tertiary educators in New Zealand. *British Journal of Educational Technology*, 42(1), 145-165. doi: 10.1111/j.1467-8535.2009.00997.x

The conceptions an individual holds about a phenomenon can influence and

determine associated behaviours and perspectives. Consequently, they have a bearing upon how learning about a phenomenon is undertaken and how that phenomenon is experienced and applied in context. A phenomenographic research approach was used to gather the expressed experiences of e-learning and professional development for e-learning held by teachers and support staff from institutions across New Zealand. Five conceptions of e-learning (as tool and equipment; as a facilitator of interaction; as learning; as a reduction in distance; and as a collaborative enterprise) and four conceptions of professional development for e-learning (as training; as opening up possibilities; as collaboration; and as relevant and purposeful) were discovered. In this report, we discuss the conceptions, and show how they are interrelated through outcome space. Implications for the professional development of tertiary teachers and teaching support staff are outlined. The study provides some insights for individuals, institutions and those responsible for planning and implementing professional development programmes to help them to support the development and progress of e-learning in appropriate and rewarding directions.

Steyn, J. L., & Buys, A. J. (2011). CREATIVITY AND 'EUREKA' IN SCIENCE AND ENGINEERING. *South African Journal of Industrial Engineering*, 22(2), 1-17.

Creativity theory started out on a scientific basis at the beginning of the 20(th) century; but then the scope broadened and inquiry became more multidisciplinary. In this article it is shown how the current demand for creativity in science and engineering grows faster than the understanding of it. As a result, the broad definition of 'creativity' is refocused on science and engineering by considering its evolutionary roots. Based on an overview of the work of scientists and engineers, a unified theoretical framework for creativity is proposed, and the systemic approach to awareness and creativity is affirmed. This approach - the theoretical framework and the core of current creativity knowledge - is then used to derive a fresh layer of theory that is anchored in the literature and industrial experience.

Strom, A., Kvernbekk, T., & Fagermoen, M. S. (2011). Parity: (im) possible? Interplay of knowledge forms in patient education. *Nursing Inquiry*, 18(2), 94-101. doi: 10.1111/j.1440-1800.2011.00517.x

A central purpose is to examine the kind of knowledge that patient experience represents; its origin, properties and tenability. We will use the term insider knowledge to designate the knowledge, beliefs and viewpoints constructed by patients about their own illnesses and predicaments more generally. It is our contention that an analysis of insider knowledge is necessary if the value of such knowledge for patient education is to be reasonably assessed. We discuss the epistemological status of professional knowledge and insider knowledge and what it might mean to afford them parity. Basically, we argue that patient-oriented programmes must give insider knowledge a status that acknowledges its privileged access to the insider's own intentions, perceptions, evaluations, decisions, reasons, notions and feelings, and thus yields distinctive insight into these areas. At the same time, patient education will be stunted if the fallibility of such knowledge is not openly addressed.

Su, J. M., Tseng, S. S., Lin, H. Y., & Chen, C. H. (2011). A personalized learning content adaptation mechanism to meet diverse user needs in mobile learning environments. *User Modeling and User-Adapted Interaction*, 21(1-2), 5-49. doi: 10.1007/s11257-010-9094-0

With the heterogeneous proliferation of mobile devices, the delivery of learning materials on such devices becomes subject to more and more requirements. Personalized learning content adaptation, therefore, becomes increasingly important to meet the diverse needs imposed by devices, users, usage contexts, and infrastructure. Historical server logs offer a wealth of information on hardware capabilities, learners' preferences, and network conditions, which can be utilized to respond to a new user request with the personalized learning content created from a previous similar request. In this paper, we propose a Personalized Learning Content Adaptation Mechanism (PLCAM), which applies data mining techniques, including clustering and decision tree approaches, to efficiently manage a large number of historical learners' requests. The proposed method will intelligently and directly deliver proper personalized learning content with higher fidelity from the Sharable Content Object Reference Model (SCORM)-compliant Learning Object Repository (LOR) by means of the proposed adaptation decision and content synthesis processes. Furthermore, the experimental results indicate that it is efficient and is expected to prove beneficial to learners.

Su, Y. H. (2011a). The constitution of agency in developing lifelong learning ability: the 'being' mode. *Higher Education*, 62(4), 399-412. doi: 10.1007/s10734-010-9395-6 \*

In an age of uncertainty, one of the aims of higher education is to establish lifelong learning abilities in students. However, different authors remain divided on the question of what constitutes 'lifelong learning ability'. This article proposes the hypothesis that the cultivation of lifelong learning abilities in higher education needs to be conceptualised and sustained through a focus on the constitution and operation of agency. The cultivation of lifelong learning as a set of agent abilities needs to be grounded within the mode of being, a concept inspired by Heidegger, rather than within having or doing. While the importance of developing epistemology by focusing on learning as delivery (having) and interacting (doing) is not denied, this article suggests that higher education also concerns ontological learning. The Heideggerian perspective on being provides a more person-focused approach that is useful for providing balance and congruence between feeling and thought and between mind and body, supplementing the having and doing approaches by inviting students to reflect on their own growth and leading not only to knowledge construction for problem-solving but also to the construction of subjectivity as a means of finding meaning in the learner's existence in times of uncertainty.

Su, Y. (2011). Lifelong Learning as Being: The Heideggerian Perspective. *Adult Education Quarterly*. 61(1) 57-72\*

This article contends that the development of lifelong learning needs to be grounded within the framework of *being*, a concept inspired by Heidegger, rather than within the framework of *having*. This article also describes the problems of

the adult education literature, which favors the pragmatic sense of being and, thus, may under-theorize the meanings of developing lifelong learning. It considers Heidegger's conception of "being" by defining the existential mode of learning as part of the development of lifelong learning, thereby resisting the exclusive mention of the functional mode of learning in times of postmodern change. The analysis of being is captured by the language of dynamic movement, which grants no priority to one's thought, action, or feeling, none of whose operations can be understood without reference to the other. Finally, the implications of the being mode of learning for developing adult education research, practice, and policy are discussed.

Swaray, R. (2012). An evaluation of a group project designed to reduce free-riding and promote active learning. *Assessment & Evaluation in Higher Education*, 37(3), 285-292. doi: 10.1080/02602938.2010.531246

Group projects are recognised as effective means of engaging students with work-related skills and promoting cooperative learning. This paper reports findings of a small survey - a group project designed to reduce problems associated with the process of production of group goods and services: free-riding and monitoring participation level. The survey elicits information on students' perception of the group project, random group membership and intra-group random selection of presenters of their group report. A compilation of summary statistics of the survey data shows that the design and evaluation of the project helped to reduce free-riding and incentivised students to monitor the group members' level of commitment to the project as well as their understanding of the assignment.

Swiller, H. I. (2011). Process Groups. *International Journal of Group Psychotherapy*, 61(2), 263-273.

A Process Group is a group that studies its own behavior to enable its members to learn about group dynamics, individual dynamics, and interpersonal communications. (Swiller, Lang, & Halperin, 1993) Not only is social life identical with communication, but all communication (and hence all genuine social life) is educative. To be a recipient of a communication is to have an enlarged and changed experience. (Dewey, 1916)

## T

Tamminen, K. A., & Holt, N. L. (2012). Adolescent athletes' learning about coping and the roles of parents and coaches. *Psychology of Sport and Exercise*, 13(1), 69-79. doi: 10.1016/j.psychsport.2011.07.006

Objectives: The purpose of this study was to develop a grounded theory of the ways adolescent athletes learned about coping in sport. We subsequently came to focus on the roles of parents and coaches within this process. Method: Interviews were conducted with 17 athletes (8 females, 9 males, M(age) = 15.6 years), 10 parents (6 mothers, 4 fathers), and 7 male coaches. Grounded theory methodology (Corbin & Strauss, 2008) was used. Results: Learning about coping was an experiential process consisting of the athletes' sport experiences and learning



through trial and error, reflective practice, and coping outcomes (consistent performance, independence in coping, and persistence in coping). Learning was facilitated by athletes being exposed to multiple situations and reflecting on their coping efforts. Parents and coaches helped athletes learn about coping by creating a supportive context for learning (listening and monitoring their own reactions, establishing trust and respect, reading the athlete, and fostering independence). Parents and coaches also used specific strategies to help athletes learn about coping, including questioning and reminding, providing perspective, sharing experiences, dosing stress experiences, initiating informal conversations, creating learning opportunities, and direct instruction. Conclusions: Adolescent athletes must gain personal experience in dealing with stressors in order to learn how to cope. Parents and coaches represent key sources of influence within the process of learning about coping.

Tang, T. S., Funnell, M. M., Gillard, M., Nwankwo, R., & Heisler, M. (2011). The Development of a Pilot Training Program for Peer Leaders in Diabetes Process and Content. *Diabetes Educator*, 37(1), 67-77. doi: 10.1177/0145721710387308

**Purpose** The goal of this study is to describe the process of developing a program that trains peers to facilitate an empowerment-based diabetes self-management support intervention. **Methods** To guide and advise the development process, the authors formed a peer leader training action committee. The committee was an interdisciplinary group (principal investigator, nurse-certified diabetes educators, dietitian-certified diabetes educators, nutritionist, physician, and 3 community members) that met every 3 months over a 1-year period for continuous quality improvement meetings. During meetings, the committee reviewed and supervised the curriculum development, provided feedback, and informed modifications and improvements. **Results** The resulting peer leader training program is a 46-hour program with 2 training sessions conducted per week over a 12-week period. The competency-based training program is based on the theory of experiential learning, and it consists of 3 major components-namely, building a diabetes-related knowledge base, developing skills (communication, facilitation, and behavior change), and applying skills in experiential settings. All components are integrated within each training session using a range of instructional methods, including group brainstorming, group sharing, role-play, peer leader simulations, and group facilitation simulations. **Conclusion** Through the process described above, the authors developed a training program that equips peer leaders with the knowledge and skills to facilitate empowerment-based diabetes self-management support interventions. Future directions include conducting and evaluating the peer training program.

Tax, C. L., Doucette, H., Neish, N. R., & Maillet, J. P. (2012). A Model for Cultivating Dental Hygiene Faculty Development Within a Community of Practice. *Journal of Dental Education*, 76(3), 311-321.

There is a need to explore approaches in faculty development that will foster change in actual teaching practices. The literature suggests that there should be more deliberate use of theory in faculty development research. This study

addressed this gap in the literature by exploring social learning theory in the context of communities of practice and applying this theory to a dental hygiene faculty development program. The purpose of the study was to determine if participation in a community of practice helped dental hygiene clinical instructors implement new teaching strategies by providing ongoing support for their learning. In addition, the study explored whether the level of participation in the community changed over time. A retrospective self-assessment questionnaire consisting of four open-ended questions was administered to a group of clinical dental hygiene instructors at the end of the 2010 academic year. The narrative data were analyzed thematically using qualitative methodology. The results indicated that participation in the community of practice helped clinical instructors make effective changes in their teaching practices by optimizing social learning opportunities. The responses also revealed that instructors became more comfortable participating in discussions as they identified with other members of this unique community.

