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Research on Teaching Physical Education: Celebrating Our Past and Focusing on Our Future

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I'd like to thank Lynn Housner and his colleagues for organizing this effort and for asking me to participate in this way. I understand that many here are more informed about the current state of research on teaching and teacher education in physical education than I am, but I remain determined not to let that inconvenient truth deter me from trying to say something useful this evening. I also have to say that I greatly appreciate the opportunity to again see so many colleagues and friends I have made over the years attending AAHPERD, AIESEP, AERA, and other events where sport pedagogy researchers gather.

Beacuse Lynn thought it appropriate for a senior citizen to provide opening remarks, I'd like to start by expressing my appreciation to some colleagues whose contributions certainly influenced my work and also moved forward our collective research endeavors. My regards and deep appreciation to:

- Bill Anderson, who had the foresight to create a videotape databank of physical education lessons and engage a group of doctoral students at Columbia Teachers College to develop yoked dissertations that pioneered measurement systems to help us understand "what's going on in the gym";
- Ann Rothstein and Pat Del Ray, who took the risk to start *Motor Skills: Theory Into Practice*, a journal friendly to our early efforts in teaching research;
- My dear friend and longtime colleague, Larry Locke, for his willingness and his extraordinary skill in building a niche as a reviewer and commentator on our methods and our purposes;
- Kate Ross Barrett, who was teaching us about techniques and tactics and teaching games for understanding long before those terms entered our common vocabulary;
- Ann Jewett for helping us to think about curriculum from a more conceptual perspective;
- Don Hellison, who first brought forward, and for over thirty years has sustained a focus for, developing human and social capital among youth;
- Maurice Pieron for his steadfastness in developing AIESEP to build bridges among colleagues in Europe and then to bridge the Atlantic to include those of us in the USA—and

to Ron Feingold for his hard work to push forward that relationship from our side of the pond;

- Amelia Lee, The Mary E. Baxter Professor in Kinesiology at LSU who transformed herself from the ultimate all-purpose physical educator to a highly focused and productive scholar;
- To my doctoral students, Mike Metzler and Mark Freedman, who started JTPE in their basements just a year or so after completing their degrees;
- Larry Locke and George Graham for conspiring to produce the initial meeting of what became our "invisible college" in AERA and later our special interest group;
- Again to George Graham, the most gutsy innovator in our profession in my lifetime—for The American Master Teacher Program, which foreshadowed National Board Certification, for USPE, an organization whose sole focus was the improvement of physical education, and, of course, for PE Central;
- and, finally, to the 81 doctoral students who survived my chairing their doctoral committees and who, each in their own way, helped me to get better because they were so good.

I hope and trust that there are visionaries in this audience who are conjuring up bold ways of continuing to move us forward.

I want to share some thoughts with you about the current state of physical education with particular reference to the emerging dynamic created in response to the childhood and youth obesity crisis. I do this because I have always believed that research in teaching physical education and research in physical education teacher education exists primarily to serve and move forward the profession of physical education and, especially, the quality of physical education programs in schools. Although my comments pertain primarily to what I know about the current scene in American physical education with regards to responding to the obesity crisis, I am fully aware that similar problems have arisen elsewhere. For example, just a few months ago our German colleague, Wolf Brettschneider, sent me a copy of the recent publication titled "Obesity in Europe: Young People's Physical Activity and Sedentary Lifestyles," commissioned by the European Union's Directorate for Education and Culture and published by Sport Sciences International.

Now, I also realize that there are many cautions we should attend to regarding the current focus on the childhood and youth obesity. I understand that BMI is far from the gold standard for measuring overweight and obesity. I understand that there is some evidence that slightly overweight adults might actually have reduced risk for certain health problems. I understand that there is an enormous risk of stigmatizing obese children and youth in ways that are terribly counterproductive, that the national spotlight on overweight and obesity may lead to discrimination of obese adults by the media and insurance companies, that there are arguments that obesity is not a modifiable behavior, and that for those who are overweight or obese there is some inherent risk in combating the condition with binge dieting and the like. All that having been said, we also have to recognize that this particular health crisis has led to more federal and state legislation than any of the previous American health crises and that physical education has been targeted in these new laws as a key component for com-

bating the childhood/youth obesity crisis. School physical education programs are expected to respond to this crisis. Physical education teacher education programs are expected to prepare teachers who are capable of developing school programs that respond to this crisis.

