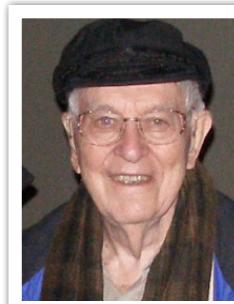


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The Earle Zeigler Way: Permanence, Perseverance, and Persistence



Earle Zeigler

When he landed his first job as football and wrestling coach at Yale University, he was finishing his master's degree in German and the United States was bogged down in wars in Europe and Japan. He became

department chair at the University of Windsor and published his first article ("The Influence of Sheldon's Somatotyping on Physical Education") when Harry Truman was president. When he moved to the University of Michigan to direct doctoral students in history and philosophy of physical education and administrative theory, the first domestic commercial jet service was still two years off, and we were anticipating Alaska and Hawaii becoming the 49th and 50th states. The same year JFK was assassinated, he was named chairman of

"I owe much to Earle Zeigler for mentoring me at the University of Illinois in the 1960s. Our field owes much to him for his thoughtful analyses and constant prodding for a better profession. Even in retirement he's the consummate professor."

Rainer Martens
Human Kinetics

the department of physical education at the University of Illinois. When he moved back to the University of Windsor as dean of the faculty of physical education, the Dow Jones Average hovered around 850, the average price of a house was \$23,000, gas was 36 cents a gallon, and a postage stamp cost 6 cents.

Nobody in the field of kinesiology personifies permanence, perseverance, and persistence quite like Earle Zeigler. In a career that has spanned over six decades,

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Decreasing the Incidence of Sudden Cardiac Events in Firefighters

Siv Schwink, KT Writer



Denise Smith

Firefighters confront numerous life-threatening dangers in the line of duty, not the least of which are explosions, falling debris, collapsing buildings, and exposure to smoke, flame, and hazardous chemicals. But according to statistics published by the U.S. Fire Administration, the leading cause of line-of-duty death is not trauma or injury associated with these hazards. The combination of a hot and dangerous environment and strenuous tasks performed in heavy, insulating personal protection equipment (PPE) puts an intense physiological strain on bodily systems—in particular, the heart.

The Fire Administration reported 43% of firefighter line-of-duty deaths in 2009 were caused by heart attacks. It is estimated that another 800 to 1,000 firefighters suffer nonfatal heart attacks each year. Especially vulnerable are those members of the fire service with underlying cardiovascular disease.

A series of studies out of the department

of health and exercise sciences at Skidmore College is aimed at reducing the incidence of sudden cardiac events in firefighters, while improving the overall health and safety of first responders. Professors Denise Smith and Patricia Fehling have headed up an integrated research program over the past five years, partnering with fire departments, other research agencies, and private manufacturers of medical technologies or firefighter gear. The results of their team's studies are shared with partners as well as the fire service and have real-world application—informing national standards of firefighter occupational health and departmental policies on fitness and incident rehabilitation, and advancing technologies that support firefighters' health and safety.

In 2010, the Skidmore team published a report for the fire service, titled *Sudden Cardiac Events in the Fire Service: Understanding the Cause and Mitigating the Risk*, based on a two-year investigation that encompassed two parallel studies. The first was a field study that grouped subjects (career firefighters aged 23 to 61 years, from the Oxnard Fire Department in California and the Boston Fire Depart-



The First Responder Health and Safety Laboratory at Skidmore College, where Smith is the principal investigator on several federally-funded projects aimed at understanding the cardiovascular strain associated with firefighting.

ment in Massachusetts) by fitness level into four fitness profiles—aerobically trained, strength trained, cross trained (both aerobic and strength), and low fit—and recorded actual cardiovascular exertion while on duty. Firefighters wore physiological status monitors (PSMs)—slim computerized devices attached to flame-resistant T-shirts with embedded sensors that measured heart rate, skin temperature, and respiratory

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PRESIDENTIAL PERSPECTIVE

What Does Every Kinesiology Undergraduate Student Need to Know Upon Graduation?

Wojtek Chodzko-Zajko PhD, AKA President



Wojtek Chodzko-Zajko

when pursuing an undergraduate degree in kinesiology.

Defining the core curriculum for our field is a surprisingly complex task. Kinesiology draws on several sources of knowledge, including knowledge gained from personal physical activity experiences, knowledge gained from professional practices centered in physical activity, and knowledge gained through scholarly study and research of physical activity. Kinesiology departments are often composed of numerous specialized areas of study, such as biomechanics, sociocultural foundations of sport, sport and exercise psychology, exercise physiology, motor behavior, physical education

teacher education, athletic training, sports medicine, and sport management.

The American Kinesiology Association does not believe that all academic departments need to interpret the building blocks of our field in the same manner, or that all departments will necessarily offer the same areas of specialization. In 2009, an AKA-sponsored national workshop examined the core curriculum in kinesiology. Emerging from this meeting was a broad agreement that there is a need to achieve consensus concerning the essential elements of the undergraduate core in our field. In essence, we need to agree on what it is that every undergraduate kinesiology major should know or be able to do.

However, the 2009 workshop participants went to great lengths to underscore that achieving consensus about a common core of content is not the same as mandating a particular set of courses be required in all kinesiology programs. How the core content is packaged for delivery and the precise manner in which the core content is covered will differ among kinesiology programs

across the nation based on local factors such as the number and expertise of the faculty; institutional, college, or departmental preferences; and the diversity, needs, and accreditation demands of institutions and programs involved.

The AKA as an association strongly supports the concept of local control over the academic curriculum. In today's university environment, an individual department of kinesiology would be stressed to offer all of the diverse elements of kinesiology (just as departments of history, physics, English, or other academic departments almost never represent the full scope of their academic disciplines). Decisions regarding what should be included in each department's core curriculum should be made locally.

However, the American Kinesiology Association does believe that it is important to identify a set of principles and experiences that are central to the discipline and that are available to guide kinesiology programs when making curricular decisions.

The AKA 2009 consensus conference identified the following four fundamental

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Dr. Darlene Kluka Inducted Into NASPE Hall of Fame

Dr. Darlene Kluka, professor of sport management, was inducted into the National Association for Sport and Physical Education (NASPE) Hall of Fame in Indianapolis. She was one of three individuals selected.

The award recognizes outstanding individuals in the fields of sport education, professional sports, and physical education and physical activity who make significant contributions to maintaining sport and physical activity as an integral part of the total education program. Kluka was honored in the category of sport.

Kluka is a full professor and coordinator of sport management programs at Barry School of Human Performance and Leisure Sciences in Miami Shores, Florida. She is currently chair of the consultants committee of the International Association of Physical Education and Sport for Girls and Women (IAPESGW), is a member of the International Working Group (IWG) on Women and Sport, and is a founding member of USA Volleyball Sports Medicine and Performance Commission. She is a former vice president of USA Volleyball and served on its board of directors for eight years. She also served

as a member of the United States Olympic Committee for a quadrennium.

She has published 2 books, has more than 100 articles published in refereed journals, and has presented more than 300 professional papers on 5 continents. Her areas of interest include visual perception and decision making in sport, women and sport leadership, and the governance of sport.

Kluka has been recognized as an international scholar and leader in the fields of sport science and women and sport. Her professional career spans 36 years, of which she has dedicated her energy and enthusiasm to the advancement of women and sport science. In addition to her NASPE Hall of Fame award, she has been presented with the International Council for Health, Physical Education, Recreation, Sport, and Dance (ICHPERSD) Biennial Scholar Award; the International Scholar Award, presented by the International Relations Council of the American Alliance for Health, Physical Education, Recreation and Dance; and the International Academy of Sports Vision Research Award. In 2011 she was awarded the International Council of Sport Science



Barry University colleagues and friends join Dr. Darlene Kluka as she is inducted into the National Association for Sport and Physical Education (NASPE) Hall of Fame in Indianapolis on March 19. Photo by Jeff La Liberte.

and Physical Education Philip Noel-Baker Research Award at a meeting in Israel. She is an honorary research fellow at Hong Kong Baptist University Research Center. She has achieved research fellow status in the International Academy of Sports Vision and in the Research Consortium of the American Alliance for Health, Physical Education, Recreation and Dance (AAHPERD). She has been inducted into the American Volleyball Coaches Association (AVCA) Hall

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Chico State Students and Faculty Travel to Middle East for Cultural Opportunity of a Lifetime

Amy Rose, KT writer

A group of seven students and faculty members from California State University at Chico traveled halfway around the world last December to find out that people aren't really all that different no matter where you go. The group from Chico State's adapted physical education program were invited to assist with the Al-Amal camp for people with disabilities in the city of Sharjah, the third-largest city in the United Arab Emirates (UAE). The annual camp is hosted by the Sharjah City for Humanitarian Services and serves around 50 campers aged 12 to 17 who are deaf or have intellectual or physical disabilities.