Taylor, A. A., Backlund, P. & Niklasson, L. (2012). The coaching cycle: A coaching-by-gaming approach in serious games. *Simulation and Gaming* 43(5): 648-672.\*

Military organizations have a long history of using simulations, role-play, and games for training. This also encompasses good practices concerning how instructors utilize games and gaming behavior. Unfortunately, the work of instructors is rarely described explicitly in research relating to serious gaming. Decision makers also tend to have overconfidence in the pedagogical power of games and simulations, particularly where the instructor is taken out of the gaming loop. The authors propose a framework, the coaching cycle, that focuses on the roles of instructors. The roles include instructors acting as game players. The fact that the instructors take a more active part in all training activities will further improve learning. The coaching cycle integrates theories of experiential learning (where action precedes theory) and deliberate practice (where the trainee's skill is constantly challenged by a coach). Incorporating a coaching-by-gaming perspective complicates, but also strengthens, the player-centered design approach to game development in that we need to take into account two different types of players: trainees and instructor. Furthermore, the authors argue that the coaching cycle allows for a shift of focus to a more thorough debriefing, because it implies that learning of theoretical material before simulation/game playing is kept to a minimum. This shift will increase the transfer of knowledge.

Taylor, M.M. (2011). *Emergent learning for wisdom*. London: Palgrave Macmillan\*

Teixeira-Poit, S. M., Cameron, A. E., & Schulman, M. D. (2011). Experiential Learning and Research Ethics: Enhancing Knowledge through Action. *Teaching Sociology*, 39(3), 244-258. doi: 10.1177/0092055x11407346

How can instructors use experiential learning strategies to enhance student understanding of research ethics and responsible research conduct? In this article, the authors review literature on using experiential learning to teach research ethics and responsible research conduct. They present a three-step exercise for teaching

research ethics and responsible research conduct using experiential learning strategies. Their primary teaching and learning objective is to broaden student understanding of ethical behavior beyond notions of "right" and "wrong" to a conception of ethical behavior involving thinking critically about all stages of the research process. The authors present assessment data that suggest that participation in the exercise increased knowledge about ethical guidelines and broadened understandings of ethical behavior.

Thomas, R. J., Jules, C. & Light, D. A. (2012). Making leadership development stick, *Organ Dyn* , doi:10.1016/j.orgdyn.2011.12.009\*

Thomas, R. (2012). Business elites, universities and knowledge transfer in tourism. *Tourism Management*, 33(3), 553-561. doi: 10.1016/j.tourman.2011.06.009

Policy-makers charged with enhancing the competitiveness of tourism, sometimes draw attention to the potential contribution of universities to strengthening innovative behaviour in the private sector. Business elites (very senior managers of large enterprises) play a key role in determining the propensity of organisations to participate in knowledge transfer with higher education institutions. This paper examines the process of knowledge acquisition among ten British business elites, who between them employ tens of thousands of workers, and the (potential) contribution of universities to that activity. Qualitative data are interpreted using concepts from the literature on knowledge transfer and Mezirow's theory of adult learning. The findings suggest that business elites not only operate within communities of practice but also tend to learn within their own 'meaning perspectives'. As a result, initiatives aimed at strengthening engagement are not likely to succeed unless they are able to influence how elites approach their own learning. (C) 2011 Elsevier Ltd. All rights reserved.

Timken, G. L., & McNamee, J. (2012). New Perspectives for Teaching Physical Education: Preservice Teachers' Reflections on Outdoor and Adventure Education. *Journal of Teaching in Physical Education*, 31(1), 21-38.

The purpose of this study was to gauge preservice physical education teachers' perspectives during one physical activity pedagogy course, teaching outdoor and adventure education. Teacher belief, occupational socialization and experiential learning theories overlaid this work. Over three years 57 students (37 males; 20 females) participated in the course. Each student wrote four reflections during their term of enrollment based on semistructured questions regarding their own participation, thoughts on K-12 students, and teaching and learning in physical education. Reflections were analyzed using constant comparative methods. Three main themes emerged from the data: 1) fear, risk and challenge, (subthemes of skill and motivation; self-awareness); 2) lifetime activity; and 3) teaching physical education (subthemes of K-12 students; curriculum). Implications for physical education teacher education suggest the inclusion of novel physical activities that elicit strong emotional responses due to challenges with perceived and/or actual risk as a viable method for inducing belief change.

Timura, T. J. (2012). *An Experiential Learning Theory Study to Enhance Retirement Literacy Education Delivery: Introducing the Retirement Learning Cycle*. Unpublished Doctoral dissertation, University of Pennsylvania Graduate School of Education.\*

In today's self-directed marketplace, individuals are responsible for making their own complex retirement decision making. Seeking counsel, many turn to professionals for advice or education or both. The evidence however, suggests that these interactions often fail to deliver improved knowledge, satisfaction, or behavior. Because experiential based approaches have enhanced learning in other disciplines, this dissertation seeks to discern whether a positive link between experiential learning - focusing on the retirement educator and her instructional approach - and retirement education exists. Pursuant of enhanced learning events, professionals who employ experiential learning theory and teach around the cycle, adopting time varying educator roles and their respective learning tools and techniques, appear to aid their clients in making welfare enhancing retirement decisions. No support for style matching was found.

Toth, P. (2012). Learning Strategies and Styles in Vocational Education. *Acta Polytechnica Hungarica*, 9(3), 195-216.

Vocational education in Hungary has seen significant changes over the past 20 years. However, the adaptivity of the system is largely aggravated by certain problems of content, compensation and selection. As a result, the success of Hungarian public education, as shown by PISA research, lags far behind its possibilities. In our present paper the adaptive model of vocational education is outlined first, where teaching and learning strategies appear as regulating agents with a formative influence on the educational process. The preferred patterns of learning and teaching strategies typical of the individual yield the learning and teaching styles. In the second part of the paper, the results of a longitudinal examination performed among secondary vocational school students in Budapest are presented. The answers to the following questions are sought: how much learning strategy and style can be regarded as an individual characteristic, how it changes with the progress of studies, and whether it shows any correlation with the gender or specialization of the students.

Trinh, M. P. & Kolb, D. A. (2011). Eastern experiential learning: Eastern principles for learning wholeness. *Journal of Career Planning and Adult Development* Special Issue "Recovering Craft: Holistic Work and Empowerment. William Charland, Guest Editor. 27(4): 29-36\*

Although Experiential Learning Theory originated in the work of Western scholars, many of their theoretical principles have a decidedly Eastern orientation. In this essay we draw out these Eastern principles of experiential learning and suggest an Eastern perspective on learning wholeness in one's life and career based on an ontological approach to adult development that emphasizes existential ways of being in the here and now—centering, balance, harmony and flowing in the watercourse way.

Tsai, A. (2011). A HYBRID E-LEARNING MODEL INCORPORATING SOME OF THE PRINCIPAL LEARNING THEORIES. *Social Behavior and Personality*, 39(2), 145-152. doi: 10.2224/sbp.2011.39.2.145

In the context of e-learning many learning theories used in the physical classroom situation, including learning in a community adaptive, collaborative, scaffolding, and scenario learning, have been adopted and validated. Based on these learning theories, an electronic platform and set of procedures for applying a hybrid e-learning model to an internationally accredited training course in industry was explored, developed, and evaluated for this study. This hybrid e-learning system provided electronic, illustration, group learning, comprehension, and workshop learning units and complied with the training objectives of the designated course. The validation of this model was positive and the results indicated that the proposed hybrid e-learning course could be further improved by taking into consideration individual learners' attributes.

Tulbure, C. (2011). Do different learning styles require differentiated teaching strategies? In F. M. Singer & L. Sarivan (Eds.), *Teachers for the Knowledge Society* (Vol. 11).

The purpose of this study has been that of identifying the categories of teaching strategies that lead to the best academic outcomes for students having a certain learning style. We used five categories of teaching strategies along two Educational Sciences classes in one semester. A sample of 85 pre-service primary and pre-school teachers participated in the study. Data was collected through a survey method and has been analyzed using a one-way analysis of variance. Our results support the idea that students with different learning styles achieve better learning outcomes when confronted with teaching strategies that respond to their learning preferences.

Tumkaya, S. (2012). The Investigation of the Epistemological Beliefs of University Students According to Gender, Grade, Fields of Study, Academic Success and Their Learning Styles. *Kuram Ve Uygulamada Egitim Bilimleri*, 12(1), 75-95.\*

The aim of this study is to investigate the epistemological beliefs of university students according to their genders, classes, fields of Study, academic success and learning styles. This study was carried out with 246 females and 242 males, in total 488 university students. The data was collected through Epistemological Beliefs Questionnaire.(EBQ), Kolb Learning Style Inventory (KLSI) and Personal Information Form. According to the findings, the epistemological beliefs do not differ depending on the gender of the students. According to the grade levels, it was found out that two beliefs, one of which is that "Learning depends on the effort" and the other one is that "There is one unchanging truth", differ. However; the belief concerning that "learning depends on ability" does not differ. It was seen that the common interaction between the gender and the grade level did not differ significantly in the sub-dimensions of the beliefs concerning that learning depends on effort" and of the beliefs concerning that learning depends on ability; whereas it differs meaningfully in the sub-dimension of the beliefs that "There is one unchanging truth". Results showed that the males in the second grade

believed that there is more than one unchanging truth. It was realized that the epistemological beliefs of the students differ according to their fields of study; however, they do not differ according to the common effect of the academic success and the field of Study. It was understood that the students from the field of social sciences in the sub-dimension of the belief concerning that "learning depends on effort"; the students from the field of health in the sub-dimension of the belief concerning that "learning depends on ability"; the students from the field of science-techniques were more developed/mature in the sub-dimension of the belief concerning that "There is one unchanging truth". It was determined that a great majority of university students have "Assimilating" and "Converging" learning styles. It was seen that there is not a meaningful difference in the sub-dimension of the beliefs concerning that "learning depends on effort" in terms of different Learning styles. On the other hand, it was realized that there is a meaningful difference in the sub-dimensions of the beliefs concerning that "learning depends on ability" and of the beliefs that "There is one unchanging truth" in favour of the students who have "Diverging" learning styles. It was suggested for the further studies to investigate the epistemological beliefs of the university instructors and the personal characteristics (locus of control, learned helplessness) of the students.

Turesky, E. F. & Gallagher. (2011). Know thyself: Coaching for leadership using Kolb's Experiential Learning Theory. *The Coaching Psychologist*, 7(1):5-14\*

This article discusses the role of professional coaches who apply Kolb's Experiential Learning Theory as a means of enhancing their client's leadership capabilities. The authors posit that Kolb's four learning modes and styles provide a guiding structure for professional coaches to individualise their approach to coaching leaders to overcome the leader's overreliance on their dominant learning style and appropriately access more effective behaviours in handling the myriad of responsibilities they face. It is equally important for coaches to know their own learning styles to be more effective in their coaching role. A coach's ability to access all four modes and learning styles in themselves can foster more effective coaching practices so that they may more effectively coach others whose learning styles are different from their own. The authors conclude that Kolb's Experiential Learning Theory provides a sound theoretical framework to help professional coaches in the development of the organisation's leadership capacity.

Tyler, J. A. (2011). Reclaiming rare listening as a means of organizational re-enchantment. *Journal of Organizational Change Management*, 24(1), 143-157. doi: 10.1108/09534811111102328\*

Purpose The purpose of this paper is to contribute to a reclaiming of the potency of Rogerian listening in organizations. The paper views listening after Rogers, the father of active listening, as a process with potential to re-enchant organizations and the people who comprise them, in a move away from the popular view and professional training that fosters instrumentalized listening that deadens organizations and crushes the spirit of individuals. Design/methodology/approach - The study employs a text analysis using iterative coding processes and constant

comparison. A total of 12 web sites focused on "active listening" in business contexts were analyzed for overlap and divergence with Rogers' descriptors and essential conditions for active listening. Findings Rogers is almost completely disassociated from his original multi-sensory conception of listening, which is now reduced to a set of instrumental tips and techniques that help the listener gather data in the interest of achieving preconceived goals. Rarely was Rogers' intention invoked of understanding in the context of growing a relationship between speaker and listener that was grounded in unconditional positive regard, care, and love. Research limitations/implications - Though the sample size is limited, it suggests a particular zeitgeist in organizations that inhibits the possibilities of re-enchantment by shutting down a principle of channel for developing understanding and making connections that can foster novelty and increase collaboration. An awareness of the current reduction of listening being taught in organizations, and the particular ways in which it varies from the richness of Rogers' powerful conception is the first step toward identifying and overcoming the barriers to re-enchantment at individual and organizational levels. Originality/value - The prevailing efforts in the literature include listening as one dimension in the broader field of communication skills, and tend to result in recommendations that deepen the instrumental nature of listening in business. This study focuses on listening exclusively, beginning with the origins of Rogers' "active listening," examining the ways it has been conceptually co-opted and distorted, as a first step in the process of reclaiming it from the territory of calculated and observable skill.

