

Table of Contents

Active Architecture	1
New Building Holds Promise of Bright Future for Auburn's Kinesiology Program	2
Pilot School Program Is Moving Kids to Move	3
Top Athletes Excel in Mental as Well as Physical Skills .	4
Presidents' Column	
The Changing Faces of Kinesiology.	5
What Constitutes Discrimination When Minority Roles Are Reversed.	6
Rehabilitation Meets Virtual Reality	7
Executive Directors' Corner	
Being Involved in Physical Activity Promotion.	8
Faculty Salaries	9
Insight	
Understanding and Using Journal Impact Factors .	10
Chair Balls	11
Salaries for Nonfaculty Professional Workers	12
Editor's Two Cents' Worth	
Sports Watching and Kinetic Amnesia	13
On Childhood Obesity Prevention	14
Shortchanging Collegiate Athletes.	16
Short Shots.	17

Active Architecture

This slide at Gloria Marshall Elementary School at Spring Independent School District in Houston, along with other architectural elements in the school, is intended to be a teaching tool, encouraging students to question and discover and engage them in fun, active and exciting opportunities for learning. The architects considered how each design element could be an opportunity for learning and physical activity. In this case the slide serves as a teaching tool for lessons about both DNA and static electricity. In addition, a science garden and eco pond at the front of the school promotes activity outside of the classroom and provides opportunities for hands on math and science lessons.

The Houston project also reflects a growing interest among architects concerning how physical structures can be built to encourage physical activity. In its December (2012) report, Healthier Communities Through Design, (www.aia.org/localleaders) The American Institute of Architects (AIA), lay out a road map for towns and cities to promote physical activity among their residents. The report includes case

Continue on Page 33



Luis Ayala/SHW Group

New Building Holds Promise of Bright Future for Auburn's Kinesiology Program

Ten years ago the kinesiology department at Auburn was a largely underappreciated unit in the College of Education hampered by flagging administrative support and a decaying facility managed by the athletics department. Now, after a decade of hard work by a team-oriented faculty and leader, with enthusiastic support from a new dean and university administration, it is hitting its stride as a unit known not only for its ambitious visions but also its skill in bringing those visions to life.

The past decade has witnessed a tripling of graduate research assistants and doctoral students, a tripling of external proposals, and a tripling of funded proposals and number of principal investigators. Funds have been found for recruiting a top-flight faculty and launching a distance education program that services more than 2,000 students a year and provides partial financial support for 60-plus graduate assistantships. The department has earned a reputation as a leader in the design and delivery of a diversity program that could serve as a model for universities across the country. Few would question that Auburn



Interior of Auburn's new kinesiology building

is moving into the upper tier of kinesiology departments in the country.

The most recent and visible sign of Auburn's rise to prominence is a new 58,000-square-foot building that serves as a base for 20 faculty members and more than 650 students and offers space tailored to the department's unique assortment of research and outreach endeavors. "This building represents a significant upgrade over our former residence," says department chair Mary Rudisill.



Moving into the new biochemistry lab.

Kinesiology faculty members and research laboratories had previously been housed in the 44-year-old Beard-Eaves-Memorial Coliseum, a multipurpose sports arena that will eventually meet a wrecking ball. The building's numerous quirks, including a temperamental electrical system, probably won't be missed by faculty members, one of whom described Beard-Eaves as a "dirty box" housing cutting-edge research laboratories.

The new sole-occupancy facility offers

[Continue on Page 23](#)

Pilot School Program Is Moving Kids to Move: Accelerometer With Integrated Social Media and Gaming Platform Shows Early Promise

Siv Schwink, *KT writer*

As any parent will tell you, youngsters today, left on their own, rarely put down their electronic devices. Whether it's an MP3 player, a cell phone, or a portable gaming device, even young children seem to prefer exercising their thumbs to exercising their bodies (not to mention spending time in front of the television). Now some schools are looking to turn that correlation on its head, using interactive electronic devices to engage children in physical activity—both in and out of school.

Dolly Lambdin, a clinical professor in the department of kinesiology and health education at the University of Texas at Austin, has used Polar Active brand accelerometers in her college classes and with elementary schoolchildren and believes devices like these will have a place in high-quality PE programs in the future.

"Activity tracking devices such as pedometers, accelerometers, and heart rate monitors can help students to understand their own activity levels and motivate them to reach target levels. We have had children double their daily steps just based on feed-

back provided by pedometers," she explained.

But, Lambdin cautions, the devices are only as motivational as they are accurate. When they fall short of providing accurate measurements, participants who use them tend to lose motivation.

Patrick Henry Elementary in Arlington, Virginia, is one of several schools across the United States included in a pilot program initiated by startup company Sqord to test and get feedback on the inexpensive Sqord accelerometer specifically designed for children. Third-through fifth-grade students are using the wristband accelerometers synced with an interactive online data-collection application that incorporates kid-friendly social media and gaming aspects.

The brightly colored Sqord wristband is



Finn and Lily Loughney check in their Sqord bands as Mr. Haws looks on.

worn throughout the school day and outside of school hours to encourage students to engage in physical activity whenever they get the chance. The wristband contains a three-axis accelerometer to measure movement in three planes and is powered by a battery that lasts from six months to

Continue on Page 20

Top Athletes Excel in Mental as Well as Physical Skills

Amy Rose, KT staff writer

We have all witnessed astounding physical feats by professional and elite Olympic athletes and clearly acknowledge their superior athletic skills. However, several recent studies show that elite athletes appear to possess superior cognitive skills as well. "The mind and body are not separate things. A healthy mind generates a healthy body," said Jocelyn Faubert of the University of Montreal's School of Optometry.

Faubert's study, published in *Scientific Reports*, tested 102 professional athletes from three sports (soccer, hockey, and rugby) and 173 elite amateur athletes from NCAA programs and a European Olympic training center on their perceptual-cognitive skills related to the processing of a complex dynamic visual scene. The control group consisted of nonathlete students from the University of Montreal. The visual scenes were designed to eliminate any sport expertise and to take away all motor tasks that would favor the athletes.

Data were gathered by using the three-dimensional multiple-object tracking speed threshold task (3-D MOT) developed by Faubert. The participants view spheres in a 3-D space in which they are tested on color change, movement, and identification.

The study found that the professional athletes outperformed the elite amateur athletes, who in turn performed better than the nonathlete control group. "It's so obvious that there is something going on in their brains," said Faubert. "I am surprised by how much better learners (professional athletes) are." Another recent study conducted by a group at the University of Illinois led by psychology graduate student Heloisa Alves and psychology professor and Beckman Institute director Arthur Kramer tested the cognitive abilities of elite Brazilian volleyball players preparing for the Beijing Olympics. Although their results were not as dramatic as Faubert's, the study that appeared in the March 7, 2013, issue of *Frontiers in Psychology* found elite athletes performed better in memory tests and tests that required them to switch between tasks quickly.

Participants performed a cognitive battery of tests that were also set up to be non-sport specific. The athletes were asked to perform tests both before training sessions and after. Alves reported that although the athletes were often in a state of physical and mental exhaustion when performing the tests, there was not a substantial difference between scores taken before training and



those by athletes who had just gone through a grueling training session.

The most significant results came when comparing athletic females to their nonathletic counterparts and to male participants as well. In two of the tests, female athletes scored better than the nonathletic female participants and equal to nonathletic males.

Continue on Page 24

PRESIDENT'S COLUMN

The Changing Faces of Kinesiology

Wojtek Chodzko-Zajko, PhD, President, American Kinesiology Association



Wojtek Chodzko-Zajko

Every year I have the pleasure of addressing the incoming freshman class in the department of kinesiology and community health (KCH) at the University of Illinois at Urbana-Champaign. Part of my charge is to introduce our students to their new department, to review some of the many opportunities and challenges they will face over the next four years, and to provide them with an introduction to the 120-year-old history of Kinesiology at Illinois. As part of my lecture I present brief biographies of some of the many famous scholars and thinkers who have served on the faculty of our department. This exercise, in addition to providing me with an opportunity to meet some of the brightest and most enthusiastic future leaders of our field, also provides me with an opportunity to reflect on how much our field has evolved over the past century or so. Although the University of Illinois is one of the oldest kinesiology departments

in the country, I would argue that there is nothing especially unique about how kinesiology has evolved at Illinois and that similar stories could be told regarding the changing of our field at many AKA member institutions. Nonetheless, I believe that there is a tremendous amount of wisdom to be gained from studying the historical roots of our discipline and understanding where we have come from and where we might be heading.

I begin my talk by introducing our students to my oldest predecessors; **Ella Morrison** and **Henry Houghton (H.H.) Everett**. Morrison and Everett were appointed in 1895 as directors of the departments of physical training for women and men, respectively. Ella Morrison wrote about the importance of physical activity for women, coining the phrase "to be weak is miserable." She advocated that physical training is essential if students are to develop the strength and endurance needed to successfully complete their academic preparation. She argued that physical activity has four fundamental goals: health, strength, muscular flexibility, and grace. Henry Everett presided over a rigorous program that included gymnasium

and field exercises, academic coursework related to physiology, first aid, muscle development, effects of exercise on health, training for athletic competition, prevention and treatment of disease, and personal hygiene issues. All students, regardless of major, were required to take physical training classes, underscoring the prevalent belief that sport and physical activity were an essential component of a comprehensive undergraduate education. Much has changed since the times of Morrison and Everett, but some things have remained the same. I believe that most current kinesiology faculty and students share the belief that physical activity and physical fitness are no less important for today's undergraduate student than they were a century ago. However, in the university of today we are much more comfortable in allowing students to decide for themselves how, when, and if they will participate in a particular health behavior. We seldom mandate participation in physical activity, and compulsory physical activity courses have been dropped from graduation requirements at almost all universities and colleges.