A member of the UAE royal family, Her Highness Sheika Jameela Bin Mohammed Al Qasimi is a graduate of Chico State and is currently head of humanitarian services in Sharjah. During a visit to campus in 2010, she met with Rebecca Lytle, coordinator for Chico State's adapted physical education program, and asked if she and her students were interested in helping with the Al-Amal camp. Lytle accepted the invitation and spent the next year preparing a group of three

faculty and four graduate students for the cultural differences they could expect on the trip. The graduate students were selected based on a personal letter expressing their interest in the trip and letters of recommendation from faculty. "They needed to be graduate students to have the experiences needed to help with the camp," said participant John-Paul Gonzalez, who went as a project director at the time. The students were responsible for their airfare to the UAE, but everything else was provided by the hosts of the camp.

The group read resources on the cultural differences in the Middle Eastern areas and invited speakers who had visited the region to give them information and answer questions. They also worked on dealing with the language barrier and learning teaching



Al-Amal camp participants. All the countries united in fun – teachers and kids alike. Play is a universal language

styles that could work without the use of language. "We turned it into a class," said Gonzalez. "It was very interesting."

Very little had been planned for the group's participation at the camp. They only knew that they would be doing a two-hour workshop at some point, so they brought a lot of equipment and had activities at the ready for when they were needed.

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Ekso Bionics Delivers First “Ekso” Exoskeleton

All paraplegic patients walked during first session

Provided by Ekso Bionics

Ekso Bionics in Berkeley, California, recently announced that the first commercial unit of its Ekso exoskeleton was delivered to Craig Hospital in Denver. Ekso is a wearable robot that powers paraplegics up, enabling them to stand and walk. Working with top rehabilitation centers in the United States, Ekso Bionics just completed a 10-month investigational study of Ekso that entailed sharing and learning of information, training, and the definition of clinical protocols. Delivery of Eksos, beginning with Ekso Bionics' charter rehabilitation centers, will take place over the course of the next three months.

Ekso is a ready-to-wear, battery-powered exoskeleton for patients with spinal cord injuries and pathologies that inhibit their ability to walk. It is strapped over the user's clothing. The patient doesn't bear the weight, however, because the device transfers its 45-pound load directly to the ground. Each Ekso can be adjusted in a few minutes to fit most people weighing up to 220 pounds who are 5 feet 2 inches to 6 feet 2 inches tall, with at least partial upper-body strength. It can be adjusted to

fit one patient and then another in minutes.

"We said we'd be shipping the first units in Q1 of 2012, and we made that deadline," explained Eythor Bender, CEO of Ekso Bionics. "Ekso Bionics has fulfilled all of the FDA requirements that empower the company to sell the first commercial version of the Ekso exoskeleton to rehabilitation centers," he added. The sale of each exoskeleton to rehabilitation centers includes Ekso+, a comprehensive service, financing, and training program.

Investigational studies of the device at the charter rehabilitation centers have just been completed. The 10-month program defined clinical protocols and provided insights into ways to improve the device. The charter hospitals will also become the first Ekso centers in the world, conducting ongoing research and offering the device for the rehabilitation of their patients.

Following are among the preliminary results of the investigational studies:

- 70 subjects were proposed by the rehabilitation centers.
- **All 63 patients who passed the preliminary health screening were able to walk**

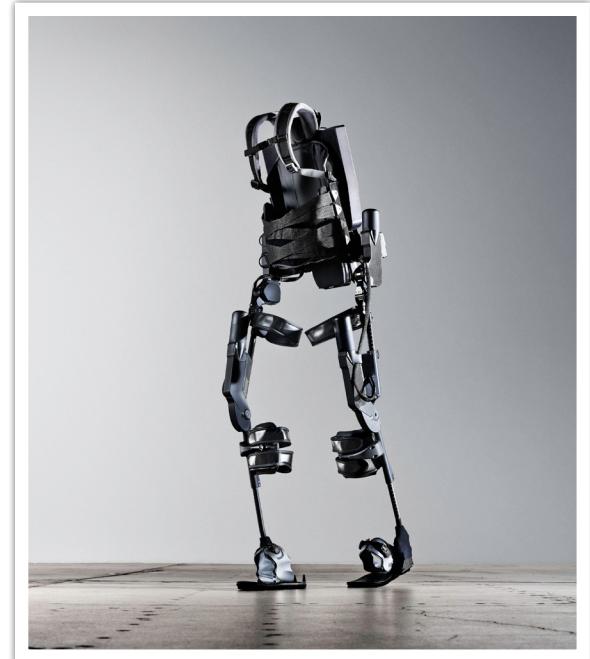


Photo compliments of Ekso Bionics.

81 to 638 steps during their first session in Ekso.

- 7 of the 70 proposed subjects did not pass the preliminary screening due to flexibility, bone density, or weight issues, so they were unable to participate.
- The average number of steps taken in

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EXECUTIVE DIRECTOR'S CORNER

What is the Future of Online Learning in Kinesiology?

Amelia Lee, Executive Director



Amelia Lee

With the advanced innovative technology that is available today it appears to me that online learning is gaining ground in higher education. The move from the classroom to the website is not only helping us to provide

more options for high quality instruction in kinesiology but at the same time it is economically feasible because it can increase enrollment without adding new classrooms. Many universities have extended the boundaries of the traditional classroom by designing successful online delivery programs that are rich, outcome driven, and have the capability of keeping students engaged in a host of real time interactions. Students are provided the opportunity to become part of a global community where they can select programs that help them reach their career goals from the convenience of their own home or office. It seems to me that a move toward the development and delivery of online learning formats can offer high quality instruction for more students and at

the same time provide increased revenue for colleges and universities.

While online learning has flourished and is probably here to stay, not everyone has jumped on the bandwagon. There are some critics who have serious doubts about online programs and are identifying issues with accountability. In a special issue of *The Chronicle of Higher Education* (November 11, 2011) Eric Kelderman argues that most of the reservations are not necessarily about quality but more related to aggressive recruiting strategies and business practices by for-profit groups who might put big bucks ahead of educational quality. In the same issue a team of editors and writers not only describe the strong calls for quality controls and more oversight, but also highlight articles on strategies for teaching and doing research on line and offer various projections for the future. The overall view is that with good planning online learning can provide a course or an entire curriculum that is high quality, effective, and reasonably priced.

One "buzz word" in higher education today is a focus on **Disruptive Innovation**, or making attempts to move from the Status Quo. One innovation that allows us to dis-

rupt the status quo is to produce more high quality learning options that allow students to engage in the study of kinesiology in an online format. While there might be some pitfalls associated with distance formats and thoughtful study might be needed to develop the new tools that are truly effective, the word I have is "Let's Continue to Move Forward."

Note: AKA-member departments West Virginia University and the University of Florida are among those offering on line coursework.. Their "reports from the field" follow.

Degrees at Your Fingertips: West Virginia University Online



Lynn Housner

Response by Lynn Housner, Associate Dean & Professor
West Virginia University offers distance education degree programs at the Master's level in athletic coaching education, physical education teacher education, and sport management.

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State Laws and School District Policies Mandating Physical Activity Do Not Always Have Intended Effect

Two recent studies examined the effect of state and school district policies on time allotted for physical education and on the physical fitness of elementary school children. The first, published in the *Archives of Pediatrics and Adolescent Medicine* (April, 2012) and conducted by researchers at University of Illinois Chicago, examined physical education and recess practices in 47 states, 690 school districts and 1761 schools. Investigators found that only 70% of the schools offered at least 20 minutes of recess each day and only 18% offered 150 minutes per week of physical education (the NASPE standard). The odds of a school offering the recommended amount of physical education increased if a school was in a state or district having a law or policy requiring it. On the other hand, schools meeting the standard for physical education were less likely to meet the NASPE standard for recess. Apparently schools substitute one form of physical activity for another rather than providing the recommended amount for both.

A second study authored by research-

ers from San Francisco State University went a step further by examining whether or not state policies for physical education were associated with the fitness levels of 5th graders in California schools. (Fitness was measured by the one mile walk/run.) Investigators found that only 28 (50%) of the 55 school districts with compliance data actually were in compliance with state physical education mandates. Controlling for student, school, and district level characteristics they found that students in policy-compliant districts were more likely than students in noncompliant districts to meet or exceed physical fitness standards (fitness zones created by Cooper Institute). They concluded that "policy mandates for physical education in schools may contribute to improvements in children's fitness levels, but their success is likely to depend on mechanisms to ensure compliance." The study was published in the May issue of *American Journal of Preventive Medicine*.