## U

Ultanir, E., Ultanir, Y. G., & Temel, G. O. (2012). The Examination of University Students' Learning Styles by Means of Felder-Silverman Index. *Egitim Ve Bilim-Education and Science*, 37(163), 29-42.

The purpose of the study is, by adaptating the Felder-Silverman learning styles instrument into Turkish, to study the reliability and validity of the instrument at Mersin University. Further, it examined the differences among the learning styles according to students' fields of science. The Index of Learning Styles (ILS) that is used in this research is a 44- question instrument designed to assess the four dimensions of the Felder-Silverman model. It was developed in 1988 by Richard Felder and Linda Silverman. Participants consisted of 526 of Mersin University students. The sample included different academic branches as follows: Natural Sciences (n=320, 61%), Health Sciences (n=149, 28%) and Social Sciences (n=57, 11%). Findings show that the preferred learning styles are different which shows that Mersin University students are rather sequential, sensory and active learners. Results have also demonstrated that ILS has a significant difference in sequential/global learning styles according to science, health and social sciences.

Ulas, A. H., Sevim, O., & Tan, E. (2012). Examination of learning styles of Turkish teacher candidates. In H. Uzunboylu (Ed.), *World Conference on Learning, Teaching & Administration - 2011* (Vol. 31, pp. 349-354).

The purpose of this study is to define the learning styles of Turkish teacher candidates under a sum of six different learning styles in three basic dimensions and to set forth which learning styles are dominant. In the study, the screening model which is a quantitative research method has been used to determine the opinions of fourth grade primary school teaching department students about teaching elementary literacy. The study population is comprised of candidate students studying at Ataturk University, Kazim Karabekir Education Faculty, whereas the sample is comprised of 349 students studying at Turkish teaching department. The scale consisting of sixty articles measures six learning styles. These sixty articles have been divided into sets of 10 articles such that each set contains statements designed to identify dependent, independent, participatory learning, passive, cooperative, and competitive learning styles, respectively. In the analysis of data, frequency and percentage which are descriptive statistical techniques have been used. The researches carried out show that students do not have a single learning style, may have more than one learning style at the same time, and one of them is the dominant learning style (C) 2011 Published by Elsevier Ltd. Selection and/or peer-review under responsibility of Prof. Huseyin Uzunboylu.

Ultanir, E., Ultanir, Y. G., & Temel, G. O. (2012). The Examination of University Students' Learning Styles by Means of Felder-Silverman Index. *Egitim Ve Bilim-Education and Science*, 37(163), 29-42.

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Unger, J. M., Rauch, A., Frese, M., & Rosenbusch, N. (2011). Human capital and entrepreneurial success: A meta-analytical review. *Journal of Business Venturing*, 26(3), 341-358. doi: 10.1016/j.jbusvent.2009.09.004

The study meta-analytically integrates results from three decades of human capital research in entrepreneurship. Based on 70 independent samples (N = 24,733), we found a significant but small relationship between human capital and success ( $r(c) = .098$ ). We examined theoretically derived moderators of this relationship referring to conceptualizations of human capital, to context, and to measurement of success. The relationship was higher for outcomes of human capital investments (knowledge/skills) than for human capital investments



(education/experience), for human capital with high task-relatedness compared to low task-relatedness, for young businesses compared to old businesses, and for the dependent variable size compared to growth or profitability. Findings are relevant for practitioners (lenders, policy makers, educators) and for future research. Our findings show that future research should pursue moderator approaches to study the effects of human capital on success. Further, human capital is most important if it is task-related and if it consists of outcomes of human capital investments rather than human capital investments; this suggests that research should overcome a static view of human capital and should rather investigate the processes of learning, knowledge acquisition, and the transfer of knowledge to entrepreneurial tasks.

Uysal, N. M. (2011). *An experimental study on the effects of reading strategies based on learning styles on reading comprehension*. MA Thesis. Institute of educational sciences Abant Izzet Baysal University.\*

This thesis aims to identify the effects of reading strategies instruction based on learning styles on reading comprehension of students. A total of 52 students participated in the study. There was an experiment and a control group in the study. There were 26 students in each group. Reading strategy instruction included teaching and practicing two cognitive language learning strategies that help to improve reading comprehension; note-taking and summarizing. The design of the courses was based on learning styles and courses were designed in the light of the 4MAT Model. Therefore, at the beginning of the study, participants in the experiment group were asked to complete Kolb's Learning Style Inventory (Version 3.1, 2005). The results of the inventory revealed learning style preferences of the learners in the experiment group. According to the results of the survey, there were 17 "assimilating" style learners, 4 "accommodating" style learners, 2 "converging" style learners whereas just one "diverging" style learner in the experiment group.

Before reading strategies instruction was given, participants in the experiment group and the control group were asked to take a test consisting of different reading texts and questions concerning note-taking strategy. The test also included questions

assessing the use of graphic organizers as note-taking devices. The results of the test showed there was no statistically significant difference between the experiment and the control group at the beginning. Thereafter, note-taking strategy instruction was given to the participants in the experiment group. Meanwhile learners in the control group were taught reading through conventional method without the inclusion of strategy instruction based on learning styles. Following instruction procedure, the same test was administered to the experiment and the control group. The results of the post-test indicated that there was statistically significant difference between the experiment and the control group.

Before summarizing strategy instruction, a test consisting of a reading passage to be summarized was given to the participants in the experiment and the control group. The results of the test showed there was not statistically significant difference between the experiment and the control group. After that, participants in the experiment group were given summarizing strategy instruction based on their identified learning styles while participants in the control group were taught reading through conventional methods. Afterwards, the same test was administered to see the differences between the experiment and the control group and the statistical analysis of the test results showed that there was statistically significant difference between the two groups. Thus, the results of the analysis revealed that reading strategies instruction based on learning styles was effective in terms of increasing comprehension of reading texts and improving reading skill of students.

## V

Vachon, B., & LeBlanc, J. (2011). Effectiveness of past and current critical incident analysis on reflective learning and practice change. *Medical Education*, 45(9), 894-904. doi: 10.1111/j.1365-2923.2011.04042.x

**OBJECTIVES** Critical incident analysis (CIA) is one of the strategies frequently used to facilitate reflective learning. It involves the thorough description and analysis of an authentic and experienced event within its specific context. However, CIA has also been described as having the potential to expose vulnerabilities, threaten learners' coping mechanisms and increase rather than reduce their anxiety levels. The aim of this study was to compare the analysis of current critical incidents with that of past critical incidents, and to further explore why and how the former is more conducive to reflective learning and practice change than the latter. **METHODS** A collaborative research study was conducted. Eight occupational therapists were recruited to participate in a reflective learning

group that convened for 12 meetings held over a 15-month period. The group facilitator planned and adapted the learning strategies to be used to promote reflective learning and guided the group process. Critical incident analysis represented the main activity carried out in the group discussions. The data collected were analysed using the grounded theory method. RESULTS Three phenomena were found to differentiate between the learning contexts created by the analysis of, respectively, past and current critical incidents: attitudinal disposition; legitimacy of purpose, and the availability of opportunities for experimentation. Analysis of current clinical events was found to improve participants' motivation to self-evaluate, to increase their self-efficacy, and to help them transfer learning into action and to progressively self-regulate.

CONCLUSIONS The results of this collaborative research study suggest that the analysis of current clinical events in order to promote reflection offers a safer and more constructive learning environment than does the analysis of incidents that have occurred in the past. This learning strategy is directly grounded in health professional practice. The remaining challenge for continuing education providers is that of creating conditions conducive to its use.

Valaski, J., Malucelli, A., & Reinehr, S. (2012). Ontologies application in organizational learning: A literature review. *Expert Systems with Applications*, 39(8), 7555-7561. doi: 10.1016/j.eswa.2012.01.075

Although ontologies and organizational learning are issues that have been discussed for many years, there is not an approach on literature that gives an overview about how both issues have been applied together. This literature review has the objective of exploring how ontologies are being applied in the organizational learning process recently: as a consequence, only studies from the year of 2005 onwards have been searched. The identification process produced 353 papers from 11 different databases. After applying the exclusion criteria, the set was reduced to 11 papers, which clearly fitted to the criteria defined for accomplishment of the systematic review, which were then analyzed and classified. The papers have been classified according to the structure and level of the ontologies. Furthermore, the Information Technology (IT) used in conjunction with ontology was identified, as well as the way ontologies and IT can act as a means of facilitating the organizational learning process. It was observed that although ontologies are rather important, a very few number of researches have applied ontologies in the organizational learning processes. In a general way, ontologies and IT encourage the sharing of knowledge and formalization. (C) 2012 Elsevier Ltd. All rights reserved.

van Doorn, K., McManus, F., & Yiend, J. (2012). An analysis of matching cognitive-behavior therapy techniques to learning styles. *Journal of Behavior Therapy and Experimental Psychiatry*, 43(4), 1039-1044. doi: 10.1016/j.jbtep.2012.05.001 \*

Background and objectives: To optimize the effectiveness of cognitive-behavior therapy (CBT) for each individual patient, it is important to discern whether different intervention techniques may be differentially effective. One factor influencing the differential effectiveness of CBT intervention techniques may be

the patient's preferred learning style, and whether this is 'matched' to the intervention. Method: The current study uses a retrospective analysis to examine whether the impact of two common CBT interventions (thought records and behavioral experiments) is greater when the intervention is either matched or mismatched to the individual's learning style. Results: Results from this study give some indication that greater belief change is achieved when the intervention technique is matched to participants' learning style, than when intervention techniques are mismatched to learning style. Limitations: Conclusions are limited by the retrospective nature of the analysis and the limited dose of the intervention in non-clinical participants. Conclusions: Results suggest that further investigation of the impact of matching the patient's learning style to CBT intervention techniques is warranted, using clinical samples with higher dose interventions. (c) 2012 Elsevier Ltd. All rights reserved.

van Paassen, A., de Ridder, N., & Stroosnijder, L. (2011). Role of an explorative model for learning about sustainable agricultural development in Burkina Faso. *International Journal of Agricultural Sustainability*, 9(2), 310-321. doi: 10.1080/14735903.2011.582360

Agricultural development is complex, highly dynamic and differs among varying contexts. Decision-making for sustainable agricultural development cannot be based on generalized science-based knowledge, but should include context-specific knowledge and values of local stakeholders. Computer models seem a useful tool to integrate scientific knowledge include local-specific data, and explore local-specific solutions. In this paper we study whether and how a multiple goal linear program (MGLP) model could enhance learning for sustainable development. According to the learning theory, multi-actor learning is only productive when it consists of first-order (experiential) learning and second-order (social) learning. We applied an action-research approach and explored the value of an MGLP model SHARES (SHARED RESOURCES) for learning by agricultural extension staff and farmers in an integrated rural development project in Burkina Faso. Fieldwork showed the main value of SHARES in the capacity to generate farm scenarios and trigger second-order learning about tacit frames-of-reference. People rarely engage in second-order learning, but pursue different objectives and often remain trapped in confusing discussions and action. SHARES was a critical boundary-spanning object that facilitated communication between farmers and agricultural staff, enhanced mutual understanding, and the determination of area- and category-specific farm development goals.