My historical overview of our department

Continue on Page 29

What Constitutes Discrimination When Minority Roles Are Reversed?

“How did we—meaning the Minnesota Timberwolves—get a roster that resembles the 1955 Lakers?” Tyrone Terrell, chairman of St. Paul’s African American leadership council asked a reporter for a local newspaper. “I think everything is a strategy. Nothing happens by happenstance.” Terrell was referring to the fact that only 33 percent (5 of 15 players) on the Minnesota Timberwolves are African-Americans while American-born black players account for 78 percent of the roster spots in the NBA overall and have accounted for at least 75 percent since 1991-1992. Back in the 50’s when the NBA was 93 percent white, whispers of a quota system limiting the number of black players on teams were rampant. It

was an era that Hall of Famer Bill Russell once described this way: “you’re allowed to play two blacks at home, three on the road, and five when you’re behind.”

Now accusations of racial discrimination and quotas have resurfaced in Minneapolis, thanks in part to a story by Jerry Zgoda and Dennis Brackin that appeared in the *Minneapolis Star Tribune* in October and later was given new life by Phil Taylor in *Sports Illustrated*. The charge leveled by Terrell and other civil rights leaders is that Timberwolves’ management has deliberately tailored the team’s roster to appeal to its largely white audiences. They also point to the fact that the team has no black personnel in significant positions in the front office and are one of a few teams not to

have a black person as general manager.

The team adamantly denies any effort to juggle the racial component of its roster, explaining the dominance of white players as a result of their aggressive recruiting of Western European players. (The roster includes two players from Russia, and one each from Montenegro, Guadeloupe, Spain, and Puerto Rico.) The team has since added Dante Cunningham to their roster who is African-American.

Phil Taylor who writes the back page for SI and isn’t shy about offering his two cents on controversial issues, thinks it is a bit of tempest in a teapot. Taylor, an African American, sees the case as a classic example of people “reacting the way they do when a minority group (in this case white players) begins to upset the status quo.” As an example, Taylor points to the sometimes ugly reception players in the league (both teammates and opponents) gave to Chinese star Jeremy Lin when he became the most popular player in the league.

The Timberwolves’ case offered a unique jumping off point for a discussion about diversity, a topic AKA explored at its work-

Continue on Page 27



Jared Russell



Maureen Smith



Nancy Spencer



Fritz Polite

Rehabilitation Meets Virtual Reality

This article was based in part on a story by Lanita Withers Goins that appeared in the UNCG Magazine

Anyone who has ever had to undergo physical rehabilitation can attest to the monotony of it all. The treadmill becomes a “dreadmill.” Stretching elastic bands, pulling on cables, and straining against diabolical machines aren’t very high on anyone’s bucket list. And there is always the possibility that someone is doing the rehab exercises incorrectly. Help is on the way from researchers in the department of kinesiology at the University of North Carolina at Greensboro.

Enter Dr. Chris Rhea, director of the new Virtual Environment for Assessment and Rehabilitation Laboratory (VEAR lab). In a lab equipped with a treadmill, cameras, computers, and an activity space, Rhea and his students are creating virtual worlds,

replicating real-life situations to help patients rehabilitate injuries, disease, or the effects of aging.

Rhea’s interest in this area began with his PhD studies at Purdue University examining how

humans use vision to control their walking. He then joined a virtual reality lab at Brown University for his postdoctoral training to develop virtual environments that could be used to enhance a patient’s walking control. Rhea’s original research focused on patients who have had reconstruction of the anterior cruciate ligament (ACL) in the knee, and his team has expanded their virtual reality intervention training to include patients who have had strokes.

Rhea believes the virtual atmosphere can offer clinicians “a more precise, optimal way to rehabilitate someone.” Rhea and his staff build 2-D and 3-D environments for patient rehabilitation. These can include immersion in a virtual-reality environment like a busy sidewalk scene where patients will be able to practice the movements necessary to weave in and around pedestrian traffic, and a situation in which an avatar is projected onto a large screen. By following in the avatar’s



Creating Virtual Worlds in the VEAR Lab at UNCG

footsteps, patients replicate a proper walking pattern. “Some of this may seem like a game to patients, but what we are really doing is giving a very scientific prescription to rehabilitate their walking mechanics. We’re building into the environment the movement patterns that they are lacking.”

The VEAR Lab’s focus on physical rehabilitation makes it unique. Fewer than 10



Chris Rhea,

EXECUTIVE DIRECTOR'S CORNER

Being Involved in Physical Activity Promotion: Making a Case

Amelia Lee, AKA Executive Director



Amelia Lee

all Americans. When developed, the plan united professionals from transportation, education, recreation, sports, fitness, medicine, public health, and business in an effort to collaborate and provide a road map for decreasing sedentary lifestyles and achieving population improvements in physical activity. The kinesiology community is currently taking the next step by

identifying action items that will advance the tactics set forth in the plan.

The AKA is in a position to serve an important role in contributing to increases in physical activity on college and university campuses. Toward that end, we are collaborating with ACSM and NAK to increase the awareness of university leaders and students of the importance of creating campus environments that will encourage more physical activity. The facts and figures clearly demonstrate the need to increase lifestyle activity but, despite the demonstrated health benefits of moderate levels, more than half of university students do not engage in enough consistent activity to receive the health benefits. In addition, an overwhelming number of students are overweight or obese, suggesting sedentary lifestyles.

Kinesiology professionals can be front and center as we work to coordinate advocacy for improving physical activity opportunities at the collegiate level. University administrators must be approached and encouraged to adopt policies that will support bicycling, walking, recreational sport clubs, and an overall active campus. To achieve an active approach to campus life, it has been suggested that the social and physical environments must be changed to enable such activity to be taken. Karim Khan and his associates argue in the July 7, 2012, online edition of *Lancet* that physical inactivity is not so much a medical predicament as a cultural challenge that will create a lifestyle inclusive of activity. Understanding the relationship between college students and their environment is our goal.

Faculty Salaries: Advantage for Those at Private Institutions

According to the recently released AAUP Annual Faculty Salary Survey, discrepancies between salaries paid to faculty in private institutions and those paid to faculty in public institutions continue to increase. Average pay across all ranks was \$99,771 at private institutions (a 2.4% average one-year increase) and \$80,578 at public institutions (a 1.3% average one-year increase). In 2004 salaries at private schools were 18% higher than at public institutions; in 2013 the gap had grown to 24%. Distinct advantages for private institutions were seen across all three ranks, although the differential was most apparent among faculty in doctoral universities. Overall, differences were greatest at the full professor rank ranging from 17% at master's universities to 35% at doctoral universities. Disparities in salaries for associate professors ranged from 10% to 23% and among assistant professors 7% to 24%.

Salaries at Private and Public Colleges and Universities

	Private institutions	Public institutions
Full professors	\$139,620	\$110,143
Associate professors	\$88,301	\$78,529
Assistant professors	\$74,664	\$67,097
Lecturers	\$55,530	\$49,926

Full report at "Here's the News: The Annual Report on the Economic Status of the Profession."
www.aaup.org/report/heres-news-annual-report-economic-status-profession-2012-13.

INSIGHT

Understanding and Using Journal Impact Factors

Bradley J. Cardinal, Professor, social psychology of physical activity, Program in exercise and sport science, Oregon State University



Bradley Cardinal

that they were never intended (e.g., attempting to generalize journal impact factors across disciplines, sub-disciplines, and fields of study; gamesmanship strategies aimed at improving a journal's impact factor or an individual scholar's performance).

Journal impact factors are derived by dividing the total number of articles published in any given 2-year time span (denominator) by the total number of citations received during the same 2-year time span (numerator). The value is carried out to three decimal places. The values always refer to a previous point in time. For example, the most recently available journal impact factor value available is for 2011 (as of March 27, 2013).

In calculating journal impact factors, only

Journal impact factors were introduced in 1955 with the intent of helping scholars identify and retrieve key resources and build linkages within the scientific community. Unfortunately, they are now being used in ways

citable content (e.g., full-length papers) is included in the denominator, whereas all published material is included in the numerator (e.g., commentaries, corrigenda, editorials, letters to the editor, news items). Several journals with high impact factors publish in excess of 50% of their content in the form of un-citable material, and this practice has not escaped kinesiology journals. The uncitable content often makes reference to a journal's own papers, thereby inflating its journal impact factor.

Shrewd journal editors and publishers have figured out additional strategies for intentionally increasing journal impact factor scores. Some strategies include soliciting and publishing more "hot topic" papers, asking authors to cite more papers from the host journal prior to accepting an author's work, asking authors to decrease the number of citations to "competitor" journals, and publishing more multiauthored works. Researchers may also form citation cabals.