This new demand has followed a decade when physical education in American schools has not fared well. The dominant theme of education in America, at least from the perspective of policy makers, has been better academic preparation, especially in reading and mathematics, to better enable us to compete in increasingly competitive world markets. For the very first time in American history, the federal government saw this agenda as so important that it created the No Child Left Behind (NCLB) policy to exert substantial influence on the direction of K–12 education in ways that heretofore had been left to the individual states. I should remind our many conferees from other parts of the world that America's federal constitution makes no mention of education. Historically, legislation affecting education has been left to the states and within the states to local school districts. Aside from the federal government's strong involvement in supporting education for students with disabling conditions and its efforts to support school lunch programs for poor children, NCLB marked the first major federal legislative foray into regular academic programming in American schools.

It is now abundantly clear that a consequence of NCLB has been the diminution of weekly minutes devoted to other subjects such as science, social studies, art, music, and physical education. This has been especially clear in the reduction of physical education time requirements in elementary schools, but it has also affected later grade levels where physical education has been depleted through reduced requirements in middle schools, reduced requirements in Carnegie units in high schools, and increases in activities that can be substituted for PE, such as band, school sports, and the like. The demands of NCLB on schools have created new expenses for school districts, and districts can be very clever in freeing up resources to cover the new NCLB-related expenses. For example, the Columbus Public Schools had always fulfilled Ohio's one semester high school PE requirement in the 9th grade, but several years ago the district decided to have high school students fulfill the requirement in their senior year. Why? Because almost 40% of their high school students drop out after the 9th grade, this allowed Columbus to reduce their high school physical education staff by several teaching positions and use those resources for other NCLB-related purposes.

American physical education has a long history of having to respond to health crises. The first was the polio epidemic of 1916. Then, in the early 1940s, there were the large numbers of WWII draftees failing fitness tests. A decade later, in the early 1950s, there was a reaction in America to the comparison of European and American children's performances on the Kraus-Weber tests, leading to President Eisenhower's creation of the President's Council on Physical Fitness and Sport. Finally, there was President Kennedy's 1960 *Sports Illustrated* article, The Soft American, published shortly after his inauguration, which led to a stronger emphasis on fitness testing.

The federal response to the current obesity crisis, however, has been more robust than in any of those previous crises. In June 2004, Congress passed the Child Nutrition and WIC Reauthorization Act, with Section 204 requiring that "each local educational agency participating in a program authorized by the Richard B. Russell Child Nutrition and Reauthorization Act of

1996 shall establish a local school wellness policy by the school year 2006–2007." This legislation required that local wellness policies, crafted by local school wellness councils, focus on school nutrition, nutrition education, and physical education/physical activity. Because nearly every public school in America receives federal funds for their school food programs, the requirement for local wellness councils has been nearly universal.

From September to December 2006, I worked with the able assistance of 17 doctoral students at OSU on an analysis of Ohio's efforts to combat childhood and youth obesity, and compared our state's efforts to those in other states (Siedentop, 2007). During the data collection phase of our research, we found that most states had already created legislation to define and guide the work of their local school wellness councils. While the federal legislation required the formation of the wellness councils and framed broad objectives, legislation in states had set more specific requirements for school nutrition, nutrition education, and physical education/physical activity. In many states, requirements for physical education and physical activity have been strengthened by increased time requirements in PE and the addition of time requirements for physical activity outside of PE. In the state of Washington, recent legislation requires schools to develop a comprehensive health and fitness curricula with a minimum time commitment of 100 minutes per week in grades 1–8. In Texas, elementary and middle schools are now required to provide a minimum of 135 minutes weekly in physical education. In North Carolina, new legislation requires elementary schools to "consider the benefits of and move toward having 150 minutes per week with a certified physical education teacher throughout the 180-day school year," and the expectation for middle school is to move towards 225 minutes per week. California legislation now requires 200 minutes for every 10 school days in grades 1–6 and 400 minutes for every 10 school days in grades 7–12. In a few states, legislators recognized that increased time requirements for physical education would make it necessary for districts to hire more PE teachers and have included in the legislation funds to support such hiring—$23 million over three years in South Carolina and $40 million in California. In other states, however, this same recognition likely prohibited legislators from increasing time requirements for PE, as it would be yet another unfunded mandate for schools. A number of states have also included in their legislation, especially for elementary schools, weekly time requirements for physical activity in addition to the time requirements for physical education. Several states have added requirements that students take part in physical activity programs in addition to physical education, with specified weekly minute requirements for the PA sessions. For example, Arkansas now requires that elementary schools provide 150 minutes per week of physical activity, including 60 minutes of physical education. Students in Arkansas high schools must now participate in a minimum of 150 minutes per week of PA through activities such as walking programs, intramurals, lifestyle wellness education, and organized PA courses, all in addition to the one semester requirement in physical education. States have also included new rules in their legislation that require physical education classes to have the same student to teacher ratio as regular classes and requirements for having one full-time, qualified physical education teacher for every 500 students. I should also say that most legislation does not include accountability measures to