van Rijssen, H. J., Schellart, A. J. M., Anema, J. R., de Boer, W. E. L., & van der Beek, A. J. (2011). Systematic development of a communication skills training course for physicians performing work disability assessments: from evidence to practice. *Bmc Medical Education*, 11. doi: 10.1186/1472-6920-11-28

Background: Physicians require specific communication skills, because the face-to-face contact with their patients is an important source of information. Although physicians who perform work disability assessments attend some communication-related training courses during their professional education, no specialised and

evidence-based communication skills training course is available for them. Therefore, the objectives of this study were: 1) to systematically develop a training course aimed at improving the communication skills of physicians during work disability assessment interviews with disability claimants, and 2) to plan an evaluation of the training course. Methods: A physician-tailored communication skills training course was developed, according to the six steps of the Intervention Mapping protocol. Data were collected from questionnaire studies among physicians and claimants, a focus group study among physicians, a systematic review of the literature, and meetings with various experts. Determinants and performance objectives were formulated. A concept version of the training course was discussed with several experts before the final training course programme was established. The evaluation plan was developed by consulting experts, social insurance physicians, researchers, and policy-makers, and discussing with them the options for evaluation. Results: A two-day post-graduate communication skills training course was developed, aimed at improving professional communication during work disability assessment interviews. Special focus was on active teaching strategies, such as practising the skills in role-play. An adoption and implementation plan was formulated, in which the infrastructure of the educational department of the institute that employs the physicians was utilised. Improvement in the skills and knowledge of the physicians who will participate in the training course will be evaluated in a randomised controlled trial. Conclusions: The feasibility and practical relevance of the communication skills training course that was developed seem promising. Such a course may be relevant for physicians in many countries who perform work disability assessments. The development of the first training course of this type represents an important advancement in this field.

Varela, D., Malik, M. U., Laeeq, K., Pandian, V., Brown, D. J., Weatherly, R. A., . . . Bhatti, N. I. (2011). Learning Styles in Otolaryngology Fellowships. *Laryngoscope*, 121(12), 2548-2552. doi: 10.1002/lary.21898

Objectives/Hypothesis: Previous studies have identified a predominant learning style in trainees from different specialties, more recently in otolaryngology residents. The purpose of our study was to determine a predominant learning style within otolaryngology fellowships and to identify any differences between otolaryngology fellows and residents. Study Design: We conducted a survey of otolaryngology fellows at 25 otolaryngology fellowship programs accredited by the Accreditation Council for Graduate Medical Education. Methods: We emailed Kolb's Learning Style Index version 3.1 to 16 pediatric otolaryngology (PO) and 24 otology/neurotology (ON) fellows. This index is a widely used 12-item questionnaire. The participants answered each item in the questionnaire as it applied to their preferred learning style: accommodating, converging, diverging, or assimilating. Results were then analyzed and compared between each subspecialty and the previously reported preferred styles of otolaryngology residents. Results: Ten PO and 20 ON fellows completed the survey, with an overall response rate of 75%. PO and ON fellows (60% of each group) preferred a learning style that was "balanced" across all four styles. For ON fellows, 35%

preferred converging and 5% preferred accommodating styles. For PO fellows, converging and accommodating styles accounted for 20% each. Conclusions: It was previously reported that 74.4% of otolaryngology residents prefer either converging or accommodating styles. We believe that the fellowship training environment calls for fellows to use more than one learning style to become proficient physicians, hence the trend toward potentially developing a balanced style when at this level.

Vermunt, J. D. & Endedijk, M. D. (2011). Patterns in teacher learning in different phases of the professional career. *Learning and Individual Differences* 21(3): 294-302

This paper reviews recent research on learning patterns of student teachers and experienced teachers, mostly in the context of educational innovation and teachers' professional development. The discussion is structured along a model of teacher learning patterns comprising learning activities, regulation of learning, beliefs on own learning about teaching, motivations to learn about teaching, learning outcomes, and personal and contextual factors. A learning pattern is conceived as a coherent whole of learning activities that learners usually employ, their beliefs about own learning and their learning motivation; a whole that is characteristic of them in a certain period. Patterns in teacher learning across studies are identified and problematic aspects of teacher learning are discussed. It is concluded that teachers differ in the learning patterns they adopt, and that these patterns differ with regard to the quality of teacher learning and professional development in the context of adaptation to educational change and innovations. Implications for fostering teacher learning are derived.

Vervoort, J. M., Kok, K., Beers, P. J., Van Lammeren, R., & Janssen, R. (2012). Combining analytic and experiential communication in participatory scenario development. *Landscape and Urban Planning*, 107(3), 203-213. doi: 10.1016/j.landurbplan.2012.06.011

This paper explores the need to combine analytic understanding and experiential engagement in communication on social-ecological systems futures. Humans use two distinct mental modes to deal with salient information: analytic processing and experiential processing. Tools combining both modes of processing can help societal actors seeking to stimulate active and informed environmental governance to facilitate both understanding of and engagement with social-ecological systems. In this paper, we combine two tools, each geared to one mode of communication. The System Perspectives Scope is a tool aimed at eliciting and sharing analytic perspectives on social-ecological systems change.

ScenarioCommunities facilitates the communication of perspectives on the future in an engaging experiential mode. We applied these two tools in two scenario workshops in Oxfordshire. Each workshop featured the tools in a different order to compare the effects across tools. The System Perspectives Scope was able to elicit participants' analytic perspectives and let them reflect on the systems they described. ScenarioCommunities communicated animated scenario storyline segments in a vivid and engaging experiential mode. This stimulated participants to create individual, experiential perspectives on the scenarios. The workshop that

started with experiential engagement yielded reinforcing effects of the first tool on the second. This study shows that analytic and experiential communication can be used to generate both understanding of and engagement with social-ecological systems change. The study also indicates that the social-ecological systems frame used to develop these tools entails that they offer complementary advantages when compared to tools used in participatory landscape ecology and participatory modeling.

Vincent, C. V., Wilkie, D. J., & Wang, E. (2011). Pediatric Nurses' Beliefs and Pain Management Practices: An Intervention Pilot. *Western Journal of Nursing Research*, 33(6), 825-845. doi: 10.1177/0193945910391681

We evaluated feasibility of the Internet-based Relieve Children's Pain (RCP) protocol to improve nurses' management of children's pain. RCP is an interactive, content-focused, and Kolb's experiential learning theory-based intervention. Using a one-group, pretest-posttest design, we evaluated feasibility of RCP and pretest-posttest difference in scores for nurses' beliefs, and simulated and actual pain management practices. Twenty-four RNs completed an Internet-based Pain Beliefs and Practices Questionnaire (PBPQ,  $\alpha = .83$ ) before and after they completed the RCP and an Acceptability Scale afterward. Mean total PBPQ scores significantly improved from pretest to posttest as did simulated practice scores. After RCP in actual hospital practice, nurses administered significantly more ibuprofen and ketorolac and children's pain intensity significantly decreased. Findings showed strong evidence for the feasibility of RCP and study procedures and significant improvement in nurses' beliefs and pain management practices. The 2-hr RCP program is promising and warrants replication with an attention control group and a larger sample.

Vermunt, J. D., & Endedijk, M. D. (2011). Patterns in teacher learning in different phases of the professional career. *Learning and Individual Differences*, 21(3), 294-302. doi: 10.1016/j.lindif.2010.11.019\*

This paper reviews recent research on learning patterns of student teachers and experienced teachers, mostly in the context of educational innovation and teachers' professional development. The discussion is structured along a model of teacher learning patterns comprising learning activities, regulation of learning, beliefs on own learning about teaching, motivations to learn about teaching, learning outcomes, and personal and contextual factors. A learning pattern is conceived as a coherent whole of learning activities that learners usually employ, their beliefs about own learning and their learning motivation; a whole that is characteristic of them in a certain period. Patterns in teacher learning across studies are identified and problematic aspects of teacher learning are discussed. It is concluded that teachers differ in the learning patterns they adopt, and that these patterns differ with regard to the quality of teacher learning and professional development in the context of adaptation to educational change and innovations. Implications for fostering teacher learning are derived.

von Wittich, D., & Antonakis, J. (2011). The KAI cognitive style inventory: Was it personality all along? *Personality and Individual Differences*, 50(7), 1044-1049. doi: 10.1016/j.paid.2011.01.022

Kirton's Adaption-Innovation Inventory (KAI) is a widely-used measure of "cognitive style." Surprisingly, there is very little research investigating the discriminant and incremental validity of the KAI. In two studies ( $n = 213$ ), we examined whether (a) we could predict KAI scores with the "big five" personality dimensions and (b) the KAI scores predicted leadership behavior when controlling for personality and ability. Correcting for measurement error, we found that KAI scores were predicted mostly by personality and gender (multiple  $R = 0.82$ ). KAI scores did not predict variance in leadership while controlling for established predictors. Our findings add to recent literature that questions the uniqueness and utility of cognitive style or similar "style" constructs; researchers using such measures must control for the big five factors and correct for measurement error to avoid confounded interpretations. (C) 2011 Elsevier Ltd. All rights reserved.

## W

Wallace, C. S. (2012). Authoritarian science curriculum standards as barriers to teaching and learning: An interpretation of personal experience. *Science Education*, 96(2), 291-310. doi: 10.1002/sce.20470

This is a critical time for the science education community as we embark on the creation and implementation of new national science standards. The purpose of this essay is to offer insight into how the language of curriculum standards, including that found in state science standards in the United States over the past 15 years, has posed barriers to meaningful science teaching and learning. I synthesize research from educational policy, science education, curriculum theory, critical inquiry, and my own experiential learning from a particular case in the state of Georgia to analyze the effects of authoritarian standards language on science classroom teaching. I argue that curriculum standards based on a content and product model of education (A. V. Kelly, 1999), have been incongruent with research from cognitive psychology, science identity formation, language use, and science as inquiry. The final portion of the essay considers how a process-oriented set of curriculum standards, for example that found in New Zealand, could provide a more empowering epistemological foundation for classroom teaching. (C) 2011 Wiley Periodicals, Inc. Sci Ed 96:291310, 2012

Walter, S. G., & Dohse, D. (2012). Why mode and regional context matter for entrepreneurship education. *Entrepreneurship and Regional Development*, 24(9-10), 807-835. doi: 10.1080/08985626.2012.721009

This study examines how modes of entrepreneurship education (active, such as business simulations, versus reflective, such as theory lectures) alone and in interaction with the universities' regional context - affect students' self-employment intentions. Results from a cross-level analysis show that active modes are, irrespective of the regional context, positively related with intentions



and attitudes towards entrepreneurship, whereas the effect of reflective modes is contingent on the regional context. The findings have important implications for the ongoing discussion on the teachability of entrepreneurship, the design of educational programmes and for future research.

Walton, G., & Hepworth, M. (2011). A longitudinal study of changes in learners' cognitive states during and following an information literacy teaching intervention.

*Journal of Documentation*, 67(3), 449-479. doi: 10.1108/00220411111124541

Purpose - This paper seeks to identify the changes in cognition associated with becoming information-literate, specifically, in relation to the evaluation of information. Additionally, it puts forward a model for a teaching and learning intervention that engages the learner and leads to higher order information literacy (IL) thinking. From a theoretical perspective the research integrates ideas from the fields of IL, teaching and learning, e-learning and information behaviour (IB).