While failures in compliance are one reason why children receive less physical activity instruction in schools, Cathy Ennis,

Professor of Kinesiology at University of North Carolina Greensboro believes the big problem remains the failure of states and school districts to institute policies in the first place. "A major concern is that states are very reluctant to write minimum instructional time requirements for physical education into their legislative codes for education because it requires a permanent allocation of resources. With no minimums, physical education instructional time and resources (teacher staffing, facilities, equipment budgets, class sizes) are increased or decreased at the whim of the principal (school-based management model). Schools that are low performing and need increased reading and math test scores have taken physical education instructional time for extra tutoring and test preparation from the encore subjects (art, music, and physical education) and physical education classes are routinely canceled so that the physical educators can proctor high stakes tests. Affluent schools also take physical education instructional time as needed to provide enrichment experi-

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INSIGHT

Developing a Sense of Purpose in Kinesiology

Gregg Twietmeyer, Marshall University



Gregg Twietmeyer

What is kinesiology? In a recent *Quest* article I attempted to tackle this question from a historical and philosophical perspective. I wrote the following:

“Kinesiology is a human discipline, born of, and reliant upon the embodied, curious, political and rational nature of human beings. The field examines physical activity from a myriad of scholarly perspectives, with physical activity being understood not as an abstract or literal moniker, but rather as the placeholder term for culturally significant and recreative movement forms. Games, play, sport, exercise, dance (among others) are central to who we are and what we do. If physical activity is understood in this way, then the field is as reliant upon ‘ethics’ as much as it is reliant upon biology. Human *kinesis* is a function of all aspects of the human person whether those aspects are physiological or just plain logical. Kinesiology is neither a pure science nor solely

a member of the humanities, but rather a field that necessarily encompasses both.”

What are we to make of such academic arguments? How important are they? Is a right understanding of the discipline the key to our future? Whatever one thinks of my reasoning (good or ill), it is clear that I am vested in the importance of such academic and theoretical debate. Yet, regardless of my obvious commitment to these debates, theoretical understanding is actually less important than we might suppose.

Despite the significance of theoretical (academic) discussions in kinesiology, they alone will not push us across the finish line. Answering these academic questions correctly is crucial, but even consensus around the right philosophy will be impotent absent of a renewed sense of purpose in the field. Or perhaps better put, the right philosophy of kinesiology cannot be a purely academic or theoretical matter. We must learn to embody—not merely clarify—our principles. We must have a passion for the profession born of our own experience with the role of physical activity in human well-being. In short, a sound philosophy



Lose the Training Wheels Camp hosted by Marshall University's School of Kinesiology

of kinesiology must be *lived* by the professionals in our field.

But if this is right, then it follows that many people will embody a right understanding of kinesiology, many people will be passionately involved in spreading the gospel of physical activity, without being able to articulate their understanding in academic terms. Theory (even sound theory) is impotent absent of right action. Ultimately, practice trumps theory. How, then, can we develop this sense of purpose in the field?

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Resistance Training Improves Brain Function in Elderly

Siv Schwink, KT writer

Wisdom is said to come with age, and it could be considered an injustice that this hard-earned entitlement of our later years should be followed so closely by forgetfulness. Cognitive decline in the elderly is a serious health issue. It can limit a person's ability to live independently and is a factor in many quality-of-life concerns. In addition, it can pose difficulties for family members and other caregivers.

A recent study by researchers at the Centre for Hip Health and Mobility at Vancouver Coastal Health and the University of British Columbia suggests a regular resistance training regimen may prove an effective intervention against cognitive decline in older women who present with mild cognitive impairment—a well-noted risk factor for dementia.

The six-month study, titled EXCEL (Exercise for Cognition and Everyday Living), was led by Dr. Teresa Liu-Ambrose, professor of physical therapy at UBC. It is the first study to compare the efficacy of aerobic versus resistance training in altering the trajectory of cognitive decline in seniors.

The team published their findings this year in the April 23 issue of *Archives of*



Dr. Teresa
Liu-Ambrose

Internal Medicine in a paper titled "Resistance Training Promotes Cognitive and Functional Brain Plasticity in Seniors with Probably Mild Cognitive Impairment." The study was supported by a grant from the Pacific Alzheimer's Research Foundation, with additional infrastructure support from the Canada Foundation for Innovation.

The team enlisted 86 women 70 to 80 years old classified as having probable mild cognitive impairment. Each was randomly assigned to one of three twice-weekly exercise programs—28 to resistance training, 30 to aerobic training, and 28 to a control group that focused on balance and tone training.

The 60-minute classes were led by certified fitness instructors, with progressive levels of strain appropriate to individual fitness levels. Resistance training (RT) made use of free weights and a Keiser pressurized air system. The aerobic program (AT) involved walking outdoors to achieve specific target

heart rates. The balance and tone program (BAT) involved stretching, balance exercises, and relaxation techniques.

The team assessed the subjects at the start of the program and six months later at the conclusion of the study. They collected measurements of executive cognitive function, associative memory performance, problem-solving ability, regional patterns of functional brain plasticity, and physical function (balance, mobility, and cardiovascular capacity).

The result: The subjects who completed the resistance training program enjoyed greater benefits all around than those who completed the aerobic program.

The researchers note the following: "In senior women with subjective memory complaints, six months of twice-weekly RT improved selective attention and conflict resolution, associative memory, and regional patterns of functional brain plasticity compared with twice-weekly BAT exercises. In contrast, six months of twice-weekly AT improved physical function. We provide novel evidence that RT can benefit multiple domains in those at risk for dementia."

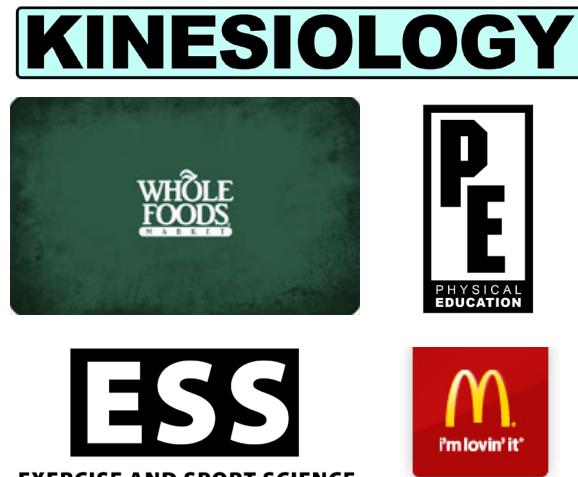
MRIs taken on resistance-trained subjects

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EDITORIALLY SPEAKING

Branding the Field

Shirl J. Hoffman Editor, Kinesiology Today



Shirl Hoffman

A Whole Foods store just opened in my neighborhood after several months of promotions and serious anticipation by local Whole Foods aficionados. Opening day brought a crush of people enthralled at the prospect of being able to purchase natural and organic food, shade-grown coffee, and 85% organic French triple-milled soap at a premium price. This wasn't simply a run-of-the mill supermarket; it was a

Whole Foods (!) and they all knew exactly what to expect when they walked through the front doors. Yes, the merchandise is the big draw, but so is the Whole Foods brand, a label that sums up not only the food found at the store but the atmosphere, the company philosophy, and the service they offer.

The American Marketing Association defines a brand as a "name, term, sign, symbol, or design, or a combination of them intended to identify the goods and services of one seller or group of sellers and to differentiate them from those of other sellers." Brands serve many functions, but the most important may be to form associations in customers' minds about the unique services or products a company offers, convey a message about the expertise offered by the company, and prevent confusion in customers' minds by separating a company's services or products from others in the marketplace.

The Golden Arches implicitly convey a message that consumers associate with a distinctive type of cuisine. The food may not always be healthy, but the McDonald's brand assures customers that it will be prepared expertly (according to company standards) and will be served in a predictable manner in a predictable environment. And most important, the McDonald's brand ensures that customers will not confuse a Big Mac

with the fare of another burger joint.

All of this got me to thinking about the kinesiology label, the brand used by approximately 175 college and university departments in the country to signal the courses it offers, the type of professionals it prepares, the research it conducts, and the peculiar expertise of its faculty. It also got me thinking about the estimated 600-plus departments in the country that, for one reason or another, have adopted a different brand. If 175 of our departments are selling Big Macs (kinesiology), the other 600 seem to be selling Arby's Ultimate Anguses (exercise and sport science), Burger King Triple Whoppers (physical education), or even KFC Colonel Crispy Sticks (integrative physiology). This is brand confusion on a monumental scale!

Obviously, those of us close to the field have learned to read between the lines, realizing that a name a department calls itself often bears little relationship to the nature of the discipline to which it lays claim. But for many of those we hope to recruit or seek research grants or muster political support from, we are an academic discipline or profession without a recognizable brand.

Clearly the leaders of the field have decided that kinesiology is the best brand for the discipline. Isn't it about time that all departments unite under the same banner and help bolster the kinesiology brand? I think so. What about you?

Short Shots

Making Research Public

Questions about who should “own” journal-published research and who should be able to reap the benefits of publicly financed research have been part of the recent political debate. The Research Works Act supported by the publishers’ lobby would have banned public (internet) access to research funded by taxpayers. It ultimately had a painful death. The Federal Research Public Access Act introduced in 2009 has been revived in Congress. It would require U.S. agencies with budgets of more than \$100 million to make journal articles based on federally financed research available on the Internet.