Moreover, 20% of a journal's published papers typically garner 80% of a journal's citations, and the majority of journal articles are never cited. Thus, the journal impact factor when applied to an individual article

that is never cited within a journal with a high journal impact factor benefits from the journal's halo effect, whereas a highly cited journal article in a low-impact or nonindexed journal receives few or no such accolades.

When journal impact factor scores are used to evaluate scholarship, the work becomes secondary to the dissemination outlet. The higher the journal's impact factor, the more it counts. And, since many journals in kinesiology are *not* indexed in "accepted" indexing systems, they actually have no journal impact factor at all, even though they may appear in other equally rigorous indexing systems. This could have disastrous consequences with regard to the preservation of kinesiology (at least certain subdisciplines). Our academic departments and degree programs could be in trouble in such a hierarchical and intellectually exclusive environment.

Also, the majority of indexed journals are exclusively written in English (89.3%) and come from the western hemisphere (52.4% from the United States alone), indicative of one-way communication patterns and Eurocentric biases, which are at odds with an increasingly pluralistic worldview that

[Continue on Page 25](#)

Chair Balls: A Good Way to Counteract the Negative Effects of Prolonged Sitting?

Citing research that shows sitting for extended periods can contribute to increased risk of heart attack and stroke and reduce life expectancy and that the effects of sitting appear not to be mitigated by periodic trips to the gym, chair manufacturers have rushed in to help. In the fall 2012 issue of *Kinesiology Today*, we noted a rise in the use of standing and treadmill desks as a way of warding off the ill effects of sitting for long periods. But standing at a desk for prolonged periods can create its own physical (back and leg) problems. Treadmill desks can be inconvenient and impractical. Another alternative is the ball chair, such as the Balance Ball Chair from Gaiam. The chair features a 52-centimeter ball on which one can sit while working at a desk. It can be removed for exercises away from the desk.

The benefits of using balance chairs rather than regular desk chairs are said to include increased caloric expenditure and the strengthening of core muscles because sitters must constantly adjust their postures to remain balanced. But these effects remain largely untested. Some scientific reports have noted increased caloric expenditure, but recent research conducted by Jack P. Callaghan, who holds the Canada research chair in spine biomechanics and injury prevention at the University of Waterloo in Ontario, suggests caution. His has found little difference in abdominal and lower back muscle activity between sitting on a ball and sitting in a typical office chair. Neither was sitters' posture improved by sitting on a ball, and he noted that some sitters risked falling over when reaching sideways.

-SJH



Photo Credit: Photo courtesy of Gaiam.

Salaries for Nonfaculty Professional Workers

Results from the 2012-2013 Professionals in Higher Education Salary Survey published by the College and University Professional Association for Human Resources based on over 182,000 non-faculty professionals in 275 positions at 1,109 institutions are available. Results showed that the median salary increase from last year was 2% for those working at public institutions and 2.4% for those at private institutions. Median salary increases across all job categories ranged from 2% to 2.5%; the higher increase occurred in athletic affairs.

	Doctoral	Master's	Baccalaureate
Head athletic training program	\$70,548	\$54,268	\$41,260
Head campus recreation	\$81,815	\$57,944	\$41,180
Athletic trainer	\$42,823	\$38,525	\$39,630
Head coach strength and conditioning	\$57,765	\$43,736	\$42,078
Head athletics academic affairs	\$79,287	\$55,659	\$54,000
Head athletics compliance	\$72,105	\$50,923	\$48,121

Full report, including list of colleges and universities, can be found at
www.cupahr.org/surveys/files/salary2013/PHE-2013-Executive-Summary.pdf.

EDITOR'S TWO CENTS WORTH

Sports Watching and Kinetic Amnesia

Shirl Hoffman, KT Editor



Shirl Hoffman

something as profoundly simple as games can so completely absorb us, reach deep into our souls (and pockets), and stir emotions we rarely experience or express in our comparatively hum-drum daily lives. It seems an especially apt exercise for kinesiologists, the only academics who include sport in their smorgasbord of specialized knowledge and who sponsor professional programs that prepare sport specialists.

Centuries of thinking about the matter by some first-rate minds haven't moved us much closer to a definitive answer. Those who study sports for a living might point out that through watching games we participate in an affirmation of ultimate reality played out in sacred time and space, or that we are drawn to the bleachers because

Having spent most of March and April digesting a stew of the men's and women's NCAA basketball tournaments and the Masters, I think it's a good time for us to sit back and reflect on why

we, like patrons of the dance, relish the beauty of human form in motion, or that fans watching our heroes tough it out on the stadium turf and arena hardwood find inspiration essential for confronting their own challenges in life.

But such talk seems to fall woefully short of explaining the exuberance of the 75,000 people gathered in the Georgia Dome on March 8. Whether those assembled in Atlanta actually found religious fulfillment or aesthetic gratification or were inspired to do heroic deeds, no one can know for sure. My hunch is that they, like most sport fans, were mainly after a jolt of titillation

Perhaps a better question for kinesiologists is how this fascination with sports watching, as opposed to sports playing, has (or may eventually) affect the average person's conception of the meaning of sport and his or her notions of the role it should play in our lives. Could it be that gorging on sport spectacles as a thrilling (but hardly demanding) form of entertainment is leading us to conceive of sport not as something to do as much as something to *sit back and watch* the elite few do—safely, effortlessly, and from a distance?

Of course, if all of this sports watching eventually leads to sports doing, it would leave a sweeter taste in the mouths of worriers like me. Some believe that this actually happens. Organizers of London's 2012 Olympic Games, for example, argued that holding the events in their city would promote physical activity among the citizenry. Largely on the basis of the trickle-down theory that hypothesizes watching games will cause people to leave their couches and run to the playgrounds to emulate the athletes, they claimed that a million residents of England would be motivated to practice a sport and another million would start exercising by 2013. It was a plan, wrote Traci Watson of *USA Today*, that now sounds laughable since the European Commission's report has shown that more than 30 percent of Brits engage in no physical activity of any kind.

In his rant against the entertainment industry (*Amusing Ourselves to Death: Public Discourse in the Age of Show Business*), the late Neil Postman warned of how a deluge of entertainment eventually will lead to "cultural amnesia," sapping the intellectual and spiritual vitality from society. Compared to the written word, television is far less likely

[Continue on Page 26](#)

On Childhood obesity Prevention: Exercise Is Medicine vs. Exercise Is Vaccine

Ang Chen, Professor of Kinesiology, University of North Carolina at Greensboro



Ang Chen

There is consensus about how to address the obesity epidemic: promoting healthy nutrition and increasing physical activity. There is, however, little consensus on how these approaches can be used effectively in dealing with childhood obesity. One philosophical position is the treatment orientation. A typical representation of this position is the popular metaphor of "exercise is medicine." The other is a little-known position with a rarely heard metaphor "exercise is vaccine." Although the two may be connected in some way (e.g., one can argue vaccine is medicine too), they are fundamentally different in terms of intervention timing and subsequent health and behavior outcomes. There is no doubt that both are needed in addressing the childhood obesity epidemic. But each can lead to personal and

social consequences different from those of the other.

Exercise Is Medicine

The metaphor implies that overweight and obesity are diseases that require medical attention and that exercise is an effective medicine. Growing out of this perspective is a hidden message that fighting against the diseases of overweight and obesity is primarily a personal responsibility. That is, the individual is responsible for seeking help and following the treatment protocol. The evidence in a recent U.S. Institute of Medicine report suggests that this person-focused approach has not been successful since the country began the fight against obesity in 1980s when the obesity rate was 15%. The medicine metaphor is particularly ineffective in preventing children from becoming obese adults. Among the obese U.S. adults, half of them were not overweight or obese in their childhood. Because personal disease and medicine have become such a private issue, physi-

cal educators, the most likely source of help, become hesitant to overtly mention weight control and weight loss to overweight children (and their parents) and are reluctant to design individualized exercise tasks for them.

Exercise Is Vaccine

The vaccine approach has been most effective in controlling epidemics. For example, smallpox was not controlled until the smallpox vaccine was introduced for population application and became a social and societal effort. The vaccine metaphor implies a similar continuous social and societal effort. It is relevant for school-based childhood obesity intervention, implying that individual efforts are part of an institutional and societal effort. The success of the prevention depends on individual success; while the institutional effort provides both guidance and support for the individual.

Continue on Page 31

Rolling and Bowling Down a Country Road

One of the world's oldest sports, Irish road bowling, has secured a foothold in the United States. Contested on country roads in Ireland for over 300 years, it is now played by teams in New York and Boston. Since 1995, it has been part of the Irish Spring Festival held each year in appropriately named Ireland, West Virginia. The goal of the sport is to roll a 28-ounce iron ball down a country road for a prescribed distance (various distances are used) in the fewest number of tries. The longest road on the American tour is 2.2 miles. (Record holders covered the 2.2 miles in 30 throws.) The thrower runs with the ball to the starting line with arm hyperextended and releases the ball in an underhand fashion, often jumping into the air before stepping over the line. Chalk marks are drawn on the road to indicate the distance of each throw, and the bowlers use that spot for their next throw. An aide to the thrower, called a road shower, gives advice on direction; another stands in front some distance down the road to provide a target.