Design/methodology/approach - Three interventions were designed to develop the information literacies of first-year undergraduates studying Sport and Exercise at Staffordshire University, to teach and test IL. Interventions took a blended approach and combined face-to-face and online social network learning (OSNL) - also referred to as social media learning (SML) - and focused on one aspect of information literacy: the ability to evaluate source material. Data were captured via interviews, focus groups and from the online discussion that was analysed thematically and categorised using task, behaviour, cognitive states, affective states, cognitive states and knowledge. This helped to evaluate the efficacy of the interventions and provided data for further analysis. This paper focuses on the cognitive data and their transitions during the interventions and, in particular, among those respondents who experienced OSNL.

Findings - The changing cognitive states, associated with IL learning were modelled and made evident key cognitive states and transitions. This is represented in the paper in diagrammatic and mathematical notation. The findings indicate the complexity of the information behaviours associated with IL including the cognitive, behavioural, cognitive and affective elements. Although the cognitive transitions are the focus of this paper, an insight is also given into an IL intervention that fosters the capability to interact critically and reflectively with information. The pedagogy that underpins these changes is indicated. The intervention, which incorporated OSNL, proved the most successful. Research limitations/implications -

Undergraduate students' IB can be changed and IL developed. Additional long-term data would have indicated whether this intervention had a lasting impact on the undergraduates. Practical implications - IL practitioners should consider incorporating OSNL and assessment in their interventions. Incorporating discussion, reflection and peer-to-peer assessment is likely to lead to deeper learning when teaching IL. Originality/value - The research adds detail to the understanding of the cognitive, behavioural, affective and cognitive states associated with IL and makes explicit how these may change, as the learner becomes information-literate.

Wang, E. E. (2011). Simulation and Adult Learning. *Dm Disease-a-Month*, 57(11), 664-678. doi: 10.1016/j.disamonth.2011.08.017\*

Wang, T. J. (2011). Designing for Designing: Information and Communication Technologies (ICTs) and Professional Education. *International Journal of Art & Design Education*, 30(2), 188-199.

Information and Communication Technologies (ICTs) appear to be well fitted to the education of design professionals, such as architectural and engineering students, mainly because of the unique culture of these professional schools, where the emphasis is on creativity, collaboration, social relevance and rapid communication of ideas. Attention is focused on the reflection-in-action theory of Donald Schon as well as the educational paradigm of constructivism as it is articulated by Dewey and Vygotsky. It is also argued that the full implementation of ICTs for professional education would also be extremely beneficial to the development of professional collegiality beyond the borders of geography and culture. All of this is followed by a consideration of important criticisms brought to bear upon both the use of ICTs in the classroom and the commonly held assumption that constructivism is the optimal educational paradigm.

Weber, R. A., & Armstrong, E. G. (2012). Teaching Plastic Surgeons How to Be Better Teachers. *Plastic and Reconstructive Surgery*, 129(5), 1191-1197. doi: 10.1097/PRS.0b013e318252f19d\*

The purpose of this article is to introduce plastic surgeons to a theory of adult education. Most surgeons have been hired by their parent institution because of their clinical skills, and rightly so. At the same time, these same surgeons choose or are expected to be involved to varying degrees in the surgical education process with medical students, surgical residents, fellows, and allied health workers. Likewise, busy surgical residents are also expected to teach other residents and students, and yet these two groups of teachers of surgery have little or no training in the theory and practice of adult education. This article has four major sections. The first is a scenario designed to bring to mind a context and set of ideas with which the reader is already familiar. The second provides new information, Kolb's theory of adult learning and Arseneau and Rodenberg's teaching principles, and discusses their implications. The third section is designed to give the reader an opportunity to work with the new knowledge and practice possible applications, and the fourth encourages the reader to use the new knowledge in concrete ways in a real-world environment.

Wehbe-Janek, H., Lenzmeier, C. R., Ogden, P. E., Lambden, M. P., Sanford, P., Herrick, J., . . . Colbert, C. Y. (2012). Nurses' Perceptions of Simulation-Based Interprofessional Training Program for Rapid Response and Code Blue Events. *Journal of Nursing Care Quality*, 27(1), 43-50. doi: 10.1097/NCQ.0b013e3182303c95

Following completion of an interprofessional simulation program for rapid response and code blue events, we explored hospital unit nurses' perspectives of the training, through a mixed-methods analysis. The results of this study advocate for the use of simulation training in preparing nurses and promoting

communication among team members, effective teamwork, and early recognition of clinically deteriorating patients. This study provides support for the implementation and continued use of simulation interprofessional programs in hospital settings.

Wehner, A. K., Gump, A. W., & Downey, S. (2011). The effects of Second Life on the motivation of undergraduate students learning a foreign language. *Computer Assisted Language Learning*, 24(3), 277-289. doi: 10.1080/09588221.2010.551757

Virtual worlds are an emerging technology in computer-assisted learning. Due to the novelty of these new learning spaces, little research has been done on the use or the effects on students learning foreign languages. This research looks at how the use of the virtual world Second Life affects the motivation of students in an undergraduate Spanish course. Comparisons were made on responses to an attitude/motivation test battery completed by students enrolled in two sections of a beginning level undergraduate Spanish course. One section utilized Second Life as part of its instruction while the other section participated in traditional curriculum. Results demonstrate that virtual worlds could be a valuable resource to lower student anxiety and increase their motivation to learn a foreign language.

Wei, C. W., Hung, I. C., Lee, L., & Chen, N. S. (2011). A JOYFUL CLASSROOM LEARNING SYSTEM WITH ROBOT LEARNING COMPANION FOR CHILDREN TO LEARN MATHEMATICS MULTIPLICATION. *Turkish Online Journal of Educational Technology*, 10(2), 11-23.

This research demonstrates the design of a Joyful Classroom Learning System (JCLS) with flexible, mobile and joyful features. The theoretical foundations of this research include the experiential learning theory, constructivist learning theory and joyful learning. The developed JCLS consists of the robot learning companion (RLC), sensing input device, mobile computation unit, mobile display device, wireless local network and operating software. The aim of this research is to design and evaluate the JCLS, which is implemented by using robot and RFID technologies. The developed JCLS system has been applied in real world for supporting children to learn mathematical multiplication. Both pilot experiment and formal experiment were conducted and the results showed that the JCLS can provide learners with more opportunities for hands-on exercises and deepening their impressions about the learning contents. Having many opportunities for hands-on exercises, learners can have more thinking time for knowledge construction. Using robot to design RLC can simultaneously increase learners' motivations and offer a more joyful perception to learners during the learning process. On the other hand, the JCLS can support instructors to immediately acquire the learning statuses of every learner for adjusting his/her in-class instructional strategy and giving after-school assistances.

Westera, W. (2011). On the Changing Nature of Learning Context: Anticipating the Virtual Extensions of the World. *Educational Technology & Society*, 14(2), 201-212.

Contextual learning starts from the premise that learning cannot take place in a vacuum, but should somehow be connected with real world attributes to make

sense to learners. Today, digital media tend to bring about new dimensions of context: internet connections and mobile devices enable learners to overcome restrictions of time and location, and neglect the physical boundaries and limitations of the learning environment. This calls for reconsidering contextual learning. This paper takes a theoretical stand by conceptualising the notion of learning context in the light of its virtualised extensions. It explains the historical and pedagogical backgrounds of contextual learning and reviews existing models that deal with context parameters. The paper identifies and discusses the constituting components of context for learning and it demonstrates how attributes of virtual representations affect the nature of context. The overall purpose of the paper is re-establishing the notion of contextual learning in the light of emerging digital media and making explicit the various dimensions involved.

Wildflower, L. & Irennan, D. (2011). *The handbook of knowledge-based coaching: From Theory to Practice* San Francisco, CA: John Wiley & Sons

Wilhelmsson, M., Pelling, S., Uhlin, L., Dahlgren, L. O., Faresjo, T., & Forslund, K. (2012). How to think about interprofessional competence: A metacognitive model. *Journal of Interprofessional Care*, 26(2), 85-91. doi: 10.3109/13561820.2011.644644

Different professions meet and work together in teams every day in health and social care. To identify and deliver the best quality of care for the patient, teamwork should be both professionally and interprofessionally competent. How can enhanced education prepare teamworkers to be both professionally and interprofessionally competent? To achieve interprofessional skills and design effective interprofessional curricula, there is a need for metacognitive frameworks focusing on the relationship between theories and the problem-solving process as well as the structure and content of professional competence. The aim of this article is to discuss the need for shared metacognitive structures/models as a tool for securing successful interprofessional learning and developing personal, professional and interprofessional competence to improve the quality of care. A metacognitive model for interprofessional education and practice is presented in this article. This model has been developed as a tool for analyzing professional competence on three levels: individual, team and organization. The model comprises seven basic components of professional competence and the way they are related and interact. Examples of how this metacognitive model can be used in the early, middle and late stages in interprofessional education are given.

Willems, J. (2011). Using learning styles data to inform e-learning design: A study comparing undergraduates, postgraduates and e-educators. *Australasian Journal of Educational Technology*, 27(6), 863-880.

What are the differences in learning styles between students and educators who teach and/or design their e-learning environments? Are there variations in the learning styles of students at different levels of study? How may we use this learning styles data to inform the design in e-learning environments? This paper details mixed-methods research with three cohorts teaching and learning in e-learning environments in higher education: novice undergraduate e-learners,

graduate e-learners, and educators teaching in, or designing for, e-learning environments (Willems, 2010). Quantitative findings from the Index of Learning Styles (ILS) (Felder & Silverman, 1988; Felder & Soloman, 1991, 1994) reflect an alignment of the results between both the graduate e-learner and e-educator cohorts across all four domains of the ILS, suggesting homogeneity of results between these two cohorts. By contrast, there was a statistically significant difference between the results of the graduate and educator cohorts with those of the undergraduate e-learners on two domains: sensing-intuitive ( $p=0.015$ ) and the global-sequential ( $p=0.007$ ), suggesting divergent learning style preferences. Qualitative data was also gathered to gain insights on participants' responses to their learning style results.

Williamson, P. K. (2011). The creative problem solving skills of arts and science students—The two cultures debate revisited. *Thinking Skills and Creativity* 6 (2011) 31–43\*

Research, carried out mainly in the period between the 1960s and 1980s, reported significant differences in the thinking styles of science and arts students. At this time university and school teaching was highly specialised and concern was expressed in the ongoing 'two cultures' debate (Snow, 1959). Considerable changes have taken place in the provision of education at all levels since this time, including changes in the role and culture of modern universities with a wider range of interdisciplinary degree modules; and the desire for students to keep their career options open, reflecting their uncertain employment future. In this study problem solving tests were completed by one hundred and sixteen participants recruited from a post-1992 university and equally balanced between arts and science undergraduate students. The tests covered convergent thinking, divergent thinking, preferred learning style and creative problem solving skills using examples of novel and imperfectly defined problems in the fields of management and public policy. This was followed by direct interviews with a selected sample to gain more textured insight into their contemporary educational experiences. The findings of this study were in marked contrast to earlier published results in that no differences were found in the problem solving skills of arts and science students. Differences were found in preferred learning styles but these were much smaller than reported previously. This research indicates that modern graduates are likely to have a more balanced educational profile than their specialised predecessors and examines possible causes.

Wilson, M. L. (2011). Students learning style preferences and teachers' instructional strategies, correlations between matched styles and academic achievement. Ed. D. thesis Liberty University \* VARK and brain based learning

The purpose of the current study was to identify the extent to which learning styles influence the educational process as well as the outcome of students, particularly elementary-age students, in terms of academic achievement. This study examined the potential relationship between the degree of match (as determined by comparing learning style preferences of students with instructional strategies of teachers) and the academic achievement of fourth grade students as shown by Palmetto Assessment of State Standards scores in four academic content areas, namely English language arts, mathematics, science, and social studies. The researcher collected data from a sample of approximately 200 students from three schools in different northwestern South Carolina districts. A quantitative approach utilizing a correlational design was used to analyze the data and produced Pearson  $r$  values for each content area respectively. These results demonstrate a lack of significant correlation between variables.