ensure that time requirements are being met, with the exception of several states that require districts to annually report the number of minutes per week spent in physical education. South Carolina remains the only state that has the beginnings of an accountability system.

I submit to you that none of the health crises cited earlier resulted in anything close to what we now see in state legislation that strengthens school physical education and introduces requirements for physical activity outside of physical education class requirements. The best we could accomplish in response to previous crises was to increase fitness testing, what one of my favorite critics once described as "doing the President's push-ups."

It seems clear that there is a strong national consensus that the primary goal for American physical education should be for students to adopt and value a physically active lifestyle. This is a very broad goal that accommodates those who eventually grow into a commitment to exercise for health purposes, those who grow into a commitment to regular physical activity for health purposes and also because they find it very enjoyable, those who choose informal or home activities, those who prefer participation at a health or fitness center, and those whose commitment to physical activity is primarily achieved through regular participation in sport or dance activities.

It appears that this national agenda should encourage researchers in sport pedagogy to focus on various aspects of how these programs develop, how instruction is provided, how students are nurtured towards valuing physical activity, how different students respond to these efforts, how much activity students actually get and how they perceive that activity, and the degree to which teachers have the content knowledge and pedagogical skills to deliver programs that are likely to achieve the goals of this national agenda. It has likely already done this. To pursue these topics would be consistent with what has always been my view of the role of a research discipline whose primary purpose is to serve a profession.

I'd like to share a few of the issues I ponder for which a stronger research base would be useful.

1. Who are the students enrolling in our Physical Education Teacher Education (PETE) programs?

   For several years I taught our undergraduate curriculum and instruction course. On the first day of class, I started by having each student describe their K–12 physical education experiences. Over those years, I estimate that about 20% had a decent experience, with good high school programs appearing most frequently in their comments. The vast majority of those 20%, I'm saddened to report, did not attend Ohio high schools, with students from Pennsylvania and New Jersey reporting the best experiences. Twenty percent had mixed experiences, but nothing memorable in their recollections. The remaining 60% had bad experiences that they were able to describe fairly specifically, with the most common experience being the short unit with little instruction and organized activity that was dominated by more skilled students, and I don't even need to tell you what activity was most common in their middle school and high school classes. These PETE students also came to us with fairly narrow backgrounds in physical activity, largely because many of them participated and trained in one sport the entire year. The conventional wisdom might be

that the majority of those students were primarily interested in coaching school sports and saw physical education licensure as an entry. Indeed, nearly half of the students last spring were already coaching middle or high school sports that quarter. We need to learn more about our students; that is, it would be good to have some serious research on who they are, what they bring to the program, what goals are foremost for their first job, and what they see as their long-term goals. Knowledge like this would enable us to think more clearly about entrance criteria and to adjust our PETE program to better match the needs, and deficiencies, of the students entering the program.

2. Do PETE programs provide sufficient content knowledge (what Shulman [1987] identified as the "first source of the knowledge base for teaching,") and curricular and field experiences that help students learn how to apply that knowledge in instructional settings, that is, their pedagogical content knowledge?