According to David Powell of the West Virginia Irish Road Bowling Association, more than 2,000 players "threw a bowl" in West Virginia in 2012. He touts the fitness advantages of the sport, noting that when people who never walk as a matter of course try it, they walk a couple miles without realizing it. "The throws can roll 150 to 200 yards on a narrow country road even for a beginner," says Powell. "An experienced player can generate a 250- or 300-yard shot(three football fields) on a narrow country road, an amazing sight. Yet elderly, overweight, young, and old can enjoy it the first day; it is fun and joyful." This summer, the North American finals will be held in Durham, New York, August 2 and 3.

For video of bowling in Ireland, go [here](#)



Travis Craig, competes in road bowling in Ireland, West Virginia.

Shortchanging Collegiate Athletes: The \$6 Billion Heist

Six billion dollars. That's how much a recent report by National College Players Association (NCPA) figures college athletes will be shortchanged by the NCAA between 2011 and 2015. The NCPA, the only national advocate for college athletes, released the report in collaboration with Ellen Staurowsky of the sport management department at Drexel University (www.insidehighered.com/news/2013/04/23/experts-weigh-possible-outcomes-effects-ncaa-likeness-lawsuit#ixzz2RIT5sLjV).

The NCPA was founded in 2001 by former UCLA linebacker Ramogi Huma. Its membership includes more than 17,000 former and current athletes from over 150 Division I campuses nationwide.

Using publicly available data, authors calculated the market value of football and basketball players, taking into account the value of their scholarships and the amount of revenue they would earn in a fair market. The study revealed that "the average football and men's basketball players from BCS conferences would receive an average of over \$714,000 and \$1.5 million, respectively, above and beyond the value of their full scholarships over the four years

between 2011 and 2015. It estimates that players on the top ten revenue-generating basketball teams will each be denied over \$3.5 million. It is estimated that Louisville basketball players will be shortchanged almost \$6.5 million apiece.

"These players are being unfairly treated," Ramogi Huma, president of the National College Players Association, told CBSNews.com. "For players to be denied over a million dollars in fair market value, and for the NCAA to continue to resist simply increasing scholarships \$3,000 to equal the cost of attendance is ridiculous, and it goes to show how tone deaf the NCAA is."

The salt that is rubbed in the wound continues to be the egregious salaries paid to coaching staffs who have seen their salaries (FBS coaches) increase by 55% between 2006 and 2011. Coaches in the six power conferences benefitted from average salary increases that rose from \$1.4 million in 2006 to \$2.125 million in 2011. The report points out that Florida State coach Jimbo Fisher's raise for 2011 (approximately \$950,000) is nearly triple the amount it would take to make up his entire football team's scholarship shortfall (\$351,000).



Given that many college athletes need playing time and television exposure to up their chances of entering professional sports,

Continue on Page 32

Short Shots

Are We Genetically Predisposed to Physical Inactivity?

A study in the April 3, 2012, issue of *American Journal of Physiology: Regulatory, Integrative and Comparative Physiology* suggests that at least 36 different genes may play a role in predisposition to motivation for physical activity. Physiologist Frank Booth and geneticist Kevin Wells examined levels of voluntary physical activity in a group of rats, divided them into high- and low-activity groups, and then bred the top 26 runners with each other and the bottom 26 runners with each other. After repeating the process through 10 generations, they found that descendants of the high-activity rats elected to run 10 times more than the "lazy" rats. Future research will look at the role each of the 36 genes might play in motivation to exercise.

Source: *Science Daily*, April 8, 2013.

New Study Sheds Light on Brain Damage in Football Players

In a study of 67 college football players,

researchers found that the more hits to the head a player absorbed, the higher the levels of a particular brain protein (S100B) that's known to leak into the bloodstream after a head injury. Even though none of the football players in the study suffered a concussion during the season, four of them showed signs of an autoimmune response that has been associated with brain disorders. Although the function of S100B is not fully understood, its presence indicates damage to the blood-brain barrier. It appears to be involved in regulating nerve growth and has been associated with certain neurological conditions such as Alzheimer's disease, epilepsy, amyotrophic lateral sclerosis (ALS), and certain cancers. Using a relatively inexpensive blood test (relative to the enormous costs of CT and MRI scans), the researchers found that elevated S100B levels directly correlated to the number and severity of head hits. Body contact or simply playing in a football game did not affect S100B levels in the players. "Much attention is being paid to concussions among football players and the big hits that cause them, but this research shows that more common 'subconcussive' hits appear to cause damage too," said Damir Janigro, PhD, the director of cerebrovascular research in Cleveland Clinic's Lerner Research

Institute, who led the research team. The study was funded by a \$250,000 grant from NIH.

Source: Health Hub From Cleveland Clinic: http://my.clevelandclinic.org/media_relations/library/2013/2013-06-03-cleveland-clinic-study-uncovers-risk-of-brain-damage-college-football-players.aspx

Cheat Your Way to Athletic Success?

Baseball players who chew (gum or tobacco) while playing may be on to something. A recent study reported in *Brain and Cognition* has shown positive effects for gum chewing on reaction time. Japanese researchers investigated the effect of chewing on aspects of attention and cognitive processing speed, testing the hypothesis that this effect induces higher cognitive performance. Participants were instructed to press a button with the right or left thumb according to the direction of a centrally presented arrow. Each participant underwent two back-to-back sessions with or without chewing gum, odorless and tasteless to remove any effect other than chewing. Behavioral results showed that mean reaction time was significantly decreased during the chewing condition.

Continue on Page 18

Short Shots

Researchers also found higher activations in the anterior cingulate cortex and left frontal gyrus for the executive network and motor-related regions for both attentional networks during the chewing condition. These results suggest that chewing induces an increase in the arousal level and alertness in addition to an effect on motor control and, as a consequence, these effects could lead to improvements in cognitive performance. So, let's break out the Wrigley's.

Source: Yoshiyuki, H. et al. (2013). Effects of chewing on cognitive processing speed. *Brain and Cognition*, 81(3), 376-381.

Fewer Foreign Students Enroll in Science Programs

The *Wall Street Journal* reports that applications to science programs in American graduate schools have declined 5% for the next academic year, a reflection of tighter immigration policies, uncertainty in funding for science research and education, and the emergence of strong academic alternatives in China. Applications for biology programs declined 7% after a

1% decline the prior year. Almost 15% of graduate students in American universities are from abroad. The University of Illinois at Urbana-Champaign was one school especially hard hit as applications from Chinese students fell by more than 15% last year. (Applications from Chinese students make up more than half of all international graduate applications at the school.) Still, there are some encouraging signs. Applications from Brazilian students increased 21% this year, albeit from an application pool that includes only 1% of all international students enrolled in U.S. graduate schools.

Source: Korn, M. (2012). Fewer foreigners eye U.S. graduate science programs. *Wall Street Journal*, April 8, A6.

Barefoot Runners Personae non Gratae at Gyms

Those who like to run on the treadmill at a local gym are meeting with resistance not only from management but from other exercisers as well. A member of a Seattle fitness emporium told the *Wall Street Journal* how repulsed she was to see a man running barefoot on the treadmill at her gym. "It was just a big, hairy dude with

his big hairy feet, clomping along beside me. I just felt like that was an unnecessarily excessive human skin transfer." Still, the practice seems to be on the rise. According to the *WSJ*, the Barefoot Runners Association now has 5,000 members, up from 500 members in 2009.

Source: Athavaley, A. (2013). At the gym, the shod with the unshod would beat feet. *Wall Street Journal*, March 16-17, A1, A8.

Boxing Association Bans Headgear to Quell Concussions

In what many see as a counterintuitive move, the International Boxing Association (AIBA) has banned head gear in matches between elite boxers as a way of minimizing concussions. Data to support the idea are limited, if available at all, but some think the rule change will prevent boxers from using their heads as weapons and may not hit quite as hard. Some think that the headgear endangers boxers because it prevents them from seeing oncoming blows to the side of the head. Others point out that headgears diffuse the force from blows to the head, thus allowing boxers to continue fighting when they should stop, and still others point out that headgear does nothing to prevent the trauma to the

Continue on Page 19

Short Shots

brain stem that results from blows to the jaw that twist the head to the side.

Researchers Recommend ECG Screenings for Athletes

A recent NCAA-funded study carried out by the president of the American Medical Society for Sports Medicine Jonathan Drezner, MD, and his team of researchers from the University of Washington supports using ECG screening in preparticipation exams for athletes. The study examined ECGs from 2,471 male and female athletes from 14 NCAA Division I universities, none of whom had received an ECG screening in the past. Seven of the group were diagnosed with serious cardiac disorders on the basis of abnormal ECGs. None had an abnormal medical history or had been identified as being at risk for sudden cardiac death. Nearly a dozen collegiate athletes in the United States suffer cardiac arrest each year.

Source: *Science Daily*

www.sciencedaily.com/search/?keyword=ecg+athletes.