More at Emmett, A., et al. *Chronicle of Higher Education*, March 16, A40 and <http://www.theatlantic.com/technology/archive/2012/01/why-is-open-internet-champion-darrell-issa-supporting-an-attack-on-open-science/250929/>

Why Kids Aren’t Physically Active in Day Care Centers

A recent study out of the Division of General and Community Pediatrics at Cincinnati

Children’s Hospital has offered a clearer picture of factors that limit the amount of physical activity experienced by children in day care centers. It is estimated that three quarters of U.S. preschool-age children are in child care centers and do not get the daily recommended levels of physical activity. The study, based on focus groups with 49 child care centers from 34 centers (including inner-city, suburban, and Montessori centers) in Cincinnati, identified three main causes:

1. Concerns over injury. Strict licensing codes implemented to reduce children’s injuries have resulted in less physically challenging and uninteresting playgrounds, and parents often express concern about potential injuries on playgrounds.
2. Financial. Because of small operating margins, many child care centers cannot afford to purchase and install high-quality playground equipment.
3. Academic. Child care providers felt pressure from state mandates and parents to focus on academics at the expense of gross motor play.

Copeland, K.A. et al. (2012) Societal Values and Policies May Curtail Preschool Children’s Physical Activity in Child Care Centers. *Pediatrics*, January 4, 2012 <http://pediatrics.aappublications.org/content/early/2012/01/02/peds.2011-2102.full.pdf+html>

Cost of Obesity Now Registering on Public Conscience

The true cost of obesity to businesses and the public sector has been measured, and the total is enormous. It is being felt not merely in the costs of replacing seats in sport stadiums, public auditoriums, and bus stops with wider versions or in the rising costs of insurance premiums, but in once-unexamined indices such as the increased cost of fuel to transport heavier drivers. While the percentage of overweight (not obese) population has held steady at 34% since 1960, the percentage of obese population has more than tripled to 34%, and the percentage of morbidly obese has risen sixfold to an astounding 6%. The decrease in productivity by obese workers (called presenteeism) has been estimated at \$3,000 to \$3,800 per worker. Obese men rack up an extra \$1,150 per year in medical spending; obese women incur \$3,600 more per year in medical costs. A few years ago, public health analysts believed that the total medical (lifetime) costs of obesity would, like the lifetime costs of smokers, be offset by the likelihood that unhealthy people would die sooner and thus absorb less cost. Surprisingly, the life span of the obese isn’t that much different from the nonobese who now can be kept alive with beta-blockers and dia-

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Short Shots

abetes medications. There is some good news in all of this: An obese man is 64% less likely to be arrested for a crime than a healthy man. No word yet on how much this saves the public coffers.

Story at Begley, S. (2012) As America's Waistline Expands, Costs Soar. Reuters, April 30. <http://news.yahoo.com/americas-waistline-expands-costs-soar-100758490--sector.html>

Sliding Fractures Caused by Well-Intentioned Adults

When pediatric orthopedist John Gaffney at Winthrop University Hospital in Mineola, New York, examined the medical records of an unusually large number of toddlers who presented with broken tibias, he discovered that out of 58 cases, 13 had occurred on playground slides and all of them had been riding on a parent's or older sibling's lap at the time. The dynamics of the injury are illustrated in a video hosted by orthopedic surgeon Ed Holt (<http://shine.yahoo.com/team-mom/danger-playground-riding-slide-toddler-lap-could-break-183100453.html>). The

injury occurs when the child sits on the adult's lap with his or her legs positioned ("safely") inside those of the adult. If the side of the child's rubber-soled shoe happens to come in contact with the slide, the foot becomes planted as the weight of the adult continues to propel the child's upper body down the slide. The result is a violent twisting of the lower leg and, often, a nasty spiral fracture.

Swimming Records Due to Suits, Not Just Human Performance

"Our data strongly indicate that it was more than just hard work that allowed athletes to set the unprecedented 43 world records during the 2009 world championships," Lanty O'Connor, first author of a recent study, told *Science Daily*. "The swimsuits played a significant role." O'Connor, who is also the manager of simulation technologies in the department of simulation technology and immersive learning at Northwestern University Feinberg School of Medicine, points out that since the Fédération Internationale de Natation (FINA) banned full-body polyurethane technical swimsuits in 2010, only two world records have been set. The suits were designed to reduce drag, improve buoyancy, compress muscles,

and provide other enhancing properties.

The impact of the swimsuits on the performance improvements in 2009 were determined by analyzing publicly available race data from 1990 to 2010 and comparing improvements in swimming to improvements in track and field, a similar sport. Incredible swim performances are possible without the assistance of high-tech suits, O'Connor said, pointing to two swimmers in 2011 who each broke a record set in 2009. "But those two records don't make a dent in the phenomenal number of records made in 2009.",

Research article at O'Connor, L. & Vozelik, J.A. (2011). Is it the athlete or the equipment? An analysis of the top swim performances from 1990 to 2010. *Journal of Strength and Conditioning Research*, 3239-3242.

On the Other Hand . . . Restricting Technology Doesn't Always Have the Expected Outcome

Restricting technology in swimming will result in slower times, but bans on technology don't always have the intended effects. Wake Forest University (which has produced more than its share of professional golfers) sport economist Todd

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Short Shots

McFall, writing in the *Applied Economics Letter*, has shown how after a ban was imposed on superior high-spin golf club grooves in the 2010 season, scores on the tour went down (good) rather than up as expected, and the trend held for whether shots were taken from fairways, light rough, and sand traps. McFall said that players became more cautious and changed their behavior by playing more conservatively with better results. Previous research has shown that regulations intended to curb behavior often have the opposite effect. Data have shown a similar (though opposite) type of compensation in the way drivers reacted to mandatory seat belt use. When wearing seat belts, drivers felt more secure and tended to drive more recklessly.

Study can be found at McFall, T., and J. Treme (2012). Pandora's Groove: Analysing the Effect of the U-Groove Ban on PGA Tour Golfers' Performances and Strategies. *Applied Economics Letters*, 19(8), 763-768.

Are Women Better Leaders Than Men?

A recent study published in the *Harvard Business Review* compared the evaluations of more than 7,000 male and female leaders and discovered that women out-scored men on 12 of the 16 attributes that the investigators say are associated with great leaders. Women scored higher than men on such qualities as displaying high integrity, driving for results, nurturing, and other critical leadership factors. Men scored higher than women in customer service, a finding that also ran counter to stereotype. Women stood out particularly high in taking initiative and practicing self-development. Jack Zenger, one of the researchers, told the *Washington Post*, "When you look at the top two competencies, you start to draw this conclusion that women are more motivated. They're not assuming that things are going to be handed to them. When people give them feedback, they use it. Sometimes men just assume they will have things handed to them on a silver platter. I find in my own interviews with women that they have almost a paranoia: "I earn everything I get. If I don't perform, I'm out of here."

He was careful to point out that the data were averages and couldn't be applied across the board. "Women," said Zenger,

"were among the worst leaders that we have ever found, and among some of the best leaders. It isn't a general conclusion that women are always better. Hopefully we can get beyond that issue. This isn't a gender issue. The biggest insight to me is that if you really want to be a great leader, be a little paranoid. Ask for feedback. We are very optimistic in the ability for people to develop these skills."

Story at McGregor, J. (2012). Are Women Better Leaders Than Men? Harvard Business Review Piece Gets Whirlwind of Response. Washington Post, April 20. Study summary at <http://www.zfco.com/media/articles/ZFCo.WP.WomenBetterThanMen.033012.pdf>

Do Brushes With the Law Boost Chances in NFL Draft?

When NFL general managers are trying to winnow down the potential list of draftees, they pay close attention to times in the 40-yard dash or bench press performances. Now, according to researchers from Hamilton College's economics department, they should also pay attention to the recruit's rap sheet. But not for reasons you might think. Based on the data of Kendall Weir and Stephen Weir, if you are on the fence about a player and worried about his criminal record, you should take a chance. Although players with character issues tend

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Short Shots

to get drafted 15 to 25 spots lower than those with squeaky-clean images (earning them lower salaries), they perform on a par with those with more rosy backgrounds.

Based on 1,200 players taken in the 2005 to 2009 drafts, they looked at four groups:

1. Players with no suspensions or legal problems while in college
2. Players suspended one game or more for violating team or university rules
3. Players arrested but not charged
4. Players arrested and charged with a crime.

Given that players selected low in the draft cost teams less money, the authors say go with players from group 3, who tend to be drafted in the same position as players in group 1 but perform better (average two more starts per season).

