

SPECIAL TOPICS: COMMENTARY

## Implementing Policies to Enhance Physical Education and Physical Activity in Schools

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### ABSTRACT

The purpose of this commentary is to provide an overview of national physical activity recommendations and policies (e.g., from the Institute of Medicine, National Physical Activity Plan, and Centers for Disease Control and Prevention) and to discuss how these important initiatives can be implemented in local schools. Successful policies are illustrated. Specific strategies and ideas are shared regarding how physical educators can assert themselves and impart their knowledge in an effort to build support for policy implementations that enhance the delivery of physical education and physical activity in their schools and communities.

### KEYWORDS

Barriers; health; strategy; youth

The benefits of even moderate physical activity (PA) illustrate the importance of providing children and adolescents with opportunities to be physically active throughout the day. Schools provide a particularly salient environment for promoting PA with youth because it reaches nearly all children and adolescents who spend nearly half of their waking day in school (Lounsbery, McKenzie, Morrow, Monnat, & Holt, 2013). Thus, targeting the school environment with policy-based approaches may have a great impact (Eyler, 2011; Måsse et al., 2007; Story, Nanney, & Schwartz, 2009). These policies consist of laws and regulations that emphasize the importance of healthy behaviors by improving physical education, increasing PA (Eyler, 2011; Woods & Mutrie, 2012), and decreasing discretionary sedentary behaviors. In general, students have five opportunities to be physically active during a normal school day. These opportunities include physical education classes, recess, active transport before and after school, afterschool activities, and in-class activity breaks (Slater, Nicholson, Chriqui, Turner, & Chaloupka, 2012). PA policies can target all of these areas by establishing physical education standards, increasing the amount of time students spend in recess, improving teacher training, and creating a safe school environment. Successfully implemented PA policies have the potential to influence the well-being of students (Woods & Mutrie, 2012; World Health Organization, 2010).

Table 1 provides a sample of PA and physical education reports, policies, and recommendations, most within the past 5 years, intended to influence school decision makers to offer PA and quality physical education experiences sufficient to deliver health benefits to children and adolescents. Despite the fact that daily physical education and PA are recommended by various agencies and organizations, no federal law currently mandates the number of days and minutes of physical education each week (Institute of Medicine [IOM], 2013; McKenzie & Lounsbery, 2009; Story et al., 2009). SHAPE America – The Society of Health and Physical Educators, formerly known as the American Alliance for Health, Physical Education, Recreation and Dance, recommends elementary and secondary schools provide 150 min and 225 min of weekly physical education (National Association for Sport and Physical Education, 2004), respectively—but many schools do not meet these guidelines (McKenzie & Lounsbery, 2009). Few incentives exist for schools to pass meaningful PA policies because physical education has faced a lack of federal support, which has led to reductions in PA programs and resources (McMurrer, 2008). This lack of federal support is largely due to an unintended outcome of the “No Child Left Behind Elementary and Secondary Act,” which focused on student achievement and accountability in core subjects (e.g., reading and math; McKenzie & Lounsbery, 2009). As a result, schools have dedicated less time and

Table 1. Sample physical activity and physical education reports, policies, and recommendations.

Title	Organization	Year	Purpose	Target population
Surgeon General's Report on PA and Health	U.S. Department of Health and Human Services	1996	To summarize the existing literature on the role of PA in preventing disease and on the status of interventions to increase PA.	Adults, adolescents, and children
PA Guidelines for Americans	U.S. Department of Health and Human Services	2008	Primary source of information for policymakers, physical educators, health providers, and the public on the amount, types, and intensity of PA needed to achieve many health benefits.	Adults, adolescents, and children
National PA Plan	National Physical Activity Plan Alliance	2010	To provide a comprehensive strategic plan for increasing PA in all segments of the U.S. population.	Adults, adolescents, and children
Morbidity and Mortality Weekly Report	Centers for Disease Control and Prevention	2011	To provide nine general guidelines for school health programs to promote healthy eating and PA.	Agencies, policymakers, teachers, etc.
Fitness Measures and Health Outcomes	Institute of Medicine	2012	To identify fitness measures that are associated with health markers in youth and that are also practical in a field setting.	Schools, administrators, and teachers
PA Guidelines for Americans Midcourse Report	U.S. Department of Health and Human Services	2012	Highlights PA interventions from a variety of settings. Presents evidence-based practices, emerging evidence, and opportunities for additional research.	Adults, adolescents, and children
Shape of the Nation Report	SHAPE America; National Association for Sport and Physical Education; American Heart Association	2012	To provide current information about the status of physical education in each of the 50 states and the District of Columbia.	Policymakers, teachers, and advocates
Educating the Student Body	Institute of Medicine	2013	To provide quality physical education for all youth and also to implement other evidence-informed methods to help all children and adolescents attain at least 60 min of PA.	Schools, administrators, teachers, and parents
Comprehensive School PA Program	Centers for Disease Control and Prevention	2013	Multicomponent approach that schools use to help students meet the recommended 60 min of PA each day and develop the knowledge, skills, and confidence for lifetime PA.	Adolescents and children
PA Report Card	National Physical Activity Plan Alliance	2014	To assess levels of PA and sedentary behaviors in American children and youth, facilitators and barriers for PA, and related health outcomes.	Adolescents and children
School Health Policies and Practices Study	Centers for Disease Control and Prevention	2014	National survey conducted to assess school health policies and practices.	Schools, administrators, teachers, adolescents, and children
Whole School, Whole Community, Whole Child	ASCD; Centers for Disease Control and Prevention	2014	Socioecological approach directed at the whole school while the school draws its resources and influences from the whole community and serving to address the needs of the whole child.	Adolescents and children

Note. PA = physical activity.

resources to physical education to free up more time and resources for other school subjects (Siedentop, 2009).