Fighting Racism on the Pitch

The Beitar Jerusalem football (soccer) team recruited two Muslim players, and its clubhouse has been burned down, Jewish Israeli fans have boycotted, ticket sales have tanked, and sponsors have distanced themselves from the club. When one of the Muslim players (both Chechens) touch the ball, the few spectators who remain boo. The ultranationalist club was founded by a Zionist youth movement decades ago. But Beitar is the exception, not the rule, in Israel where more than 20% of football players are Palestinians. The roster of one team is virtually all Arab. Israel's football federation has punished Beitar by deducting points when police hear cries of "Death to Arabs" or "Muhammad is dead." Fortunately, change is imminent. This year Beitar recruited some local Palestinians for its youth development program. "There's no way back," a Beitar coach told *The Economist*. "We've no choice but to co-exist."

Source: *The Economist*, April 13, 2013.

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Continued from page 3

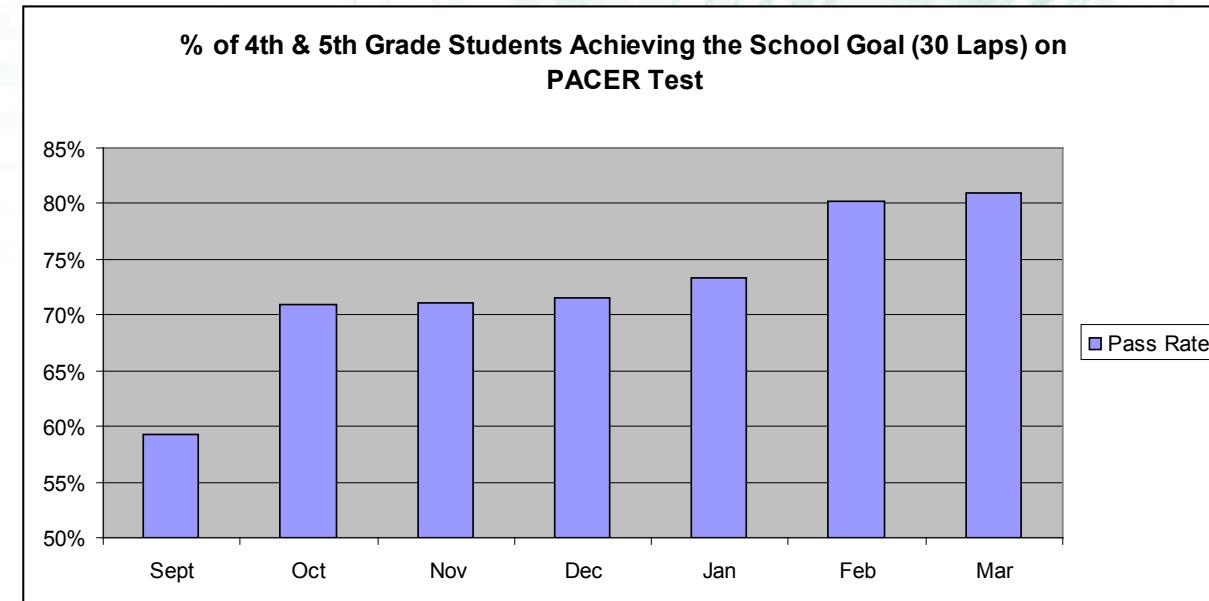
Pilot School Program Is Moving Kids To Move

a year. The data collected are uploaded to the online application on school days when children swipe their wristbands at one of several syncing stations. Children can log on to the Sqord website (www.sqord.com/parents.php) and view their activity levels over time and their corresponding point totals for the day or week, and they can send encouraging notes to classmates through their PowerMe avatars.

Physical education teacher Jon Haws said that so far the program has been successful in motivating his students to be more active during the week as well as after school and on the weekends. "There is no question that, initially, every single student is drawn into this program. They get it: The more I move, the more points I get."

In fact, monthly fitness assessment scores have gone up since the program's inception. Haws has observed the biggest improvement among students who, before implementation of the pilot program, had been least inspired to engage in physical activity. These included overweight students.

The online application automatically sets individual daily fitness goals based on the activity data it collects. It also automatically pairs participants with classmates (that is,



Note: Sqord bands were distributed after the January PACER test, but prior to the February test. *Data from 116 fourth & fifth grade students at Patrick Henry Elementary School

students within the same grade) in weekly competitions, tracks team totals (at Patrick Henry, there are red and blue teams for each participating grade), and rewards participants with virtual medals and positive feedback when goals are met. Faculty and staff make up their own group and compete against one another as well.

Haws asserts that, to convey information about healthy living and exercise today, it helps to be able to offer real-time tracking and immediate feedback at syncing stations. Students can run a lap around the

gym, sync their Sqords, and see instantly how many points they've gained. In fact, this immediate reporting of numbers at wristband syncing was a fix the PE teachers requested from the company on a Friday, and the software was upgraded with that change by the following Monday.

Haws explained, "These students are used to the immediate responsiveness of their technological devices—if information takes more than 30 seconds to pull up, you lose their attention."

In Haws' estimation, the program's weekly

Continue on Page 21

Continued from page 20

Pilot School Program Is Moving Kids To Move

peer competitions have motivated greater increases in physical activity than the individual daily challenges ("Sqrchers") but only when both students buy in to the goals set by the program.

"They come in excited to see whom they are facing that week," Haws said. "It's worth noting that you really have to have full participation from students for this to work. If I'm going up against someone who isn't checking her band, then there's no motivation for me."

Stephen Silverman is a professor of education and chair of the department of biobehavioral sciences at Columbia University. He advises that these devices, though extensively used in health research and now available on the consumer market from several sport gear manufacturers, still have not been adequately researched as a classroom tool.

"I don't think we know a lot about it yet. It seems like it can be a good motivator that could help children and adults plan their physical activity goals," said Silverman. "The question is how it can be used as a teaching tool to get kids to learn about physical activity. We need more research to determine best practices for using the kind

of data these devices collect in elementary classrooms."

And Silverman cautions that there could be negative ramifications to teaching fitness through competition if, for example, a student is ostracized for scoring lower than others. "If I were using this as a classroom tool, it would involve having students see that information privately," he noted, "and using it to teach them to develop individual physical activity programs."

Haws stresses that the Sqord pilot program was implemented to complement a rigorous PE curriculum that he and fellow PE teacher Mike Humphreys had already set into place—one that develops both fitness and skills while stressing the importance of lifetime sports.

"We see these kids only twice a week. We try to give them the tools and education they need to go out and pursue these things on their own. And we are seeing if this little shot of motivation is able to drive other things. We want them to be healthy, but we also want them to be respectful, have a positive attitude, and exercise good sportsmanship."

And Haws maintains that competition does have its place in motivating and teaching the hows and whys of physical activity to young children. "If I were to have one message, it's that competition is healthy. It also offers teachable moments. Yes,

there is going to be that kid who gets more points than you, but without competition, you don't learn sportsmanship. Also, in the team competition aspect of this program, students may work together to beat more people on the other team, so they use cooperation."

Haws said that overall the device has been a great support to PE instruction at Patrick Henry, though he did mention several drawbacks to the program:

- It doesn't track how well students play, just how much they move.
- Students aren't able to set their own goals within the application and might set more challenging individual goals given the chance.
- When children lose their wristbands, they lose their points since the last sync. Their competitors gain an advantage, and that tends to disengage them for that week.
- Students have limited time at school to log on to the Sqord application and, until more stations are available, they have limited access to the syncing stations.
- The device can hold information for only 72 hours, limiting participation over school vacations.

Sqord cofounder and CEO Coleman
Continue on Page 22

Continued from page 21

Pilot School Program Is Moving Kids To Move

Greene maintains, "There are very few opportunities for a negative experience on our platform, other than that your team may not win every week or you may not make your individual goal. All of the pre-formed messages the children can send are goofy, positive, and reinforcing. And the competition is set up so that everyone has a good opportunity to contribute to their team's result."

Green said he is excited about the feedback the company has received from Patrick Henry and from third- through sixth-grade participants in pilot programs at schools in Colorado, Florida, and Alaska. The company has recently partnered with Premera Blue Cross in Seattle, Washington, and will provide wristbands and syncing stations through that organization's health coalition with schools, local YMCAs, and other orga-

nizations, serving about 10,000 children.

The company intends to roll out the Sqord device to the consumer market at the end of 2013 or start of 2014.

Greene said, "We found there was a huge need for a platform with this sort of technology—a way for them to track something they were already doing and a way for them to engage students outside of class, outside of school hours. If you tell a child, 'This will help with health problems down the road,' the message doesn't really resonate with 10-year-olds. But a gaming platform, this is something kids are excited about using."

According to Greene, the Sqord device may undergo some easy cosmetic fixes before it's released, but it was never the goal to compete with the high-end accelerometers currently on the market for adult use.

"If you look at the Nikes and Fitbits of the world, it's obvious these devices can do cool things," he said. "But for us, it boils

down to providing a low-cost, durable device that's affordable for kids and teachers to use. Right now, we're pretty happy with the functionality."

The company is already looking at possible upgrades to second-generation devices, including rechargeable batteries and a display screen.

Over the last decade, interactive devices have made their way into elementary classrooms across the country in support of technology-driven learning. Time will tell if technology can also drive fitness in elementary physical education.