   Now, I understand that content knowledge is a necessary, but not sufficient, requirement for successful teaching, but it is *necessary*. I am frankly appalled at the increasing diminution of content knowledge course work in PETE programs. I have examined a number of PETE program offerings at various universities, and my judgment is that content knowledge courses are seriously underrepresented in program requirements, most often in third place in the number of credit hours required behind disciplinary courses and field experience courses. This is a marked change from the content knowledge courses many programs were requiring when I became involved with PETE in the early 1970s. We have more disciplinary courses because the discipline of kinesiology has expanded. We have more field experience requirements because we have recognized the importance of early field experiences and specialized experiences in conjunction with methods courses. In most cases, the total number of credit hours in the program has not expanded, so the content knowledge courses have been reduced. I'm talking about content knowledge broadly conceived: K–3 motor skill development, sport techniques and tactics, dance, and health-related physical activity and fitness. I was not surprised that the recent Castelli and Williams (2007) article in *Journal of Teaching in Physical Education* (JTPE) found that middle school PE teachers were confident about their knowledge of health-related fitness, but their test scores did not meet the standard of achievement expected for 9th grade students in the South Carolina PE Assessment Program. I have long believed that the "short unit" exposure curriculum offered in many schools is utilized not because the students become bored but rather because teachers don't have the content knowledge to teach an extended unit that maintains student interest. As I have argued at other times and in other places, if you want to see a teacher education program that truly values content knowledge, then look to your colleagues in music education and dance education, or, for that matter, in any of the classroom subjects. Also, I've reviewed content requirements in many of these teacher preparation programs, and my estimate is that they all require at least three times the number of credit hours typically assigned to that part of PETE programs. At OSU, music education majors take 53 credit hours in music performance-content courses, and math educa-

tion majors are required to complete 54 credit hours in math-content courses. I applaud the effort that our colleagues at West Virginia University have made to increase the credit hours in content courses required for their PE majors. I counted 23 required credit hours in content courses in their program, and that is high compared to other PETE programs. It appears to me that PETE units that are embedded in kinesiology departments do worse in this area than PETE programs that are housed in units separate from kinesiology programs.

Disciplinary courses take up a lot of room in PETE programs, and the knowledge base in the sub-disciplines has become considerably more specialized. Judy Rink (2007) addressed the content knowledge and disciplinary knowledge issues with great clarity at the 2006 Academy meetings, later published in Quest. Judy is always good, and in that paper she was at her best. What has been most interesting to me is that academic kinesiologist Diane Gill (2007), in her Amy Homans Morris lecture, also published in Quest, used Judy's arguments to agree that disciplinary courses have moved from basic knowledge to highly specialized knowledge that "has little relevance for the non-specialist," and by non-specialist she meant students preparing to become teachers.

While I was aware of the lack of curricular space given to content knowledge in most American programs, I inadvertently became "educated" about how content knowledge and pedagogical content knowledge can be made central to a teacher education program when I did a week of faculty development at the National Institute of Physical Education in Granada, Spain. I watched a number of the activity classes that week, especially the volleyball class, as that sport is of national importance to Spain and is a sport I have always enjoyed even though I had no opportunity to engage in it in my youth. The class met for 90 minutes daily and had been doing so for the entire academic term. On the Thursday of the week I was in residence, the class had their volleyball final written exam, which lasted two hours. The work of the students in that course included learning to play the game, but also included pedagogical work on how to develop the techniques and how to introduce tactics and gradually make them more complex.

We need to better understand the content knowledge of our PETE majors, what they bring to the program at entry, and what they need to acquire during the program. We also have to ensure that their experiences within the program not only improve their content knowledge but also their pedagogical content knowledge. I understand that adding pedagogical content knowledge to the content knowledge issues takes you into investigations of the planning, teaching, and assessment practices of teaching candidates during their field experiences. We are fortunate that Inez Rovegno and her students have published a series of studies, starting in the early 1990s, that give us a base from which to extend our understanding of developing the content knowledge and pedagogical content knowledge of our teacher candidates. There is solid research being done on the content knowledge and pedagogical content knowledge of classroom teachers, especially at the University of Michigan, using research methodologies that could easily be transferred to investigating content knowledge and pedagogical content knowledge in physical education.

3. What do we need to know and be able to add to our PETE programs to prepare our students to develop and sustain physical activity programs at their schools and to liaison with community agencies to promote physical activity in neighborhoods?

   It is clear that state legislation that guides local wellness school programs often includes suggestions and sometimes requirements for physical activity programs that are outside of PE requirements. Thom McKenzie, (2007) in his recent Sargent lecture, reported that over 80% of children's physical activity occurs outside of physical education classes. We need to become more involved in influencing the nature and quality of those outside-of-class experiences.