Read report at <http://academics.hamilton.edu/economics/swu/NFLdraft.pdf>

Threat to Physical Activity Program at Cal State San Jose Subsidies

AKA was one of many groups that wrote in opposition to a plan to eliminate the required physical activity program at Cal State San Jose. Shirley Reekie, chair of the department, has furnished this update:

“Following rumors that the entire San José State University physical activity program was being considered for elimination on budget grounds, the department of kinesiology and students from many majors across campus took a crash course in campus activism. They made and wore buttons: ‘Spartan Physical Activity: The ❤️ of my education,’ wrote online and on paper petitions signed by over 6,000, received great letters of support from AKA, NAK, and the CSU kinesiology chairs, and ended the semester with a flash mob. Currently, the classes as a whole seem no longer to be under consideration for elimination but the physical activity requirement remains on the list for possibly being dropped.”

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The Earle Zeigler Way

he has left his mark—an indelible mark, most would say—on the institutions and lives he has touched. Now approaching his 93rd birthday, he, like the Energizer Bunny, is still going strong. A career generalist who manages to keep his fingers in several academic pies, Earle has maintained his intellectual curiosity and shrewd powers of observation long after most have retired to their Barcaloungers. The fifth and sixth decades of his professional life have been particularly productive, something he attributes to the fact that his two index (typing) fingers have remained nonarthritic. His recent book, bearing the ambitious title *How Sport and Physical Activity Could Contribute to the Survival of the World*, is his 50th and the third he published in 2011. His books, along with the 400-plus articles he has authored, the students he has mentored, and the organizations he has led, ensure him a prominent place in the pantheon of legends who helped develop and sustain the field now known as kinesiology.

Earle's earliest texts on history and philosophy of physical education and administration were centerpieces of courses for physical education majors across the land. He was a key figure in the emergence and early growth of both philosophy of sport and

sport management as specializations in kinesiology. Sport philosopher Scott Kretchmar regards Earle as "one of the pillars of our field." In contrast to many individuals in the succeeding generation of sport philosophers, says Kretchmar, "Earle never took his eyes off our profession." The North American Society for Sport Management continues to sponsor the Earle F. Zeigler Lecture Award each year, a tribute to his early efforts at getting the organization off the ground. In his early years, Earle zeroed in on issues and problems concerning the field; in his "revival years" he has spoken out on ethics and the broader culture (*A Way Out of Ethical Confusion, Through the Eyes of a Concerned Liberal, and Who Knows What's Right Anymore?*). Yet he never hesitates to speak out on professional issues that he feels passionately about (*The Use and Abuse of Sport and Physical Activity* and *Whatever Happened to the Good Life: Assessing Your RQ [Recreation Quotient]*).

Throughout his career, Earle has never lacked the courage to speak out against what he views as misplaced values, particularly in regards to educational physical activity and sports. As a former football and wrestling coach, Earle is genuinely supportive of sports in higher education but has long

"Most everything that I have achieved—a small and insignificant fraction of what he has achieved—I owe to this magnificent man. I have often said to him, although I sense that he doesn't believe me, that I would yet be loading and unloading mail trucks in State College, Pennsylvania, if it weren't for his astute and sympathetic instruction of me. He has dutifully and authentically supported—often being the decisive influence—my book-length adventures in publication. Not even once has he refused to participate in any project of significance to me, often at the considerable expense of his own valuable time and energies. Much of what I am and want most to be, much of what I have and want most to have is owed to Professor Zeigler. And what is more, I am but one of hundreds, perhaps thousands, who eagerly and enthusiastically say such things of him."

Robert Osterhoudt

Former professor of kinesiology, Arizona State University, Zeigler's doctoral student 1969-1971

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The Earle Zeigler Way

been convinced that we have our priorities “all screwed up” in competitive sport education. “All of our attention and resources go to the elite and semi-elite” (who would probably be physically active even if they didn’t have organized sport structures) while “we do a fair to poor to nil job with the very large majority of youth.” His autobiography (*Going Out a Winner and a Loser*) is laced with anecdotes telling how, as an administrator, he fought against the growing trend of commercialization and excess that was evident in college athletics many decades ago. As the chair of a department in a large, athletically committed university, he says he faced firsthand the way academic reputations and programs began to take a back seat to athletics. Ultimately, it was the Illinois slush fund scandal of the 1960s resulting in the firing of the athletic director and three coaches that was “the last straw” that sent him back across the Canadian border to accept a deanship at the University of Windsor. (Earle continues to hold dual citizenship status.)

But books and articles and academic products don’t tell the entire Zeigler story. It has been his impact on students—many now retired from academic life—that is his most significant contribution to the field.

Robert Ousterhoudt, whose later years in professional life were spent in the department of kinesiology at Arizona State University, talks glowingly about his long relationship with Zeigler, calling him “the most prominent and distinguished scholar of philosophical studies concerning sport and physical activity of any time or place and [his publication record] has made him the most prominent and distinguished figure in world physical education since the Second World War.”

Mike Ellis, former dean of the School of Applied Health Sciences at the University of Illinois, credits Earle with giving him a chance to attend graduate school and says he has been forever grateful. “In one of Earle’s Persistent Problems course, a class where we were required to parse the many issues alive then and persisting now, Earle skillfully paired me with an “old school” athletic director to jointly analyze each of the problems. When eventually I became an administrative guy, the vigorous debates between the conservative AD and me, the ultra-liberal, were truly helpful. Earle had a major effect on me and many, many others. He is a good human and a great educator. He’s deservedly gonna live till he’s a hundred.” Garth Paton, who was Earle’s doctoral student and later served as his assistant dean at the University of Windsor, retired from the faculty at the University of New Brunswick in 1996 after making his

“Earle counseled those headed toward more esoteric topics to stay connected to Plato’s marketplace and the needs of our field. I wish more people had taken his advice. It is hard to believe that Earle is 93. But I do remember as a young scholar going to philosophy of sport meetings where Earle was in attendance. Invariably, after each speaker had finished, Earle would stand up and ask the first question. He may not know this, but some of us irreverent newly minted PhDs were taking bets in the back of the room on how many times this would happen.”

R. Scott Kretchmar
Professor of kinesiology, Penn State University

mark in the field of sport management. He points with admiration to Earle’s continued enthusiasm and determination in his crusade for healthy sport and physical activity: “After all these years the one quality that still marks Earle is the fact that he places the student and youth at the top of his list of priorities and continues to champion what he feels is best for our most important clients.”

Who knows when Earle will slow down? For now, he is looking forward to three more books coming out in 2012: *Management*

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The Earle Zeigler Way

of Sport and Physical Activity: The Case Method Approach, Educational Sport and Physical Activity, and What I Have Learned (or “Nonagenarian Natterings”). He also hopes to put the finishing touches on an autobiography. He says he is “looking for something to write that I would enjoy doing and that I believe needs doing.” And then, almost as an aside, he mentions, “I do have 215 brief columns ready to go,” but who would want to read them written by someone who is presumably “out of it”? Hardly “out of it,” Earle personifies what Scottish historian and essayist Thomas Carlyle noted over two centuries ago. “Permanence, perseverance and persistence,” said Carlyle, “in spite of all obstacles, discouragement, and impossibilities (is what) in all things distinguishes the strong soul from the weak.”

-SJH

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Decreasing the Incidence of Sudden Cardiac Events in Firefighters

effort (manufactured by Foster-Miller, Inc.). The PSMs were worn throughout entire work shifts over a four-month period during the performance of an array of regular duties. Physiological data collected were cross-referenced with daily work logs and categorized by type of activity.

Not surprisingly, this study found that firefighters at greatest risk for fatal cardiac events include those who are older, those who are least fit, and those who are overweight. Fitness level affected heart rate consistently across most activities. Aerobically trained firefighters generally had the lowest heart rates, whether sleeping, performing nonemergency duties, or responding to an alarm. This group also had the highest heart rate stability (which correlates to a lower risk of sudden cardiac events).

However, while actively battling a blaze, the most fit and the youngest firefighters regularly had the greatest cardiovascular strain. This, the study suggests, was due to these firefighters’ handling the heaviest work, and so putting the greatest demand on their bodies. Likewise, when the team compared normal-weight to overweight firefighters, heart rates were higher in the

normal-weight group, again likely attributable to their performing the heaviest work at a fire scene.

Thus, highest heart rates during firefighting did not correlate to the highest risk of fatal cardiovascular events in firefighters. The study notes that elevated heart rates are not unhealthy in and of themselves, particularly in response to strenuous exercise—after all, cardiovascular conditioning involves regularly engaging in exercise to sometimes reach maximal heart rates. But elevated heart rates can pose a serious health hazard in people with cardiovascular disease, specifically atherosclerosis, a hardening of the arteries due to plaque buildup.

Atherosclerosis constricts blood flow, and during times of increased demand (as when heart rate is elevated), this condition can limit oxygen supply to the heart, potentially triggering cardiac arrhythmia. At the same time, increased blood flow with atherosclerosis could potentially cause vulnerable arterial plaque to rupture, leading to the formation of thrombosis (blood clot) that could trigger a heart attack.