Patrick Henry's participation in the pilot program was funded by a Virginia Healthy Youth Day grant, a Virginia State Department of Health grant, and the support of community families and businesses (the two PE teachers each contributed some funding, too).

Continued from page 2

New Building Holds Promise of Bright Future for Auburn's Kinesiology Program

far different scenery, including controlled-access research space, a foyer area with original artwork, and large windows that let in an abundance of natural light. It also offers enormous opportunity for the department to raise its national profile.

"I think it's going to be the number one kinesiology facility in the country," said Bruce Gladden, Humana-Germany-Sherman distinguished professor of exercise physiology. "I don't know of anyone who will have any better. The support we have received has been very gratifying. It's a real shot in the arm for us."

The first two floors house the department's biomechanics, motor behavior, epidemiology, and exercise behavior laboratories as well as the Tiger-Fit program, which provides health evaluations and fitness assessments for community members.

"We're going to be able to do experiments that other people cannot do," said assistant department head David Pascoe, director of the department's thermal and infrared lab, and a Humana-Germany-Sherman distinguished professor of exercise physiology.

The new facility also offers more opportunities for outreach activities with an outdoor play area accessible from a ground-level



A view from the thermal regulation lab onto the construction site for the new student wellness sustainability building.

porch area.

The new building will also provide operating bases for two new centers—the Warrior Research Center and the Gastrointestinal Research Center—which have been added to the department in the past two years. This spring a Performance and Health Optimization Center will be up and running. A physical activity research afterschool program will launch in the fall that will allow the department to offer research programs and events for children, including physical activity afterschool programs, summer camps, and football game day activities.

The kinesiology department is currently ranked 22nd in the National Academy of Kinesiology's most recent survey of doctoral programs, but Rudisill, a Wayne T. Smith dis-



Cardio protection lab.

tinguished professor of motor behavior, said the new building offers a unique opportunity for upward mobility. "It will play a vital role in recruiting and retaining top students and faculty members."

"Everything in this building will help us to advance our mission," she said. "Our goal is to be the best program in the country. We have unbelievable faculty, and this new facility will certainly support the work they do. We're going to be able to perform our research, outreach, and instruction much better in a building designed specifically for us."

As the College of Education's director of student development, Jared Russell is especially conscious of the impact a new building will have in recruiting and retaining the best graduate students. "Anytime you get

Continue on Page 24

Continued from page 23

New Building Holds Promise of Bright Future for Auburn's Kinesiology Program

a new building, you get more interest," said Russell, an associate professor of exercise pedagogy. "Along with the new building, we have an opportunity to expand our services to the community, Auburn University, and beyond. The more good people, the more resources, the more productivity, the more it helps with acquiring funding and supporting our research and outreach efforts."

-SJH

Mary Rudisill contributed to this story

Continued from page 4

Top Athletes Excel in Mental as Well as Physical Skills

Female athletes were able to keep up with their male peers when it came to speed of mental calculations and reaction times, while the female nonathletes were not.

Overall the elite volleyball players displayed a higher level of cognitive function in reacting to a changing environment. They noticed objects in their peripheral vision more quickly, detected changes to a complex scene, and were not distracted by irrelevant information, indicating a higher level of executive cognitive functions.

Through both of these studies, the bigger

question of whether these abilities come from intense athletic training or inherited traits still remains unanswered. Researchers agree that the opportunity to track children from a young age through their athletic careers would help to clarify that question.

While scientific evidence has always shown a clear correlation between physical activity and cognitive function, Faubert hopes that these findings with elite athletes will shed some light on the cognitive development for us mere mortals as well. "We are finding a huge difference. It's not even close. It's like they are coming from a different planet," he said. "That's why we think we are on to something special."

Continued from page 7

Rehabilitation Meets Virtual Reality

other labs in the United States are devoted to this type of work, and opportunities for collaborating with others working on a variety of applications are vast. Rhea is collaborating with researchers in his own department who are studying anterior cruciate ligament injuries, researchers at Winston-Salem State University who are working with children with cerebral palsy, researchers at Bradford University in England investigating therapeutic techniques for treating patients with leg amputations, and clinicians at UNC

Chapel Hill on rehabilitation regimens for stroke patients.

The virtual-reality training interventions are developed in the VEAR lab and then disseminated into a clinic using a mobile version of Rhea's lab. "We understood at the onset that our challenge was not only to develop virtual-reality interventions that would have a positive influence on walking rehabilitation, but also to develop a way to deliver our training into a clinic or home-based setting." Rhea and his team have developed the REVIVE (Rehabilitation Engagement Visualized In Virtual Environments) project, which will begin to test their interventions in local clinics.

The team is also continuing to develop user-friendly ways to provide research-grade assessment outside a traditional laboratory. For example, Winston-Salem State University and East Carolina University are collaborating on an application for a smart phone that taps into the phone's accelerometer. By activating the application and attaching it to the patient's thigh, the person's walking behavior can be recorded and analyzed in nearly any setting. "We aim to develop assessment and intervention applications for physical therapy that can be used in a flexible and cost-effective manner."

-SJH

Continued from page 10

Understanding and Using Journal Impact Factors

calls for greater cross-cultural understanding and communication. Journal impact factors are no substitute for sound human judgment when evaluating the impact of someone's scholarly profile or an individual piece of scholarship.

An expanded version of Cardinal's article can be found at: Cardinal, B. J. (2013). Judicious use of journal impact factors and the preservation of our fields of study, *Journal of Physical Education, Recreation and Dance*, 84(2), 7-9.

AKA asked Michael Delp and Jerry Thomas to comment on Brad Cardinal's column



Jerry Thomas
Dean and professor,
College of Education,
University of North Texas

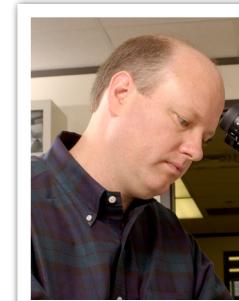
Brad Cardinal points out many of the problems associated with journal impact factors and citation rates (also see Thomas, Nelson, & Silverman, *Research Methods in Physical Activity*, 6th edition, Human Kinetics, 2011, pp. 39-41). As long as scholars understand

that impact factors depend in large part on the size of the field of study (journal numbers, number of scholars), citation rates and impact factors are among the many useful sources of information. In kinesiology, the area of exercise physiology has increasingly become linked to public health and medicine (that's good), but citation rates (and thus impact factors) from the related journals are huge (*JAMA* is currently 30). For example, if I use Google Scholar (March 28, 2013) with Steve Blair's name (one of our outstanding scholars), his 1995 paper in *JAMA* has 6,338 citations. That's a good career number of citations for many scholars in biomechanics, motor behavior, or pedagogy with around 100 papers.

In our field *MSSE* is one of our best journals and has an impact factor of 4.431. Does that mean that *JAMA* is 7 times better than *MSSE*? Of course not; it means that *JAMA* is a more widely read and cited journal. There are more scholars in medicine and related areas to cite *JAMA* than in exercise physiology to cite *MSSE*; thus, *JAMA* is more widely recognized. If one reads the papers in both, some of the papers in *MSSE* are better than some in *JAMA*. Impact factors can reveal very little in cross-disciplinary comparisons.

Cardinal's final statement is the critical

one: If you want to know the quality of the research and the research paper, *there is no substitute for reading it*. Impact factors and citation rates are useful only as general guidelines within the field of study, not across fields of study. And even then, they have the shortcomings pointed out by Cardinal.



Michael D. Delp
Professor and chair,
department of applied
physiology and kinesiology

University of Florida Thomson Reuters' journal impact factor is a commonly used metric to gauge the quality and impact of published scholarly work. As Dr. Cardinal has pointed out, there are many concerns and shortcomings regarding the use of this metric for assessing impact. Yet it is frequently used by granting agencies in the appraisal of investigators for funding decisions and by universities in the evaluation of faculty. The reality in higher education today is that assessment through professional opinion alone of such things as teaching

Continue on Page 26

Continued from page 25

Understanding and Using Journal Impact Factors

effectiveness or research impact is often viewed by legislators, accrediting agencies, and university administrators and faculty as insufficient. Thus, other means of assessment, including journal impact factor, are used to gauge scholarly impact.

At the University of Florida, journal impact factor is often used at the departmental, college, and university levels to inform decisions regarding tenure and promotion, merit pay raises, proactive retention salary adjustments, and research incentive awards. In each of these cases, a primary goal is to determine whether an individual's work is having an impact on their field and reward it accordingly. For instance, in tenure and promotion decisions, we seek peer evaluation letters to gauge the impact of a person's work as well as consider the 5-year impact factor of journals where their work is being published. This is, in part, because journals with higher impact factors tend to have higher rejection rates, so journal reviewers serve as proxy evaluators of quality and impact. But as Dr. Cardinal and others have previously stated, assessment derived from journal impact factor does not always accurately gauge the quality and impact of a single study. To more

precisely gauge the specific impact of a scholar's publications, as opposed to the aggregate impact of all the work published in a journal, citation frequency of specific publications and the author's h-index are other informative metrics to consider (see Thomson Reuters Web of Knowledge for more information about h-index).