   In Ohio, the initial response to the federal mandate for school wellness councils was the formation of a state level School Physical Fitness and Wellness Council, whose charge was to develop guidelines for best practices "regarding nutrition education, physical activity for students, school-based activities, and school-business partnerships that promote student wellness." The Council's work was eventually published by the Ohio Department of Education (2007) in a document titled "Healthier Schools: A Brighter Tomorrow, Evidenced-Based Practices to Jump Start Ohio School Wellness Plans." This manual presented 11 guidelines with "best practices" following each guideline. The term "physical education" does not appear in any of the eleven guidelines; instead, guidelines talk about healthy lifestyles, student fitness and physical activity programs, and social, noncompetitive fitness and activity opportunities. Now, Ohio has very weak requirements for physical education in schools and the State Department of Education provides no accountability for schools to implement even those weak requirements, so it was not a surprise that the initial effort was so unfriendly to our subject matter. That having been said, it is clear from many other examples of new state legislation that physical activity programs for students, in addition to and outside the regular physical education program, are seen as a significant part of the effort to help students adopt a physically active lifestyle.

   This audience, of course, will understand that to prepare newly licensed teachers to develop within-school physical activity programs and to liaison with community agencies to develop and attract students to community programs, perhaps community programs offered at schools, takes some additional training that is typically not part of PETE programs. This is difficult in an already crowded PETE curriculum, but we can be assured that local school wellness councils, when seeking to establish such activity opportunities, will expect that their physical education teachers will be able to help them conceptualize, develop, and sustain such programs.

4. Is it time to begin considering the strengths and weaknesses of a K–12 physical education license, and, more specifically, is it time to consider and begin to advocate for a separate preK–3 physical education license?

   For the final two years of my regular service at The Ohio State University, I served as Interim Dean for the College of Education. When you occupy that office, you are automatically the CEO of Reading Recovery North America. OSU holds the North American trademark for Reading Recovery and also houses the Reading Recovery Council of North

America. For those of you unfamiliar with RR, it is an intensive, daily tutoring program for first grade children who do not read well enough to participate successfully in a regular reading group. Reading Recovery was developed in New Zealand and has been exported to many countries around the world. Reading Recovery is a data-driven, 12-week program with daily tutoring from a Reading Recovery specialist. Reading Recovery specialists go through extensive training and collect daily data on their students, all of which is stored in the Reading Recovery research center at OSU. The goal of the program is quite straightforward: move the children far enough along that they can return to their class reading group and be successful within it. The program is not about making them super-skilled readers. It is simply about giving them the skills and confidence to successfully take part with other children of their age group in regular class reading instruction. In reading research, the evidence is clear that children who do not read at or near grade level by the end of third grade are very likely to fail in school. That is, their chances of doing well in math, science, social studies, and English are substantially reduced if they are not decent readers by the end of the third grade.

It wasn't until I got involved with Reading Recovery that I realized the significance of what I had learned from my wife 25 years earlier. For years, Bobbie had a "special gym" program in her K–5 elementary school. Students in grades K–2 whose motor skills were such that they were having trouble being successful within their regular class attended an additional special gym session each week. Working with small groups, she was able to get most of the children better prepared and, thus, more willing and excited about their participation in their regular gym class. Studies tracking children's levels of physical activity show that children in the lower physical activity quartile in elementary school will be in the same position in grade 12. While Reading Recovery is quite expensive, Bobbie's special gym effort was accomplished with modest resources and was done successfully in groups rather than individually. My guess is that children who are behind in motor skill development at the end of third grade are substantially less likely to be successful in physical education and, more importantly, substantially less likely to become and stay physically active.

I have come to believe in this so strongly that for several years now I have been advocating a PreK–3 grade license in physical education; indeed, if we could get daily PE in the K–3 years taught by a specialist with this kind of license (and the training that such a license implies), we would be making the largest step forward in physical education that we have made in a century. If the vast majority of students would reach the fourth grade capable in and excited about physical activity, the tasks for physical education teachers in grades 5–12 would change dramatically for the better.

I would welcome new research that examines both K–3 physical education as it now exists and also K–3 intervention studies to assess the validity of the claims I have made.

5. I would also welcome a stronger research effort in universities that have both a PETE program and a teaching research commitment in their graduate program to follow and assess

the performance of their recently licensed PE teacher candidates in the first several years of their full-time teaching.

In the USA, the National Council on the Accreditation of Teacher Education (NCATE) does reviews of teacher education programs (reviews that are supposed to provide information on candidate performance), but they do not do that in any meaningful way. While NCATE produces standardization, it also, perhaps unwittingly, produces homogenization, and there is no doubt it trivializes documentation. NCATE also tends to stifle innovation and experimentation in teacher education. In my six years as Senior Associate Dean and then Interim Dean, no event produced more resentment among our faculty than did preparing for and then enduring the NCATE review.