Interestingly, all firefighters in this study showed a significantly greater heart-rate response to fire alarms compared with all other alarms, likely attributable to a combination of greater activation of the sympathetic

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Decreasing the Incidence of Sudden Cardiac Events in Firefighters

nervous system (adrenaline surge) and an increase in physical activity as firefighters suit up in specialized gear. This is consistent with statistics that show a higher incidence of fatal cardiac events in the period after a fire alarm and before arriving on scene.

Also included in the 2010 report was a parallel investigation conducted at the First Responder Health and Safety Laboratory at Skidmore College, using its state-of-the-art medical instrumentation to record data. Since statistics show an increased incidence of fatal heart attack in the hours directly following active firefighting, this controlled study documented cardiovascular and autonomic nervous system recovery following two 20-minute bouts of exercise – designed to approximate the amount of work that is done during the use of two cylinders of air during firefighting.

Fourteen subjects (firefighters from New York state fire departments, 24 to 50 years of age, who had been screened and found generally healthy and moderately fit) performed two 20-minute exercise protocols followed by 90 minutes of supine recovery on two separate visits to the laboratory. The two protocols were identical with the exception of clothing—one was performed

in T-shirt and shorts, the other in full PPE while carrying personal air supply and breathing apparatus. Researchers measured participants' hemodynamic and autonomic nervous system responses before, immediately after, and about every 30 minutes during supine recovery.

Researchers found that wearing PPE during exercise and recovery periods put a greater load on the heart and significantly extended the time it took for the cardiovascular system and the autonomic nervous system to return to baseline—in PPE, recovery took the full 90 minutes.

In another recent study aimed at improving firefighters' health and safety, the Skidmore team compared newly developed technical textiles that could be used in base clothing layers worn under PPE, to see how these might affect physiological responses and specifically cardiovascular strain. The results of this study will be published in a paper, due out in the upcoming months, and will be presented in San Francisco this June at the upcoming annual meeting of the American College of Sports Medicine.

Said Smith, "Part of the problem is that firefighters wear about 50 pounds of gear, which is designed to protect them from burn, thermal injury, and even scrapes, but it adds significantly to cardiovascular strain. We've been working with Globe, a

gear manufacturer, to determine how a base layer might wick moisture away from the skin or be lighter than what is currently worn. We are also interested in investigating the material properties of the fabric; some fabrics might provide thermal protection that would allow manufacturers to lighten the PPE gear itself. We are trying to improve PPE from the inside out."

Data collection is ongoing in another study that investigates at the individual and combined effects of heat strain and dehydration on cardiovascular function. Feling said, "This study is unique in that it systematically investigates these two effects that generally occur in combination. If you get hot, you typically sweat, and if you sweat a lot, you typically become dehydrated. We refer to them as the twin challenges—they typically go hand in hand. What we don't know is—what are the individual effects of just hydration and just heat load?"

The researchers have come up with unique models involving four exercise protocols to piece that out. Once data are aggregated, the team will compare the independent and combined effects of heat strain and dehydration to better inform pre-cooling and hydrating strategies for firefighters before, during, and after battling a blaze.

Because of the team's expertise in

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Decreasing the Incidence of Sudden Cardiac Events in Firefighters

exercise physiology and the physiological strain of firefighting, they have been subcontracted to work on the Physiological Health Assessment System for Emergency Responders (PHASER) program, a project of the U.S. Department of Homeland Security's Science and Technology Directorate; the lead agency on this project is UCLA's David Geffen School of Medicine and the Henry Samueli School of Engineering and Applied Science.

Working through several partners, the PHASER program will seek to better outline the best physiological assessment methodology to reduce sudden cardiovascular events and to apply that to individual physiological monitors that would transmit information in real time.

Smith said, "This is an exciting project that seeks to leverage technology in order to keep first responders safer and healthier. We are developing a web-based system with an easy-to-access but secure platform, where we can access both baseline measures and physiologic-strain indices during work duties."

The team has also been contracted to provide its exercise physiology expertise on a similar project, funded by the Depart-

ment of Defense, with the manufacturing company Globe Fire Suits as the lead agency. The eventual product—a Wearable Advanced Sensor Platform (WASP)—would integrate physiological monitoring with an emergency responder 3-D locator system in a fire-resistant base layer for use during critical firefighting operations.

Smith said, "The WASP project is bringing together two important technologies to keep firefighters safer. Importantly the systems will be integrated so that firefighters don't have to carry redundant electronics and so that the information derived can be used to provide more powerful information to incident commanders and others who are charged with the safety of firefighters."

Planned research will build on the results of prior studies; the team has just submitted a new grant application for a proposed study in collaboration with the National Fallen Firefighter's Foundation that investigate the structure and function of the heart and vascular system of firefighters who have suffered a cardiac event. Smith said the team would look specifically at cardiac structure, such as cardiomyopathy (enlarged heart), which can increase susceptibility to fatal arrhythmia, and vascular abnormalities such as plaque rupture, and evidence of thrombosis (blood clots).

Funding for the Skidmore studies (exclud-

ing the PHASER and WASP programs) comes from three separate grants totaling \$2.6 million through the Assistance to Firefighters Grant Program administered by the Department of Homeland Security's Emergency Management Agency. Smith acknowledged the critical role of funding in advancing her team's work and praised the Department of Homeland Security for recognizing the critical role of first responders in serving and protecting their communities, and for directing research funding to improve their effectiveness and to enhance their health and safety.

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What Does Every Kinesiology Undergraduate Student Know Upon Graduation

areas that should be included in the core of all undergraduate kinesiology programs:

Kinesiology Core Element 1: Physical Activity in Health, Wellness, and Quality of Life

There is a growing appreciation for the importance of regular physical activity as an integral component of a healthy lifestyle. Over the past 30 years a substantial body of evidence has accumulated regarding the benefits which accrue to people of all ages who participate in regular physical activity. These advances in our understanding of the relationship between physical activity participation and health have important implications for students of kinesiology. Many undergraduate kinesiology students will go on to enter a graduate program in a health-related profession, such as medicine, physical therapy, occupational therapy, and nursing. Accordingly, it is essential that the undergraduate kinesiology core include content that explores in detail the relationship between physical activity participation, health, and well-being.

Kinesiology Core Element 2: Scientific Foundations of Physical Activity

A defining feature of the academic discipline of kinesiology is its embrace and integration of the multidimensional study and application of physical activity. Well-prepared kinesiologists are expected to have a sound understanding of the scientific foundations of physical activity. For many departments, this scientific foundation is provided by a series of courses that are taken by all majors regardless of their ultimate career goals. Examples of scientific foundation courses include exercise physiology, motor behavior, biomechanics, sport and society, and exercise psychology. The specific titles and content of scientific foundation courses offered will vary from institution to institution depending on local preferences and constraints.

Kinesiology Core Element 3: Cultural, Historical, and Philosophical Dimensions of Physical Activity

A solid grounding in cultural, historical and philosophical aspects of kinesiology is an essential component of a kinesiology education. Before entering careers in research or clinical practice, an understanding of philosophical and historical issues

will help prepare future professionals for the numerous ethical questions they will face as upon graduation. Coursework in the humanities assist the student to understand and appreciate diversity, to develop cultural competencies, and to make ethical decisions based on sound principles. In many kinesiology departments undergraduate coursework examines topics such as physical culture, cultural kinesiology, sociology of sport and physical activity, history of sport and physical activity, and sport marketing and media. Specific courses will vary from institution to institution depending on local preferences and constraints.

Kinesiology Core Element 4: The Practice of Physical Activity

The American Kinesiology Association believes that regular participation in physical activity is an essential component of a healthy and successful lifestyle and that the undergraduate curriculum should provide numerous opportunities for students to be physically active. At some institutions this may take the form of a physical activity skills program that provides opportunities for participation in sport and recreation through a diverse menu of courses often taken for academic credit. At other institutions students may be encouraged to be

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What Does Every Kinesiology Undergraduate Student Know Upon Graduation

physically active through internship and practicum experiences. In some instances physical activity participation may occur at venues outside the kinesiology department, such as in campus recreation facilities. The AKA does not prescribe a specific process for departments to follow regarding how the practice of physical activity is incorporated into the curriculum.

Interpreting the Kinesiology Core

The core curricula elements described above identify broad areas of content, not a prescribed set of core courses. It is the responsibility of each individual department to determine how this core content is packaged for delivery. The specific combination of courses and other academic experiences will vary across kinesiology programs based on local factors.

As part of the ongoing AKA core curriculum initiative, we are about to initiate a process of collecting brief descriptions of how AKA member departments have chosen to operationalize the kinesiology core curriculum at their institutions. Our goal is for member departments to share a list of course titles and descriptions that are offered for each of the four core elements,

including information about enrollment and frequency of offering and whether the course is a requirement or an elective. By making this information available publicly, we will permit AKA member departments to compare their own curricula with those at similar institutions.