In some cases, it is possible that neither journal impact factor nor citation frequency of publications may capture the impact of someone's research. For example, if an individual developed a new pedagogical method that was beneficial to practitioners adopting the method, information regarding the prevalence of its use and its efficacy for producing positive results would be powerful indicators of impact.

In today's academic climate, independent means of assessing quality and impact of research are becoming more sought after and commonly used. This includes journal impact factor, despite its limitations and shortcomings. In my opinion, there is not a single perfect metric to assess quality and impact of scholarly products; all have flaws and limitations. When journal impact factor is used in conjunction with other means of assessing value and impact, such as citation frequency, h-index, and professional judgment, it can provide insight into the quality and impact of published scholarly work.

Continued from page 13

Sports Watching and Kinetic Amnesia

to foster deep, rational thought because it requires watchers to be passive. "When a population becomes distracted by trivia, when cultural life is redefined as a perpetual round of entertainments, when serious public conversation becomes a form of baby-talk, when, in short, a people become an audience, and their public business a vaudeville act, then a nation finds itself at risk; culture-death is a clear possibility."

A rough analogy would compare doing sports (reading words) to watching them (passive enjoyment). To reduce sport to something to watch is to ignore its most significant potential impact on our lives, that which comes only by dunking, serving, swinging, spiking, blocking, deking, kicking, diving, vaulting, and . . . well, you get the point. Sport is, and has been for decades, one of the most popular forms of entertainment. While I most certainly would stop short of predicting that our preoccupation with watching sports might lead to what Postman envisioned as the death of our culture, I wonder if it may have the potential to sap our society's predilection to move. Ultimately the danger may not be the cultural amnesia that Postman foresaw but kinetic amnesia, which may be just as ominous.

Continued from page 6

What Constitutes Discrimination When Minority Roles Are Reversed

shop in January. To that end we solicited the opinions of four faculty in kinesiology departments including Maureen Smith of Sacramento State University, Nancy Spencer of Bowling Green State University, Fritz Polite, University of Tennessee, and Jared Russell of Auburn.

Jared Russell

Obviously white men can ball! Why are we surprised?

Maybe surprised is the wrong word. How about confused? Scared? Angry? Disenfranchised? Pick an emotion and let the debate begin. The grand conspiracy suggested by Mr. Tyrone Terrell and Mr. Ron White that the Minnesota Timberwolves' ownership in an effort to appeal to white NBA ticket-holders stacked the team with white players (discount the distinct international flavor) is interesting to read about but doesn't make a lot of sense. Until Kevin Love and Ricky Rubio arrived on the Minnesota hardwood, who was the most popular player in the history of Timberwolves' basketball? Say it with me: Kevin Garnett. Who happens to be African-American and was drafted right out of high-school. Yes it is odd to see a majority white NBA team but that is the result of (a) Minnesota not exactly being a

hot-bed for free-agent talent to consider, (b) the push by the NBA to expand their product overseas which has led to an influx of international talent being taken in the draft, (c) the impact of the original Dream Team on kids growing up to "be like Mike" and (d) the need to win. This conversation can start and end with that last point – winning. As Phil Taylor's piece in Sports Illustrated pointed out winning is first and foremost in the minds of ownership and the fans not conspiracies.

Maureen Smith

The Timberwolves management can state publicly that race is not an issue, and Phil Taylor writing for SI can support them and say he doesn't think it is an issue. However, if the perception of players or fans, or Mr. Terrell and others, is that management does make racially based decisions, well, those perceptions matter. We know that race remains an issue in personnel decisions in professional sport. Recently, there were eight head coaching hirings in the NFL and no coaches of color were hired. Some would argue that the hiring of eight retread white coaches was racially based decision making on the part of management (despite having the Rooney Rule in place). The NBA has no Rooney Rule, and while they have a better record of hiring

coaches of color than the NFL, the hiring of coaches of color in all professional sports lags well behind their white counterparts. As far as players, I would suggest that in the absence of qualified white American players, NBA teams do seek European players for reasons that speak to global appeal, their perceived whiteness, as well as possessing qualities traditionally assigned to "white" players (code words such as team player, fundamentally sound, outside shooter, etc.).

A new movie celebrating the life of African American baseball great, Jackie Robinson, is set to be released. More Americans will learn about this legend, who was the first African American to play in major league baseball in the modern era. How many will realize that the decision to sign Robinson had everything to do with race and money? Professional sports are businesses and business owners will take measures to make as much money as possible. Sometimes that means hiring an African American athlete to appeal to another population whose dollars you have been unable to attract. The same could be said for the Timberwolves and their personnel decisions. The Timberwolves may not be racist, but their decisions about hiring players and personnel have racial implications and indicate that race does matter.

Continue on Page 28

Continued from page 27

What Constitutes Discrimination When Minority Roles Are Reversed

Nancy Spencer

Several issues are raised by Tyrone Terrell's assertion that the Minnesota Timberwolves deliberately constructed its roster to appeal to a white fan base. It is no surprise that the Wolves' general manager created plausible deniability by saying that the makeup of the team is nothing more than a "coincidence of circumstances." Yet, consider Larry Bird's statement in 2004, when he suggested that the NBA lacked "white superstars," who would be good for the mostly white fan base. Why did Bird's remarks cause so little stir when compared to Terrell's assertions? Bird was simply saying what Terrell observed.

Some scholars speculate that the declining numbers of white players in the NBA has led to the recruitment of (mostly white) Europeans. While the Wolves say that such a move enhances the international flavor of the NBA, it has also changed the complexion of the league. Phil Taylor suggests that racial categorizing has become more complicated with the addition of white Europeans as well as Asian (Yao Ming) and Asian American (Jeremy Lin) players. And perhaps that is

a good thing, if racial categories provided the basis for quotas. Taylor concludes that some issues aren't just black and white. Such is the dilemma of binary (i.e., "black and white") thinking – it ultimately breaks down. When we can no longer think in terms of only two possibilities, perhaps we can see the drawbacks of how race is socially constructed.

Fritz Polite

The role of race, ethnicity and globalization: The Only Constant is Change

The world is changing at lightning speed. The internationalization aspects of a changing global economy are impacting almost all aspects of how we view the world. That includes how we view and decipher the constructs of race, ethnicity and culture. Sport is no exception. Historically, sport has played a significant role in our society. The issues of gender equity were challenged by Title IX. Sport was integral in the Integration process in respect to the institution of segregation in the United States. Particularly in the South where institutions and public spaces were separate and blacks were not allowed to attend, much less participate in the academic /athletic process at most PWI's. Sport was impactful in the progress

towards integration. Sport has always held a significant place in our history.

These constructs associated with integration were based on the discourse of social spacial identity. Social space as defined by French social theorist Henri Lefebvre is a social product, and the space produced also serves as a tool of thought, action, production and control. This ability to control leads to levels of attained power. The powers to be did not accidentally draft/trade for these NBA players. Whether the intention is geared towards globalization, marketing, branding or winning, the team was constructed intentionally with a determined purpose. Corporations and marketing executives expend tremendous amounts of expenditures towards the promotion of their products. This constitutes the paradox of race /ethnicity and how the majority of NBA ticket consumers (Whites) create a vastly different discourse from the minority consumer (Blacks/Hispanics). If you do not believe it, take a gander of the audience at a NBA game in Minnesota and the changing landscape of the NCAA Tournament as well.

Continued from page 5

Changing Faces of Kinesiology

moves forward by a few decades to describe the careers of two individuals with buildings named in their honor: Louise **Freer** and **George Huff**. George Huff served as both the director of physical training for men and the University of Illinois athletic director from 1901 to 1936. The primary emphasis of the department in those days was the professional preparation of physical education teachers and coaches. Huff established the first program for the preparation of Athletic Coaches in 1914. For many years, at least for male students, physical education and intercollegiate athletics were closely intertwined at Illinois. Faculty members often had joint appointments as coaches and many undergraduate students were also student athletes. It is only relatively recently that there has been an almost absolute separation of academic kinesiology from intercollegiate athletics, perhaps reflecting an increased rigor and scientific emphasis in the Kinesiology curriculum and a decreased focus on sport and competition in favor of courses related to overall health and well-being.

Louise Freer was named the director of physical training for women in 1915 and served in that capacity until her retirement in 1949. Freer was a strong advocate for

equality of opportunity for female students and it was under her guidance that the first research laboratories were established in the now renamed physical education for women (PEW) department. The PEW department was authorized to offer bachelor of science degrees for women in 1923. Long before the passage of Title IX, the Women's Athletic Association provided opportunities for female students to participate in a variety of intramural tournaments and competitions but without the level of funding that men enjoyed and without the opportunity for intercollegiate participation.

The research era at the University of Illinois began in earnest in 1941 with the hire of **Thomas (TK) Cureton** as the first director of the Illinois Physical Fitness Research Laboratory. In its early days, the laboratory was best known for developing methods to test motor fitness and to appraise human physique, cardiovascular fitness, and athletic performance. Since 1949, when the first graduates from the lab began to establish their own careers, literally hundreds of PhDs from Illinois have accepted academic positions around the world as thought leaders in the field of kinesiology. Cureton started an adult fitness program in the early 1960s, and it continues to thrive. In the lifetime fitness program, as it is now called, adults of all ages gather to begin the day with

a vigorous physical workout. The current emphasis in our field on the role of physical activity in the prevention and treatment of chronic diseases can trace its roots back to programs similar to those initiated by Cureton at Illinois.