Wilson, P. R., Wilcock, R., McNally, I., & Swabey, M. (2010). Innovative Teaching of IC Design and Manufacture Using the Superchip Platform. *Ieee Transactions on Education*, 53(2), 297-305. doi: 10.1109/te.2009.2017271

This paper describes how intelligent chip architecture has allowed a large cohort of undergraduate (UG) students to be given effective practical insight into integrated circuit (IC) design by designing and manufacturing their own ICs. To achieve this, an efficient chip architecture, the "Superchip," was developed, which allows multiple student designs to be fabricated on a single IC, and encapsulated in a standard package without excessive cost in terms of time or resources. This paper demonstrates how the practical process has been tightly coupled with theoretical aspects of the degree course and how transferable skills are incorporated into the design exercise. Furthermore, the students are introduced at an early stage to the key concepts of teamwork, exposure to real deadlines, and collaborative report writing. This paper provides details of the teaching rationale, design exercise overview, design process, chip architecture, and test regime.

Wolf, M., & Mehl, K. (2011). Experiential Learning in Psychotherapy: Ropes Course Exposures as an Adjunct to Inpatient Treatment. *Clinical Psychology & Psychotherapy*, 18(1), 60-74. doi: 10.1002/cpp.692

Exposures to a high-ropes course are introduced as an adjunct intervention in the therapy of psychotherapy patients. A controlled study was conducted to investigate the effectiveness of high-ropes exposures as an add-on to inpatient treatment in a naturalistic setting. In a sample of 247 patients, depressive symptoms, trait anxiety, locus of control and self-efficacy were assessed at admission and discharge of treatment and at 24-month follow-up. Follow-up data

were available for 104 patients who attended the ropes courses and 53 control patients who underwent an inpatient treatment programme as usual. At the end of treatment, more high-rope participants showed clinically significant change on trait anxiety than controls but not regarding depressive symptoms. High-rope participants showed better follow-up outcomes than controls in trait anxiety and self-efficacy but not in depressive symptoms and external locus of control. Moreover, during follow-up, in the high-rope group, more patients showed reliable improvements and fewer patients showed reliable deteriorations in trait anxiety as compared with controls. The study gives a preliminary indication that the high-rope interventions are a feasible and valuable add-on to inpatient psychotherapy. The study design, sample composition and loss to follow-up are discussed as potential limitations of the study.

Wong, A. (2012). Review article: Teaching, learning, and the pursuit of excellence in anesthesia education. *Canadian Journal of Anesthesia-Journal Canadien D Anesthesie*, 59(2), 171-181. doi: 10.1007/s12630-011-9636-x

Excellence in anesthesia education has been advocated to meet the future needs and direction of the specialty. The purpose of this article is twofold: first, to review the current medical education literature and theory in order to inform teaching and learning in anesthesia; and second, to advocate for excellence in anesthesia education. This review considers the general education, educational psychology, and medical education literature based on a search of the MEDLINE and ERIC databases, educational Web sites, and library catalogues. Excellent teaching is considered that which facilitates and maximizes learning. A conceptual framework of learning as a convergence of teacher, learner, assessment, and context is proposed. The contribution of each component to learning is examined in order to enable anesthesia teachers to choose and adapt the most appropriate educational approaches for their particular contexts. The relationship of excellent teaching, scholarly teaching, and the scholarship of teaching is explored. Strategies for promoting excellence in anesthesia education are suggested. The call for excellence in anesthesia has become an important theme, particularly with respect to education. While excellent teaching is a goal to which all anesthesia faculty should aspire, scholarly teaching and scholarship in teaching should also be promoted in order to advance anesthesia education for the benefit of the profession and ultimately for patient care.

Wong, E. M., Haselhuhn, M. P., & Kray, L. J. (2012). Improving the future by considering the past: The impact of upward counterfactual reflection and implicit beliefs on negotiation performance. *Journal of Experimental Social Psychology*, 48(1), 403-406. doi: 10.1016/j.jesp.2011.07.014\*

Reflecting on previous experiences and considering how things could have been better (upward counterfactual reflection) is central to learning. While researchers have identified a number of situational antecedents to upward counterfactual generation, less is known about individual differences in counterfactual reflection. We address this gap by considering how implicit beliefs regarding the fixedness or malleability of basic characteristics influence counterfactual generation. In a

negotiation context, we show that individuals who believe that negotiation ability is changeable are more likely to consider how things could have been better following a negotiation experience compared to individuals who believe that negotiation ability is fixed. We further demonstrate the impact of upward counterfactual reflection on learning and performance: Negotiators who hold malleable beliefs are better able to discover creative agreements that benefit both parties in a negotiation, and these performance differences are mediated by upward counterfactual generation.

Wong, L. L. C., & Nunan, D. (2011). The learning styles and strategies of effective language learners. *System*, 39(2), 144-163. doi: 10.1016/j.system.2011.05.004

This paper presents the results of a comparative investigation into the learning styles and strategies of effective and ineffective language learners. Subjects for the study were one hundred and ten undergraduate university students in Hong Kong. They were categorized as 'more effective' or 'less effective' learners, on the basis of their scores on a standardized public English examination administered at the end of secondary school. Subjects completed an online questionnaire through which data were collected on their learning strategy preferences as well as patterns of language practice and use. The study revealed key differences in learning strategy preferences, learning styles and patterns of language use. Implications of the study are presented and discussed.

Woods, M., & Butler, S. (2011). 'A victim of its own success'? The Diploma in Addiction Studies at Trinity College Dublin. *Drugs-Education Prevention and Policy*, 18(4), 243-250. doi: 10.3109/09687637.2011.560912

This article reviews and reflects on the Diploma in Addiction Studies: a 1-year, full-time programme taught at the School of Social Work and Social Policy in Trinity College Dublin since the academic year 1983/1984, which has recently had its external funding withdrawn. The programme was aimed at multidisciplinary classes, including students from backgrounds in community responses to drug problems and in personal recovery from alcohol and drug problems. Drawing on its status as a university-based programme, Addiction Studies saw its function as educational rather than training, and saw itself as having particular value against the somewhat dogmatic policy and practice background of the Irish addictions scene. This article sets out the background to the programme, as well as its teaching philosophy and its attempts to deal with the issue of transfer of learning.</p>
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geography and development studies to investigate what these cross-cultural experiences add to experiential learning models and recent work on emotional geographies. We find that an understanding of the sensory and emotive is imperative if we are to encourage students to build understanding across difference and connect with diverse people, places and experiences in fundamentally new ways.

Wu, L. K., & Looi, C. K. (2012). Agent Prompts: Scaffolding for Productive Reflection in an Intelligent Learning Environment. *Educational Technology & Society*, 15(1), 339-353.\*

Recent research has emphasized the importance of reflection for students in intelligent learning environments. This study tries to investigate whether agent prompts, acting as scaffolding, can promote students' reflection when they act as tutor through teaching the agent tutee in a learning-by-teaching environment. Two types of agent prompts are contrasted in this research, both from the perspective of a tutee, and they differ in their specificity. Generic prompts are aiming at eliciting students' double-loop reflection on metacognitive strategies and beliefs. Specific prompts, on the other hand, are to encourage students' single-loop reflection on domain-related and task-specific skills and articulation of their explanatory responses. Our findings suggest that designers of intelligent learning environment should concentrate on fostering students to reflect on their metacognitive strategies and beliefs, and allow students to take responsibility for directing their own learning autonomy.

Wu, W. H., Chiou, W. B., Kao, H. Y., Hu, C. H. A., & Huang, S. H. (2012). Re-exploring game-assisted learning research: The perspective of learning theoretical bases. *Computers & Education*, 59(4), 1153-1161. doi: 10.1016/j.compedu.2012.05.003\*

Previous literature reviews or meta-analysis based studies on game-assisted learning have provided important results, but few studies have considered the importance of learning theory, and coverage of papers after 2007 is scant. This study presents a systematic review of the literature using a meta-analysis approach to provide a more comprehensive analysis and synthesis of relevant studies based on four orientations of learning theories and principles: behaviorism, cognitivism, humanism, and constructivism. Major findings of this study include that the majority of published studies were not based on learning theory and the development of learning theory orientations has prompted more studies to focus on constructivism and humanism than on behaviorism and cognitivism. In addition, most studies adopted a descriptive approach, followed by experimental methods and surveys, and most presented positive outcomes. These findings not only advance understanding of game-assisted learning from the important perspective of learning theory, but also provide useful insights for researchers and educators in issues related to game-assisted learning.

Wu, W. H., Hsiao, H. C., Wu, P. L., Lin, C. H., & Huang, S. H. (2012). Investigating the learning-theory foundations of game-based learning: a meta-analysis. *Journal of Computer Assisted Learning*, 28(3), 265-279. doi: 10.1111/j.1365-2729.2011.00437.x

Past studies on the issue of learning-theory foundations in game-based learning stressed the importance of establishing learning-theory foundation and provided an exploratory examination of established learning theories. However, we found research seldom addressed the development of the use or failure to use learning-theory foundations and categorized these learning theories into relative types and synthesized their development. We investigate this issue from the perspective of learning theories invoked to underpin educational computer game design and use based on the four types of learning theories: behaviourism, cognitivism, humanism and constructivism. Because the investigation needs to examine and analyse the results from a large number of independent previous studies, this study applied the meta-analysis method to present a more comprehensive description and discussion of the influence and implications of the findings. This study shows the distribution of development trends for the use of learning theory as a theoretical foundation, as opposed to those that fail to use learning theory in game-based learning, along with the distribution of types and principles of learning theories that used a learning-theory foundation. These new findings can supplement the results of previous studies with regard to the issue of learning-theory foundations in game-based learning. The contributions of this study for the issue of learning-theory foundations in game-based learning are discussed.

Wyckmans, A. (2011). *Environmental Learning from the Ivory Tower to the Town Square: The Case of Trondheim, Norway* (Vol. 1).

Environmental learning in architecture and planning has shifted dramatically within a few years, from being an individual choice to becoming a collective responsibility and inherent part of professional ethics. Researchers, policy makers and practitioners face the challenge of improving the built environment's resilience to climate change and resource scarcity. This chapter argues for a more pro-active contribution from academic institutions, based on collaborative experiential learning, and three crucial elements including laboratory settings for facilitating creative exploration; intensive interaction between students and teachers; critical reflection of own and other's work. Knowledge brokerage activities based on these principles can trigger better, faster and more widespread environmental learning and knowledge transfer, leading to a more resilient built environment. Using the Broset development in Trondheim, Norway as a case, this article investigates the different roles academic institutions can play in sustainable urban planning, from consulting to facilitating collective learning among actors engaged with these challenges. The Broset project consists of two parallel activities: firstly, an urban planning project led by the municipality, and secondly, an interdisciplinary research project at the Norwegian University of Science and Technology, funded by the Norwegian Research Council in cooperation with the Norwegian State Housing Bank and Trondheim Energy.