Next Steps

Once the AKA membership completes the process of articulating the undergraduate core, we will begin the process of identifying expected student-learning outcomes that would emanate from each of the four core content categories. These learning outcomes will be shared with AKA member departments in order to assist them in the development of locally appropriate learning outcomes for their institution.

I firmly believe that these efforts will lead to enhanced communication across kinesiology programs, which will in turn lead to an informed sharing of ideas and perspectives. This will result in enhanced curricula in AKA departments across the nation and beyond. We may not yet know exactly what every undergraduate student in kinesiology needs to know upon graduation, but we are getting closer.

Additional information from AKA about the core curriculum is available online in the [AKA White Papers](#).

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Dr. Darlene Kluka Inducted Into NASPE Hall of Fame

of Fame for her contribution to volleyball coaching education and has earned the prestigious USA Volleyball Leader in Volleyball Award. She has been honored as an Extraordinary Professor at South Africa's University of Pretoria in the department of biokinetics, sport and leisure sciences. In 2008 she was named the Distinguished Alumna of Texas Woman's University.

According to past NASPE president Fran Cleveland of West Chester University of Pennsylvania, "The NASPE Hall of Fame honors outstanding individuals who have achieved new levels of excellence in sport and physical activity and inspired others by their example of what quality physical activity and sport programs can do to make a better world."

*Story, compliments of Barry University,
Jeff La Liberte*

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Chico State Students and Faculty Travel to Middle East for Cultural Opportunity of a Lifetime

When the Chico State group finally arrived in Sharjah, they jumped right into preparations for welcoming the campers, who would arrive the next day from all over the Middle East. They were assigned to buying and wrapping gifts for the campers and also preparing for two hours of games and activities for the opening ceremonies.

According to Lytle, the group soon found that the cultural differences and language barriers weren't as important as they had expected. "People are people no matter where you are. Our humanness is what makes us all strongly connected no matter what the culture, where you are from, or what language you speak," said Lytle. Many children with disabilities have limited language skills anyway, so they communicated through demonstrations, gestures, and facial expressions. The children had fun helping the Americans learn Arabic sign language on a long bus trip and finding other ways to communicate.

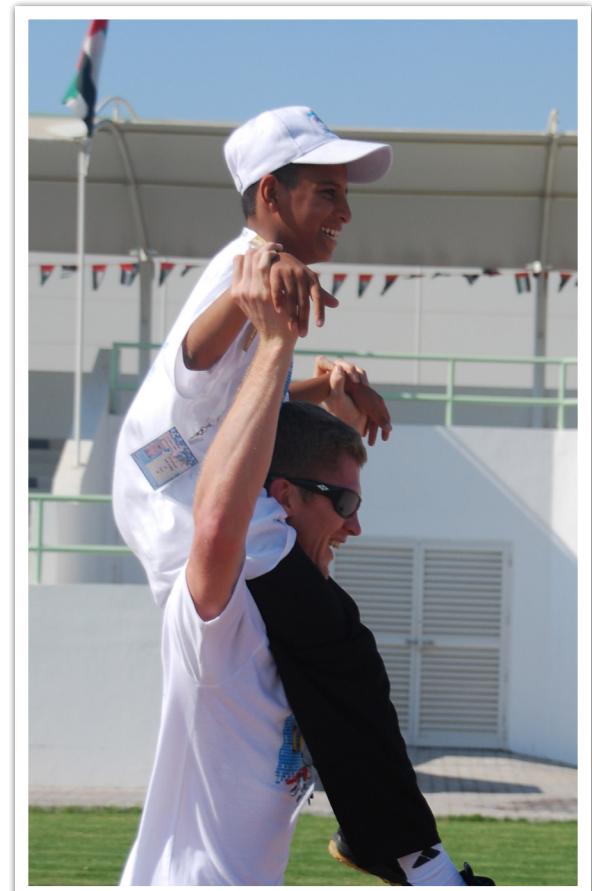
The American counselors discovered that the camp staff in the UAE had also prepared for the arrival of the American group by learning about their country, culture, and language. "It makes you feel more



Brenna McFadden dances with one of the campers

comfortable that they were concerned about (blending cultures) also. It's great that we were both just wanting to treat each other with respect," said Gonzalez.

They also shared ideas and approaches to the educational and physical activity needs for the disabled population in both countries. Sharjah has some state-of-the-art facilities for their disabled children and adult citizens. The camp is held at an exclusive school for deaf and hard-of-hearing children.



Garrett Reich carries a camper at the track events

They have a beautiful new autism center and an outstanding training complex for the Paralympic athletes in the affluent country, but Lytle observed that the disabled population is still segregated in many ways. The UAE educators were interested in learning

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Chico State Students and Faculty Travel to Middle East for Cultural Opportunity of a Lifetime

more about inclusion of disabled children in mainstream society. Professor Lytle told the *Chico State Inside*, “The adapted physical education field is very limited and may be nonexistent as a profession in many of the countries surrounding the UAE. Our hope was to share ideas and ways to work with individuals who need physical activity but might not be interested in competition—ideas to promote physical activity and healthy lifestyles on a daily basis.” Lytle said the humanitarian services leaders were interested in having her arrange for more faculty to return and hold workshops for teachers and parents on adapted physical activity for their students.

The campers were treated to entertainment and sightseeing trips along with the activities provided at the camp site. The Chico State group saw a lot of what the country has to offer, but they say the interaction with the children and the camp staff is what they will remember the most.

“Our students engaged directly with the kids more than anyone else on the staff. It’s just because that’s the way they are. They are PE people and playful,” said Lytle.

According to Gonzalez, a lot of strong relationships were built over a short time, even with the communication challenges they faced. “They were the nicest and most caring people in the world,” he said. “The one word we all used to describe the camp and the experience was *kindness*. We wanted to come home and be better people.”

Welcome New AKA Members

Howard Payne University
Exercise and Sport Science Dept.

Indiana University Purdue University
Indianapolis
Physical Education Dept.

Lamar University
Health and Kinesiology Dept.

Southeast Missouri State University
Health, Human Performance and
Recreation Dept.

Westminster College
Physical Education Dept.

**For a complete list of AKA members,
go to www.americankinesiology.org.**

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Eksō Bionics Delivers First “Eksō”

Exoskeleton

a session was over 200.

- 4,000 to 5,000 steps were taken on average, according to investigational studies.

“It was phenomenal,” architect Robert Woo and patient explained to the *New York Daily News* after taking 300 steps at Mount Sinai Medical Center in New York City, where he’s undergoing rehabilitation. “I was so excited to be walking on my own two feet, walking naturally.” Michael Rhode, a C6/7 quadriplegic at the Kessler Institute, thought the experience “was one of the most unbelievable feelings I’ve ever had. I just started walking.” He certainly did. Michael took 520 steps during his first session in Eksō.

“We’ve been wowed by the dedication and willingness to collaborate on the part of our rehabilitation partners,” stated Eythor Bender. “The input from their world-class physical therapists led to multiple new and improved features on the Eksō device, such as the adjustment of the harnessing system and the control interface. All of these remarkable centers are still on this journey with us and in it for the long haul. Knowing that every single participant stood and

walked during their first session confirms that we are on track to alter the future of spinal cord injury rehabilitation,” he added.

Darrell Musick, PT, clinical director for Eksō Bionics, oversaw the investigational studies and explained, “We were able to verify the safety of the device with various injury levels, body types, and heights and weights. Moreover, we worked closely with 31 physical therapists and successfully tested the user experience together.”

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What is the Future of Online Learning in Kinesiology?

WVU uses a blended approach where students attend resident classes during two weeks of the summer and then, they take coursework via WebCT Vista during the school year. An exciting new addition to our distance education initiatives is a MS program in Sport Management that will be offered entirely online and in Spanish. From the very beginning of our online delivery offerings, we felt that it was important to have students and faculty meet one another and develop a “community of learners” that would work together throughout the program of studies. The blended

approach, in which students come to WVU each summer for two weeks engenders this type of deep, professional interaction not only during the summers, but as they are taking online classes together.

Another element we have found to be essential to offering successful online courses is for faculty to be diligent in interacting with students by establishing regular times when students can access faculty to ask questions, clarify assignments, obtain feedback, etc. and respond to emails immediately. The beauty of online delivery is that a faculty can be accessible anywhere in the world. Last summer and this fall, I was in China for conferences and workshops and at the same time I was able to teach an online class during each visit. It wasn’t easy and I spent evenings answering emails, grading assignments, etc and the time difference was an issue, but it was doable.