Moving closer to the present day, my talk continues with a description of the remarkable career of **Rainer Martens**. Martens was a faculty member at Illinois in the mid-1970s who was unable to find a publisher for his *Sport Psychology* course text. Rather than try to deal with publishing companies who had little understanding or appreciation of the rigorous and scientific nature of Kinesiology, Martens decided to form his own company. As president of Human Kinetics (HK), Rainer has been responsible for the publication of countless books, journals, videos, and online courses in the fields of kinesiology, sports, fitness, and physical activity. Rainer Martens and HK have been hugely influential in supporting curriculum development and reform across our field, and many of the core courses in the kinesiology curriculum have adopted books and other materials developed and disseminated by HK authors. Perhaps most important for our organization, the establishment of the **American Kinesiology Association** as the premier organization representing kinesiology departments in

Continue on Page 30

Continued from page 29

Changing Faces of Kinesiology

the United States was made possible by a generous gift from Rainer and Julie Martens and Human Kinetics.

My historical journey wraps up with a description of the work of some of our current faculty members. Space does not permit me to provide a detailed overview of the diverse and fascinating careers of the remarkable colleagues I have the pleasure to work with here at Illinois. Many are internationally recognized for their research, teaching, and public engagement. Our faculty members are organized around five curricular groupings:

1. Biobehavioral kinesiology faculty examine the antecedents and consequences of involvement in physical activity and the impact that physical activity has on individuals.
2. Cultural, pedagogical, and interpretive studies faculty explore the interaction between physical activity and the individual from a variety of cultural, sociological, and pedagogical perspectives.
3. Exercise physiology faculty conduct research in order to understand the consequences of exercise stress on body systems.

4. Health disparity and disability faculty study factors that affect the overall health of communities. Faculty in disability examine the impact of disability in the population and the emotional, environmental, vocational, and educational issues surrounding adjustment to disability.
5. Public health faculty study population-based approaches to public health with an emphasis on chronic disease prevention and treatment.

At the conclusion of my talk I engage our freshmen in a discussion about what is different and what has not changed in our department since the 1890s. Most agree that our underlying commitment to the core values of physical activity, fitness, and health remains unchanged. However, we also agree that our discipline has evolved into a much more rigorous and sophisticated evidence-based science with opportunities available for today's students that would have been unimaginable in the times of Ella Morrison and Henry Everett. In addition to serving in important traditional roles as teachers and coaches, athletic trainers, sport administrators, and graduates of kinesiology departments now have the opportunity to make a difference in physical activity-related positions in hospitals, clinics,

corporations, public health departments, and a wide variety of other public- and private-sector professions. The history of the kinesiology program at Illinois and in many other institutions across the nation has been one of continuous evolution and change. These changes have not always come easily; however, they have been an essential element of our evolution in an evidence-based scientific discipline.

Continued from page 14

On Childhood Obesity Prevention

Vaccine Delivery System

School-based intervention is the only strategy identified as effective for prevention of childhood obesity. Adopting the vaccine metaphor is naturally relevant in school interventions. All schools require vaccination records of all children upon their enrollment. When a child misses a particular vaccination, the school is obligated to refer the child to appropriate health institutions to receive the vaccination. Families, communities, and society fully understand and appreciate this practice. A primary approach to achieving the goal of prevention of childhood obesity is to require quality physical education at all levels of schooling. From the vaccination perspective, physical education is a delivery system. This conceptualization requires a philosophical endorsement of the following: (a) All school-age children are likely to become obese adults. The odds of becoming obese are very high because children are the most vulnerable population. (b) Evidence from obesity

research must be accepted and acted upon: Physical activity can help reduce the chance of becoming overweight and obese. (c) Moderately high-intensity physical activity (MET > 3.0) must be embraced as a paramount guideline in planning any physical education experience. (d) Caloric balance must be taught as a major area of physical education. One important aspect of the vaccination system is that along with the institutional effort, personal responsibility must be centrally instilled in children and their families. Toward this end, physical education, as an important vaccine delivery system, must do the seemingly impossible: not only taking children to the vaccine delivery site (i.e., the gymnasium) to receive the daily dosage but also educating them about why this lifelong, daily vaccination is required for a healthy, enjoyable, and productive personal life. With tens of millions of children's future at risk, developing, strengthening, and maintaining such a vaccination system are worthy efforts.

Continued from page 16

Shortchanging Collegiate Athletes: The \$6 Billion Heist

it is difficult to muster support for anything approaching a full revolt. A strike remains a remote possibility. Nevertheless, the report includes comments by some brave athletes, including University of Georgia football player Chris Burnette, who said, "If you look at the billion-dollar TV deals, conference realignment, shoe company logos on our uniforms, and the salaries of coaches, ADs, and the NCAA president, it's clear that NCAA sports isn't amateur. The NCAA is using amateurism as a scam to rob us during the most valuable years of our lives."

As for the NCAA's argument that the value of a scholarship is sufficient remuneration for players since college graduates earn up to \$1 million more than their peers who don't graduate, the report points out that only 47%



Ellen Staurowsky
Drexel University,
Dept. of Sport
Management

of men's basketball and 57% of football players graduate within six years. According to the report, the average FBS "full" scholarship fell short of the actual cost of attending school by an average of \$3285 during the 2011-2012 school year.

Professor Ellen Staurowsky of the sport management department at Drexel and coauthor of the study with the NCPA describes how at a recent IMG Intercollegiate Athletics Forum (IMG is the leading collegiate multimedia, marketing, and licensing and brand management company), IMG College president Ben Sutton celebrated the capacity of FBS football to capture viewer ratings in unprecedented fashion, noting that "college football owns Saturdays."

Yet while the enormous financial returns are being used to fill the coffers of television broadcasters and FBS coaches' salaries (often increasing at a rate that is double the trend in the corporate sector), she says "The NCAA's principle of amateurism continues to be used as a mechanism to deny the dignity, humanity, and worth of the athletes whose hard work and commitment gives value to the product that others profit from." The question, says Staurowsky, "is whether college sports have the financial capacity to change the current compensation scheme for athletes that covers tuition, room and board, and books to (at least) minimally cover the cost of attendance. With the new FBS playoff format, \$350 million in new revenue will be tapped. Such a windfall offers the opportunity for the NCAA to adopt rules to update scholarship policies which have not changed since 1952."

The report comes at the same time an antitrust lawsuit arguing that athletes should

profit from the revenue generated by shirts and other products bearing their names or images is wending its way through the legal process. The suit was filed by former University of California at Los Angeles basketball player Ed O'Bannon in 2009 and has turned out to be a massive class-action suit. A certification hearing is scheduled for June 20 to determine whether the suit can move forward in the courts. If the NCAA loses the case, anyone who earns revenue through college sports—conferences, television networks, video game companies—would have to share some of that money with athletes. The case was the subject of a sometimes-hot debate among panelists at the annual meeting University of North Carolina's College Sport Research Institute (video available at http://new.livestream.com/SBEN/CSRIConference?origin=Digest&mixpanel_id=139404e4798310-02e37b99e-1c79343a-fa000-139404e47994d5&acc_id=2312974&medium=email).

NCPA report available at www.insidehighered.com/news/2013/04/23/experts-weigh-possible-outcomes-effects-ncaa-likeness-lawsuit#ixzz2RIT5sLjV.

Full report available at Huma, R., & Staurowsky, E. J. (2012). The \$6 billion heist: Robbing college athletes under the guise of amateurism. www.ncpanow.org.

-SJH

Age No Barrier for European Runners

A thrilling finish to the 60-meter dash in the European Veterans Athletics Championships in San Sebastian, Spain, captured the world's attention. The race pitted 94-year-old Belgian runner Emiel Pauwels against 95-year-old Finnish runner Ilmari Koppinen. Koppinen was faster out of the blocks and held the lead throughout the race only to lose by inches at the finish line. Both runners were presented with gold medals: Pauwels for finishing first in the over-90 flight and Koppinen for finishing first in the over-95 flight. [See Rotas collection of photographs of senior athletes at <http://www.womanaroundtown.com/sections/playing-around/inspirational-photos-of-senior-athleticism-on-display-at-dcs-city-fitness-gym>]

Video of the thrilling race at <http://www.youtube.com/watch?v=Pc-fskgwUIM>.



Photo of Emiel Pauwels

[Continued from page 1](#)

Active Architecture

studies for towns looking to up the level of physical activity among their citizens by promoting development patterns that are more compact closer to transit, emphasize walkable neighborhoods, include sidewalks, and have open spaces for play. Fit City 8 Conference, a collaborative project of the NYC AIA and the NY City Department of Health and Mental Hygiene, will convene in New York on June 24, bringing together architects, planners, designers, landscape architects, developers, and public health professionals "to discuss how design, policy, and practice decisions can address the key health epidemics of our time: obesity and related chronic diseases such as diabetes, heart disease, some cancers and asthma."

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