## Y

Yamazaki, Y. & Attrapreuangkul, T.(2011). Learning style differences between Japan and Thailand. *IUJ Working Paper Series: Economics and Management EMS 2011 18* International University of Japan.\*

We compared multiple aspects of learning styles between Japan and Thailand through the lens of experiential learning theory. A total of 398 participants working for Japanese multinational corporations were surveyed and examined, controlling for age, gender, work experience periods, and hierarchical management positions. Results showed that the national difference significantly impacted all learning style variables connected to the dialectical learning dimension of feeling and thinking. In their learning process, for example, Japanese employees learned more through feeling than through thinking, whereas Thai employees learned by applying the four learning modes of feeling, thinking, reflecting, and action equally. Although the learning style of Japanese employees indicated divergence as the average, an analysis of their learning style distribution revealed that accommodation was dominant. Thai employees were categorized as having an accommodating learning style that was not strongly specialized in the feeling and acting modes. Instead, the possession of balanced learning style was their distinctive characteristic. We discuss the implications of these findings.

Yang, M., Webster, B., & Prosser, M. (2011). Travelling a thousand miles: Hong Kong Chinese students' study abroad experience. *International Journal of Intercultural Relations*, 35(1), 69-78. doi: 10.1016/j.ijintrel.2010.09.010

This study focused on Chinese students' goals, experiences, and learning outcomes associated with their participation in study abroad. Data were drawn from survey responses from 214 undergraduates of a university in Hong Kong who studied or engaged in overseas internships/volunteer work in 20 countries. To explore the data, an experiential intercultural learning model was proposed. This model views study abroad as an active learning process in which study abroad goals motivate students to engage in experiences likely to enhance their intercultural, disciplinary/career, and personal competences. The findings suggested interrelatedness of students' study abroad goals, host country experiences and learning outcomes. Specifically, alignment between students' learning outcomes and study abroad goals was identified through a comparison of results from content analysis of students' perception of important things learned (an open-ended item) and the descriptive statistics on students' perception of achievement of study abroad goals. Correlation analysis identified close relationships between students' achievement of study abroad goals (i.e. personal development goals, intercultural development goals, and disciplinary/career development goals) and host country experiences (i.e. study/work experiences, intercultural experiences, and personal changes as a result of the experiences). Personal changes were correlated with intercultural experiences and with study/work experiences. The findings implied that for optimal student development via study abroad, students need to be encouraged in setting goals relating to intercultural, personal and academic/career development, and to orient actions toward such goals.

Yang, S. Y. (2011). Wisdom displayed through leadership: Exploring leadership-related wisdom. *Leadership Quarterly*, 22(4), 616-632. doi: 10.1016/j.leaqua.2011.05.004\*

Theoretical views of the role of wisdom in leadership have varied over time. While early leaders such as Christ and Confucius were perceived as wise and as great leaders, effectiveness and efficiency in promoting organizational performance and profits has become the focus of scholarly discussions of leadership in recent times. The lack of wisdom in leadership in such spheres as the global economy calls that focus into question. To address this lack, a process definition of wisdom which encompasses three components - (1) cognitive integration, (2) embodiment, and (3) positive effects - is proposed and tested against textual descriptions of wisdom in leadership contexts. The results of analyses interview transcripts of leaders nominated as wise persons indicate that: 1) incidents of wisdom involved leadership, 2) the process definition of wisdom describes the incidents of wisdom leaders reported on, and 3) leadership-related wisdom was more likely to be displayed at the societal, and at the organizational levels through fulfilling visions, solving problems, and founding organizations. The results suggest that the scope of leadership-related wisdom often goes beyond individual organizations, exerting positive effects to wider areas of society.

Yardley, S., Teunissen, P. W., & Dornan, T. (2012a). Experiential learning: AMEE guide No. 63. *Medical Teacher*, 34(2), E102-E115. doi: 10.3109/0142159x.2012.650741 \*

This Guide provides an overview of educational theory relevant to learning from experience. It considers experience gained in clinical workplaces from early medical student days through qualification to continuing professional development. Three key assumptions underpin the Guide: learning is 'situated'; it can be viewed either as an individual or a collective process; and the learning relevant to this Guide is triggered by authentic practice-based experiences. We first provide an overview of the guiding principles of experiential learning and significant historical contributions to its development as a theoretical perspective. We then discuss socio-cultural perspectives on experiential learning, highlighting their key tenets and drawing together common threads between theories. The second part of the Guide provides examples of learning from experience in practice to show how theoretical stances apply to clinical workplaces. Early experience, student clerkships and residency training are discussed in turn. We end with a summary of the current state of understanding.

Yardley, S., Teunissen, P. W., & Dornan, T. (2012b). Experiential learning: Transforming theory into practice. *Medical Teacher*, 34(2), 161-164. doi: 10.3109/0142159x.2012.643264 \*

Whilst much is debated about the importance of experiential learning in curriculum development, the concept only becomes effective if it is applied in an appropriate way. We believe that this effectiveness is directly related to a sound understanding of the theory, supporting the learning. The purpose of this article is to introduce readers to the theories underpinning experiential learning, which are then expanded further in an AMEE Guide, which considers the theoretical basis of experiential learning from a social learning, constructionist perspective and

applies it to three stages of medical education: early workplace experience, clerkships and residency. This article argues for the importance and relevance of experiential learning and addresses questions that are commonly asked about it. First, we answer the questions 'what is experiential learning?' and 'how does it relate to social learning theory?' to orientate readers to the principles on which our arguments are based. Then, we consider why those ideas (theories) are relevant to educators - ranging from those with responsibilities for curriculum design to 'hands-on' teachers and workplace supervisors. The remainder of this article discusses how experiential learning theories and a socio-cultural perspective can be applied in practice. We hope that this will give readers a taste for our more detailed AMEE Guide and the further reading recommended at the end of it.

Yen, J. C., Lee, C. Y., & Chen, I. J. (2012). The effects of image-based concept mapping on the learning outcomes and cognitive processes of mobile learners. *British Journal of Educational Technology*, 43(2), 307-320. doi: 10.1111/j.1467-8535.2011.01189.x

The purpose of this study was to investigate the effects of different teaching strategies (text-based concept mapping vs. image-based concept mapping) on the learning outcomes and cognitive processes of mobile learners. Eighty-six college freshmen enrolled in the Local Area Network Planning and Implementation course taught by the first author participated in the research. This study randomly selected one class as the experimental group and the other as the control group. Students in the experimental group used image-based concept mapping to finish assigned tasks and those in the control group used text-based concept mapping to complete the same tasks. Quantitative analysis combined with qualitative analysis was used to examine the learning outcomes and cognitive levels of the students, as defined by the revised Bloom's taxonomy. The results showed that (1) there was no significant difference in students' learning achievements, (2) the group using image-based concept mapping showed higher level than the text-based group in the dimension of understanding and creating and (3) the image-based concept mapping strategy was more complete and diverse than the text-based concept mapping strategy.

Yilmaz, A., & Ozgur, S. D. (2012). THE EFFECT OF GENERATIVE MULTIMEDIA LEARNING ENVIRONMENT ON TEACHER CANDIDATES' ACHIEVEMENT, ATTITUDE AND RETENTION ACCORDING TO THEIR LEARNING STYLES. *Hacettepe Universitesi Egitim Fakultesi Dergisi-Hacettepe University Journal of Education*(42), 441-452.

In the study, it was aimed to examine the effect of the designed generative multimedia learning environment on achievement, attitude and retention according to teacher candidates' learning styles. The one group pretest-posttest design was used in the study. 31 teacher candidates, who were studying in Hacettepe University, Faculty of Education, and Department of Chemistry Education during 2010 - 2011 academic year's fall term, were included in the study. Kolb Learning Styles' Inventory, Achievement Test about Chemical Bonds and Chemistry Attitude Scale were used in the study as a data collection tool. It was found as a result of the study that multimedia learning environment

applications caused a statistically significant increase in achievement and attitude scores of the chemistry teacher candidates and retention of learning. However, any statistically significant difference was not observed in the teacher candidates' achievement, attitude and retention according to their learning styles.

Yolles, M., Fink, G., & Dauber, D. (2011). Understanding Normative Personality. *Cybernetics and Systems*, 42(6), 447-480. doi: 10.1080/01969722.2011.600663

Organization theory has not demonstrated that it is able to adequately represent organizational complexity, especially in its inability to recognize and predict organizational conduct/misconduct. A promising approach comes from organizational culture theory, which is used in order to create a new model for normative personality that is seated in the strategic part of the organization. This takes the idea of corporate personality beyond its more usual metaphorical use. The theory of normative personality is developed by using a cybernetic frame of reference, drawing on socio-cognitive and trait theory. As a compact way of connecting traits into the model, mindscape theory is adopted. The outcome of this approach illustrates the control processes through which an organization operates and will have the capacity of not only identifying patterns of behavior/operative conduct but also misconduct.

## Z

Zawadzki, M. J., Danube, C. L., & Shields, S. A. (2012). How to Talk about Gender Inequity in the Workplace: Using WAGES as an Experiential Learning Tool to Reduce Reactance and Promote Self-Efficacy. *Sex Roles*, 67(11-12), 605-616. doi: 10.1007/s11199-012-0181-z\*

Interventions aimed at raising awareness of gender inequity in the workplace provide information about sexism, which can elicit reactance or fail to promote self-efficacy. We examined the effectiveness of experiential learning using the Workshop Activity for Gender Equity Simulation - Academic version (WAGES-Academic) to deliver gender inequity information. To assess whether the way gender inequity information is presented matters, we compared WAGES-Academic to an Information Only condition (knowledge without experiential learning) and a Group Activity control condition. We predicted that only the information presented in an experiential learning format (i.e., WAGES-Academic) would be retained because this information does not provoke reactance and instills self-efficacy. Participants (n = 241; U.S. college students from a large mid-Atlantic state university) filled out a gender equity knowledge test at baseline, after the intervention, and then 7-11 days later (to assess knowledge retention). In addition, we measured feelings of reactance and self-efficacy after the intervention. Results revealed that participants in the WAGES condition retained more knowledge than the other conditions. Furthermore, the effect of WAGES vs. Information Only on knowledge was mediated by WAGES producing less reactance and greater feelings of

self-efficacy. Results suggest that experiential learning is a powerful intervention to deliver knowledge about gender equity in a non-threatening, lasting way.

Zemliansky, P. (2012). Achieving Experiential Cross-cultural Training Through a Virtual Teams Project Teaching Case. *Ieee Transactions on Professional Communication*, 55(3), 275-286. doi: 10.1109/tpc.2012.2206191

Research questions: How can our current knowledge of experiential learning be applied to cross-cultural web-based training? How do postproject interviews with the participants advance our knowledge about experiential learning? What practical recommendations for teachers and trainers can be offered based on this and similar case studies? Situating the case: Literature on virtual teams stipulates the importance of teaching leadership development within teams, including methods of conflict resolution, and flexibility in methods and tools of communication. Literature on experiential learning places a high value on learner experience, and on indirect and combined methods of assessing experiential learning projects. Methodology: The case was studied through the analysis of data obtained from unstructured class interviews with three of the US-based participants of the teaching project. Interview participants were chosen to ensure a variety of responses about their experiences while taking part in the project. About the case: The project was a part of an introductory graduate-level seminar in technical and scientific communication. Graduate students in technical communication from the US and graduate students in marketing from Ukraine participated in the project. The participants worked in virtual teams to create collaborative analyses of localized versions of websites of transnational corporations. The findings of this research are as follows. (1) Virtual teams work more effectively when given time to build trust and connections among participants. (2) Virtual teams work more effectively when time is devoted to the development of leaders and the articulation of leadership responsibilities within teams. (3) Experiential learning team participants use a variety of communication tools depending on the nature of the communicative task at hand. (4) As part of the learning process, virtual team members recognized and attempted to adjust to cultural and professional discourse differences between countries and professional fields.