In a *Journal of Teacher Education* article several years ago, Richard Allington argued that the time and money spent on NCATE would be better spent on a serious assessment of how graduates of teacher education programs perform when they enter the teaching force. One might also argue that common problems newly licensed teachers encounter in their first years of teaching might serve as good evidence for how the licensure program needs to be tweaked year to year to address such issues. Fortunately, the work done by Mike Metzler and Bonnie Blankenship has provided a beginning model for how such programs might be developed and sustained.

PETE programs at universities in large urban centers need to better understand the context of teaching physical education in urban schools and use this knowledge to prepare future teachers. Teacher quality and teacher effectiveness take somewhat different forms in different cultural and socioeconomic settings. We need to use existing research and continue to expand the research base that focuses on the dynamics of quality teaching in urban settings in order to ensure that methods, courses, and field experiences for students in PETE programs in urban universities are more aligned with this research base.

When I retired from OSU in 2002, then-President Brit Kirwan asked me to develop a university-wide program to support urban schools in Ohio, what has become known at OSU as the P–12 Project. At the outset, the P–12 Project worked primarily with Columbus Public Schools, especially the elementary and middle schools that were close to our campus. We know that success in schools is extraordinarily important for children living in pockets of urban poverty. We also know that health problems associated with diet and physical inactivity are more prevalent in high poverty neighborhoods in urban cities. The current contexts of both urban education and teacher education make dealing with these issues extraordinarily difficult. I am pleased that one outcome of this work, under the leadership of the College of Education and Human Ecology, has been the recent dedication of an early childhood center built in conjunction with a new elementary school in the highest poverty neighborhood abutting our campus. Children in this neighborhood will now be able to start in the Center at age two, continue through their preschool years, and move seamlessly into the K–5 program in the elementary school.

I also applaud my PETE colleagues at Ohio State that have made continuous efforts to support physical education in the Columbus public schools, much of it detailed in their October 2006 JTPE monograph. In partnership with Columbus, they have been awarded

a number of grants, including several physical education program grants, and have focused especially on teacher development and program issues.

Finally, I would like to say just a bit about the emerging consensus goal for physical education to help students adopt and value a physically active lifestyle. We need to clarify what we mean by "a physically active lifestyle," and we need to learn more about the dynamics implied by successfully moving toward a healthy lifestyle, especially the pedagogical and curricular issues regarding the development of "valuing." We must take seriously what James Coleman (1988) defined as the human and social capital of children and youth. Coleman defined human capital as changes in persons that form skills and capabilities that enable them to act in new ways. He defined social capital as relations among persons that facilitate action.

We need to investigate what skills and capabilities elementary school children need to become physically active, and we need to investigate the range of teaching strategies that will be successful in "enabling" children to enjoy physical activity and make it high on the list of "what they want to do." The sport psychologist Mo Weiss, at the recent AAKPE meeting in Savannah, spoke to these issues from her disciplinary perspective, suggesting that research shows that the four consistent predictors of motivated behavior among children are (1) developing and demonstrating competence, (2) providing opportunity for autonomy and choice in activity settings, (3) fostering positive peer and adult relationships, and (4) maximizing enjoyment while minimizing anxiety. We need to know more about the various ways that physical education teachers achieve those predictors in their classes and through their programs—programs that are successful in helping children to so value physical activity that they seek opportunities to be active in discretionary time. We can then incorporate into our teacher education courses, both content courses and methods courses, the content knowledge and pedagogical skills teachers need to help students adopt and value various forms of physical activity.

I know there are many different theoretical constructs through which research on this general area can be pursued. The recent Bryan and Solomon (2007) JTPE article on self-determination theory was a valuable start. We have much to learn about how physical education teachers can enable their students to personally value physical activity as a significant aspect of their emerging lifestyle, and I have no doubt that there are many theoretical approaches that will help us to better understand this dynamic. As far as I am concerned, "vive la difference!" And, full speed ahead!

This is an exciting time for physical education, and like all times when the spotlight shines on a profession, it is fraught with risks. We have been asked to deliver, and if we don't do better than we have done during past health crises, we may not be asked again. I am confident that the research community represented so ably here tonight is up to this task.

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