Finally, although online delivery may be appropriate for traditional course work in which the delivery of knowledge can be accomplished in creative ways (i.e., virtual environments, labs, and field trips, digital video, SKYPE/ADOBE guest lectures, etc.) I would caution those who are replacing physical education programming with online physical activity programming. Physical education and physical activity are highly social enterprises and without the social

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What is the Future of Online Learning in Kinesiology?

dimension of playing and learning with others, we diminish the joy of what we do. Technology can and probably should augment, not replace, physical education and physical activity programming.

Gateway to the Gators: More than one way to become a Gator



Michael Delp

degree program with a specialization in Fitness and Wellness came about in response to cuts in state support to the University of Florida, resulting in limits being placed on the number of students transferring into the university from community colleges. In collaboration with Santa Fe College in Gainesville, we developed "Gateway to the Gators" programs through the Col-

lege of Health and Human Performance that allowed students completing a 2-yr Associates degree from Santa Fe to earn a Bachelor's degree from UF with 2 years of online coursework.

Some of the challenges in operationalizing this online program were developing and articulating required and elective online courses at UF with those offered at Santa Fe College to meet degree requirements, arranging weekend laboratory experiences for courses with labs, training faculty to develop online course content, having technical expertise available to monitor and enforce quality control, and arranging for supervised testing. In addition, it was important to develop a reward system for faculty working with the online program that would not negatively impact their research productivity.

Some of the benefits of the online program have been greater access to a Bachelor's degree from UF, greater flexibility in scheduling course offerings for traditional UF students once online courses were developed and available, particularly in the summer months, and the program provides additional resources to fund graduate student assistantships and instructional technology. Our experience with the 2+2 online degree program in collaboration with Santa Fe College has been positive, and we have

recently expanded the program to provide access to other students across the state and nation. For more information on our programs visit our website at <http://online.hhp.ufl.edu>.

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State Laws and School District Policies Mandating Physical Activity Do Not ...

ences for students (meeting time for clubs, field trips, etc). It is truly amazing how little instructional time remains in some physical education programs." In spite of mountain loads of data showing the perils facing an unfit overweight society changes in policies are very slow in coming. Says Ennis, "children's health (obesity, nutrition, etc) really isn't a priority for schools when the criterion is instructional time allocation."

For additional information on instructional time requirements in physical education see:

National Association for Physical Education and Sport. (2010). *Shape of the Nation*. Reston, VA: Author.

-SJH

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Developing a Sense of Purpose in Kinesiology

Let me respond with a brief story. Last July, in the middle of a sweltering West Virginia summer, I spent a week helping special-needs kids learn how to ride a two-wheel bike independently at a Lose the Training Wheels camp hosted by Marshall University's School of Kinesiology. Participating in the camp is an amazing experience. Most of us take learning to ride a bike—and the freedom, self-esteem, and joy it grants—for granted. However, most special-needs children will never learn to ride without the specialized training such an intervention supplies.

Hosting this camp is a perfect example of how kinesiologists can renew their passion for the entire field. Why? Lose the Training Wheels is a holistic intervention involving all areas of kinesiology. The camp is a perfect example of why we matter and why all the subdisciplines in kinesiology should view themselves as partners rather than rivals.

The modified bikes rely on principles of biomechanics. The teaching relies on adapted physical education as well the psychology of sport. The administration of the camp relies on physical education and sport management. Athletic trainers are needed to provide coverage for the event

in case of any injuries. Finally, the joy on the faces of the campers, upon learning to ride, points out the fundamentally human nature of physical activity. One mother put it this way:

"Before this week Emma couldn't ride a bike with training wheels and now she is riding a two-wheel bike on her own! We couldn't be more pleased with this program!"

Play, as philosophers, sociologists, and historians of sport have argued, is anything but trivial.

Academic arguments about who we are and why we belong together are important, but it seems clear that they have failed to carry the day. We are still largely fragmented. We still have trouble stating our purpose. We are still disintegrating.

Perhaps, then, the best strategy is not argument but rather activity. Perhaps kinesiology departments need more direct engagement with physical activity and its impact on human culture, relationships, and quality of life. As Doug Anderson argued in *Quest* 10 years ago, "A new passion for the profession" will occur, "from reawakening to the experiences of movement."

It is engagement with activity (such as Lose the Training Wheels) that will reinvigorate the profession. Such activities involve all aspects of kinesiology, and these aspects are not encountered discretely. That is, there

is no clear line where sport management or pedagogy begins and athletic training or exercise science ends. In hosting such an event, kinesiology departments can directly experience the purpose of kinesiology. All aspects of kinesiology are vital to success. All types of kinesiologists are pulling in the same direction. It is upon such experience (not academic argument alone) that a sound foundation of kinesiology can be built. It is upon such experience that we realize—not only that we matter—but that we need each other.

For more information on hosting a Lose the Training Wheels camp on your campus, visit www.losethetrainingwheels.org or contact me at twietmeyer@marshall.edu.

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Resistance Training Improves Brain Function in Elderly

at the end of the six-month study indicated significant recovery of associative memory function. Doctoral student Lindsay Nagamatsu said, "During the associative memory task, we found increased functional activation in three regions in the brain after six months in the resistance training group—the right lingual gyrus, right occipital fusiform gyrus, and right frontal pole. These changes were not observed in the other two groups."

This is an encouraging finding, since impaired associative memory is characteristic of early stages of Alzheimer's disease.

Asked what the physiological explanation for the improved cognitive function demonstrated in the elderly women who had completed six months of resistance training might be, Nagamatsu noted, "Previous studies have found that resistance training is associated with increased levels of insulin-like growth factor (IGF-1), which promotes brain health."

Researchers note in the paper that past studies by other research teams have found improved cognitive function after a more intensive aerobic exercise regimen, suggesting that resistance training may deliver the same gains in less time.

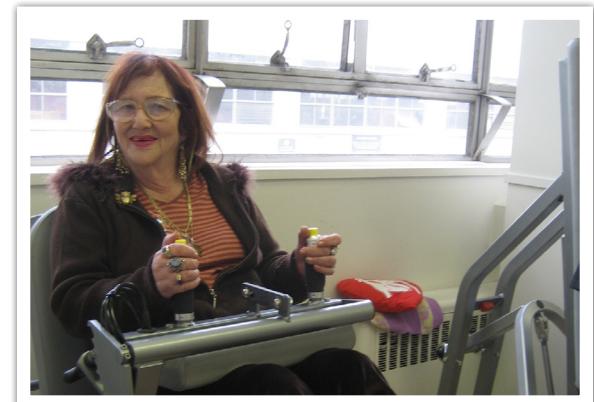
This work builds on the team's prior findings in their brain power study, published

in the *Archives of Internal Medicine* and *Neurobiology of Aging*. In those studies they found striking improvements in cognitive function in cognitively healthy women aged 65 to 75 years after they participated in a twice-weekly resistance training program over the course of 12 months. The new findings of the six-month trial would point to a greater benefit from resistance training among those at greater risk for dementia.

It's certainly good news, but it may not apply equally to men. Nagamatsu said the research group did not include men in our study, so they don't know whether resistance training might benefit older men to the same extent. "Results from previous studies suggest that the cognitive benefits of aerobic exercise training are greater for women than men. Overall, future studies are needed to determine whether men and women at risk for dementia would respond differently to resistance training, and if so, why."

Of course, improved cognitive function isn't the only benefit to resistance training for older women. Prior studies have shown that resistance training can significantly reduce the risk of falls and improve bone health in older women with low bone mass.

Nagamatsu said, "Exercise is a cost-effective strategy to improve both physical and cognitive health in seniors. Even if you have always been sedentary, exercise can have multiple benefits—it's never too late to start!"



Currently, the team has shifted their focus to two ongoing randomized controlled trials; each study employs neuroimaging to measure outcomes. The first compares the effect of aerobic training coupled with nutrition education on cognitive function and functional brain plasticity in adults with vascular cognitive impairment. The study, now in progress, is funded by Heart and Stroke Foundation of Canada and the Canadian Stroke Network. The second study examines the effect of a home-based exercise program on both mobility and cognitive performance in physically frail older adults with mild to moderate cognitive decline. It is funded by Canadian Institutes of Health Research.

To help promote this message, the team designed a YouTube video that seniors or trainers who work with seniors can use to get started on a resistance training routine. It can be accessed at <http://cogmob.rehab.med.ubc.ca/learn-more>.

Upcoming Conferences

American Society of Biomechanics 2012

August 15 to 18, 2012
University of Florida
Gainesville, Florida

Information: [http://hhp.ufl.edu/apk/ces/
ASB2012/](http://hhp.ufl.edu/apk/ces/ASB2012/)

24th Cooperstown Symposium on Baseball and American Culture

May 30 to June 1, 2012
Cooperstown, New York
Contact Jim Gates: [jgates@baseball-
halloffame.org](mailto:jgates@baseball-halloffame.org)
607-547-4094

National Athletic Trainers' Association Annual Meeting and Clinical Symposium

June 26 to 29, 2012
Saint Louis, Missouri
Register at www.nata.org

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