Ziamou, P., Gould, S., & Venkatesh, A. (2012). "Am I Getting It or Not?" The Practices Involved in "Trying to Consume" a New Technology. *Journal of Product Innovation Management*, 29(2), 216-228. doi: 10.1111/j.1540-5885.2011.00891.x

Zacharis, N. Z. (2011). The effect of learning style on preference for web-based courses and learning outcomes. *British Journal of Educational Technology*, 42(5), 790-800. doi: 10.1111/j.1467-8535.2010.01104.x

As the number of courses offered online increases rapidly, it is important for teachers and institutions to identify specific learner characteristics of successful online students. This paper reports on a study that compared an online group of freshmen computer science majors with an equivalent on-campus group to find if their individual learning styles play a role in the selection of course delivery mode

(online or face to face) and in their academic achievement. No significant statistical differences were detected in learning styles and learning performance between the two groups. Implications for teaching practice and design of learning activities that resulted from this study are discussed.

Zhang, Y., Zhang, H. F. & Wang, Y. J. (2011). Kolb's Experiential Learning Theory and Common Skills Development: The Case of Hebei University of Technology. In HU, J. (Ed.) *Education and Education Management, Vol I* 114-118 ISBN 2160-1070 978-0-9831693-6-9

The purpose of this article is to present a description of a project in the School of Foreign Languages at Hebei University of Technology, where Kolb's experiential learning theory was applied to routine teaching activities in order to develop students' common skills. A qualitative case study method was employed. Data collection methods were observation, reflective journals, and field notes. We conclude with implications related to the feasibility of establishing a career development center for students majoring in foreign languages.

Zhao, L. J. (2011). An Applied Study for Implementing "Three-Dimensional Experience English" Mode in Secondary School *2011 International Conference on Education Science and Management Engineering* 2191-2195

According to the requirement of National Education Reform and Development of Long-term Planning Programs(2010-2020), the social function of secondary school is to develop students' personality, which enhances the importance of emotion, attitude and values in curriculum education. To fulfill the goal of NERDLPP, this study aims at implementing "Three-Dimensional Experience English" Mode in secondary school. This study selects two senior middle schools of Hebei Province as the object of study. Based on the Pyramid Theory and the Experiential Theory, adopting Action Research method, this study firstly tries to investigate how to make students experience the procedure of acquiring knowledge; experience the emotion of the people in literary works; experience the making of Self-values. Secondly, the study aims at setting up a new achievement evaluation system for students, and at last estimates the teacher's role in implementing the Mode.

Zhu, H. H., Guo, C. Y., Li, B. F., & Ma, S. M. (2011). The Research and Practice of Experience-based Teaching. *2011 International Conference on Future Computers in Education* ISBN 978-988-19116-6-7

The experience-based teaching, as a teaching ideology and teaching method, is different from the way of traditional teaching. It makes students own experience in learning as the major learning way, which has good effect in arousing students' inherent motivation and cultivating comprehensive quality. This article expounded the implication of experience-based teaching, investigated its theoretical basis and also made beneficial exploration in teaching practice.



Zhu, S. J., Xie, F., & Levinson, D. (2011). Enhancing Transportation Education through Online Simulation Using an Agent-Based Demand and Assignment Model. *Journal of Professional Issues in Engineering Education and Practice*, 137(1), 38-45. doi: 10.1061/(asce)ei.1943-5541.0000038

This research explores the effectiveness of using simulation as a tool for enhancing classroom learning in the Civil Engineering Department of the University of Minnesota at Twin Cities. The authors developed a modern transportation planning software package, Agent-Based Demand and Assignment Model (ADAM), that is consistent with our present understanding of travel behavior, that is platform independent, and that is easy to learn and is thus usable by students. An in-class project incorporated ADAM and the performance of this education strategy was evaluated through preclass survey, postclass survey, scores in the quiz focusing on travel demand modeling, and final scores. Results showed that ADAM effectively enhanced students' self-reported understanding of transportation planning and their skills of forming opinions, evaluating projects, and making judgments. Students who prefer visual and active learning were found to benefit more than others through simulation-based teaching strategy. Findings in this research could have significant implications for future practice of simulation-based teaching strategy.

Zhuplev, A., & Shtykhno, D. A. (2011). *A Longitudinal Study of Small Business in Russia: Findings and Implications in Experiential Learning* (Vol. 20).

The paper explores experiential learning from a longitudinal study perspective of Russian small business. The study revealed growing demand for business education and consultant expertise. A 2009 survey ranked topics in business learning skills as well as sources of information. Experiential learning among executives of large firms, university business professors with business experience, and corporate mentors) emerged on the top as most important; university professors without practical experience were ranked low. Three skill development exercises in an international business curriculum were selected for the next stage of a Russian-U.S. comparative study in experiential learning.

Ziamou, P., Gould, S., & Venkatesh, A. (2012). "Am I Getting It or Not?" The Practices Involved in "Trying to Consume" a New Technology. *Journal of Product Innovation Management*, 29(2), 216-228. doi: 10.1111/j.1540-5885.2011.00891.x

In recent years, high rates of failure of technology-based products have spurred interest in understanding the psychological and sociological barriers to consumer learning of technological innovations. The main focus of this research was to examine the learning process and consumers coping mechanisms when they encounter technological innovations. A study was designed to understand the learning process in real time as consumers engaged in a set of activities associated with the novel interface. The goal was to investigate how consumers cope with high levels of complexity during their initial interactions with a technology-based product and how their coping strategies may hinder the learning process. Verbal protocol measures were used in order to understand the consumer's learning process as he or she interacts with a technology-based product in real time. They

were told that they would have to think aloud while performing certain tasks and that their thoughts would be recorded for further analysis. The personal digital assistant (PDA) with handwriting recognition as its interface was chosen for this study. The main task for the participants was to learn how to use Graffiti writing—i.e., the product's handwriting recognition software. We proceeded to a thematic analysis in which interpretations were generated by the researchers going back and forth between the transcribed texts, the developing interpretation, the new interface itself, and also the relevant literature. The results suggest that the new product's interface serves to structure the consumer's learning process even as he or she responds in relatively unstructured ways. The findings identify three basic factors that interfere with the learning process during consumers' initial interactions with a technological innovation: interface and functionality practices, social influence, and causal attributions. Specifically, the results suggest that in designing technology-based products there is a gap between the levels of know-how between the manufacturer and the user. The challenge for manufacturers is to understand the consumer's learning experience and coping strategies and provide mechanisms that would make the transition easy and intuitive. This could be achieved by incorporating into the new interface some degree of flexibility that will allow consumers to modify tasks based on their preferences, or by including indicators that will provide feedback to the user. Furthermore, in the context of communication strategies, in order to minimize the negative impact that prior knowledge and social influence may have on learning, marketers could communicate specific steps describing how to use the new interface.

Zigmont, J. J., Kappus, L. J., & Sudikoff, S. N. (2011a). The 3D Model of Debriefing: Defusing, Discovering, and Deepening. *Seminars in Perinatology*, 35(2), 52-58. doi: 10.1053/j.semperi.2011.01.003\*

The experiential learning process involves participation in key experiences and analysis of those experiences. In health care, these experiences can occur through high-fidelity simulation or in the actual clinical setting. The most important component of this process is the post experience analysis or debriefing. During the debriefing, individuals must reflect upon the experience, identify the mental models that led to behaviors or cognitive processes, and then build or enhance new mental models to be used in future experiences. On the basis of adult learning theory, the Kolb Experiential Learning Cycle, and the Learning Outcomes Model, we structured a framework for facilitators of debriefings entitled “the 3D Model of Debriefing: Defusing, Discovering, and Deepening.” It incorporates common phases prevalent in the debriefing literature, including description of and reactions to the experience, analysis of behaviors, and application or synthesis of new knowledge into clinical practice. It can be used to enhance learning after real or simulated events.

Zhuplev, A. & Shtykhno, D. A. (2011). A Longitudinal Study of Small Business in Russia: Findings and Implications in Experiential Learning. In Kkaynak & Harcar (Eds) *Challenges and Opportunities of Global Business in the New Millennium: Contemporary Issues and Future Trends* 20: 338-343 ISBN 978-1-888624-10-6

The paper explores experiential learning from a longitudinal study perspective of Russian small business. The study revealed growing demand for business education and consultant expertise. A 2009 survey ranked topics in business learning skills as well as sources of information. Experiential learning among executives of large firms, university business professors with business experience, and corporate mentors) emerged on the top as most important; university professors without practical experience were ranked low. Three skill development exercises in an international business curriculum were selected for the next stage of a Russian-U.S. comparative study in experiential learning.

Zigmont, J. J., Kappus, L. J., & Sudikoff, S. N. (2011b). Theoretical Foundations of Learning Through Simulation. *Seminars in Perinatology*, 35(2), 47-51. doi: 10.1053/j.semperi.2011.01.002\*

Health care simulation is a powerful educational tool to help facilitate learning for clinicians and change their practice to improve patient outcomes and safety. To promote effective life-long learning through simulation, the educator needs to consider individuals, their experiences, and their environments. Effective education of adults through simulation requires a sound understanding of both adult learning theory and experiential learning. This review article provides a framework for developing and facilitating simulation courses, founded upon empiric and theoretic research in adult and experiential learning. Specifically, this article provides a theoretic foundation for using simulation to change practice to improve patient outcomes and safety.

Zindell, M. (2012). Walking to learn: Rethinking reflection for management learning. *Management Learning* 44(2):109-126\*

This article investigates possibilities for reflection when understood from within a world that is practically experienced rather than theoretically contemplated. Based on an analysis of space and time in Descartes, it suggests that prominent conceptions of reflection in management learning remain static and lifeless. Drawing on the work of Heidegger it introduces the metaphor of 'walking around' to suggest an alternative understanding of reflection which is sensitive to the worldly immersion and finitude of being and begins to outline implications for management learning.

Zull, J. (2011). *From brain to mind: Using neuroscience to guide change in education*. Sterling VA: Stylus.

Zwolsman, S. E., van Dijk, N., Verhoeven, A. A. H., de Ruijter, W. & Wieringa-de Waard, M. (2011). How learning style affects evidence-based medicine: a survey study *Bmc Medical Education* 11 article no 81 \*

Background: Learning styles determine how people manage new information. Evidence-based medicine (EBM) involves the management of information in clinical practice. As a consequence, the way in which a person uses EBM can be related to his or her learning style. In order to tailor EBM education to the individual learner, this study aims to determine whether there is a relationship between an individual's learning style and EBM competence (knowledge/skills,

attitude, behaviour). Methods: In 2008, we conducted a survey among 140 novice GP trainees in order to assess their EBM competence and learning styles (Accommodator, Diverger, Assimilator, Converger, or mixed learning style). Results: The trainees' EBM knowledge/skills (scale 0-15; mean 6.8; 95% CI 6.4-7.2) were adequate and their attitudes towards EBM (scale 0-100; mean 63; 95% CI 61.3-64.3) were positive. We found no relationship between their knowledge/skills or attitudes and their learning styles ( $p = 0.21$ ;  $p = 0.19$ ). Of the trainees, 40% used guidelines to answer clinical questions and 55% agreed that the use of guidelines is the most appropriate way of applying EBM in general practice. Trainees preferred using evidence from summaries to using evidence from single studies. There were no differences in medical decision-making or in EBM use ( $p = 0.59$ ) for the various learning styles. However, we did find a link between having an Accommodating or Converging learning style and making greater use of intuition. Moreover, trainees with different learning styles expressed different ideas about the optimal use of EBM in primary care. Conclusions: We found that EBM knowledge/skills and EBM attitudes did not differ with respect to the learning styles of GP trainees. However, we did find differences relating to the use of intuition and the trainees' ideas regarding the use of evidence in decision-making.