Although these initiatives are well intended, interpreting these recommendations is often confusing for many reasons. There are several barriers to effective policy implementation, including lack of motivation, resources, key constituency support, and clear policy objectives. Bureaucratic dysfunction, poor role definition, and failure of leadership to fully commit and develop a sound implementation strategy often lead to poor policy adoption. For example, PA leaders, as practitioners, may be unfamiliar with the specific objectives of intended policies. Second, the linkages between research, practice, and policy may not be explicitly communicated. Finally, many PA champions may have little experience with policy development and addressing conflicts with existing policies, as policy implementation leadership requires a unique set of skills.

In December 2015, the U.S. Congress reauthorized the Elementary and Secondary Education Act (ESEA) with the name "Every Student Success Act" (ESSA). The ESSA

replaces the "No Child Left Behind Elementary and Secondary Act" and provides the framework for elementary and secondary education in the United States. Importantly, the ESSA includes commentary indicating that health and physical education are key components of a "well-rounded education." The concept of a "well-rounded education" replaces the term "core subjects" that was originally used in the ESEA. Given the wide support for PA, physical education, and health education experiences illustrated in Table 1 and passage of the ESSA, it is important that educators and legislative leaders at all levels take steps (pun intended) to see that schools provide effective learning experiences that influence health and behavior. As a result of physical education being identified as part of a well-rounded education, the content may well be elevated in its importance, which would require physical education at all levels delivered by teachers certified as physical education specialists. Emphasizing the importance of having healthy children in schools would help level the playing field among math, science, and physical

education. Likewise, making physical education part of a well-rounded education will require an accountability system that ensures that curricular objectives and standards are met. As a result, teachers and administrators must be responsible for meeting the standard if the goal is to implement a quality, standards-based physical education program.

The remaining sections of this commentary address the role of policy to improve and maintain the PA behaviors of kindergarten to 12th-grade students. Specifically, the first section provides an overview of key parts of the IOM's (2013) report titled, *Educating the Student Body: Taking Physical Activity and Physical Education to School*, which focused on using high-quality physical education programs to help students reach 60 min of daily PA. The second section addresses the current state of physical education policy at the national level and efforts being made to improve these policies. These national initiatives provide excellent resources and evidence for individuals to use when attempting to adopt and maintain policies intended to enhance physical education and PA experiences in schools. The third section presents exemplars that illustrate successful policy adoption at the national, state, and local levels intended to influence PA behaviors. The final section highlights strategies for how teachers can be effective "champions for change" in their local schools by improving local PA policies.

### Physical education as part of a well-rounded education

Although physical education has been identified as an important setting for increasing youth PA, 60 min of daily PA is sometimes difficult to implement in many schools. A reasonable estimate for the amount of moderate- and vigorous-intensity PA in physical education is only 10 min to 20 min (IOM, 2013). Lack of PA in physical education and PA policies across the United States is often due to the implementation barriers mentioned earlier. Disparities also exist for opportunities to be physically active across ethnicities and socioeconomic statuses (IOM, 2013; National Association for Sport and Physical Education & American Heart Association, 2012). As a result, not all students have equal access to appropriate facilities, opportunities for PA, and quality physical education (IOM, 2013). To address these issues, the IOM (2013) provided a series of recommendations for providing high-quality physical education and other evidence-based programs. The purpose of the IOM report was to review the current status and influences of PA and physical education on health, cognitive performance, and positive affect of children and

adolescents. Through a systems approach, the committee reviewed the literature, developed a conceptual model, and generated six recommendations related to physical education and PA experiences in schools (IOM, 2013):

- All school-related persons should advocate for a whole-school approach to PA.
- All government and school-related agencies should systematically consider access to and provision of PA in all policy decisions.
- Physical education should be designated as a core subject.
- Education and government agencies should develop and deploy data systems to monitor policy implementation and effectiveness.
- College-based teacher education programs should provide preservice and in-service educational experiences for teachers while emphasizing PA experiences.
- Disparities in programs should be eliminated and access to facilities and opportunities should be available to all.

A key recommendation from the IOM report was for administrators, teachers, and parents to advocate for a whole-school approach. This recommendation aligns well with the Centers for Disease Control and Prevention's (CDC, 2013) comprehensive school physical activity program. The whole-school approach is designed to target PA opportunities throughout the course of the school day to help children achieve 60 min of daily PA. For example, it might include active commute before school, physical education, classroom PA breaks, recess during school, active commute from school, intramurals, and extramural sports. Furthermore, all elementary school students would ideally get 30 min of physical education every school day to reach 150 min per week of school-based physical education. This 30 min of physical education would be a portion of the national goal of 60 min per day of PA for children and adolescents. For middle and senior high schools, students would get an average of 45 min of physical education on each school day, or 225 min per week. With these numbers coupled with other opportunities to be physically active before, during, and after school, students at all levels would have the opportunity to engage in moderate or vigorous activity.

Most students are sedentary during a typical 7-hr school day (Burns et al., 2015; Childhood Obesity Task Force, 2004), and they engage in 6 hr to 8 hr of sedentary behavior overall per day (Matthews et al., 2008). Consequently, our vision for tomorrow is that the school environment will be designed to promote 60 min or more of PA. However, schools continue to

cut time for recess and physical education for a variety of reasons (e.g., lack of funding, including physical education would extend the school day, class scheduling options, etc.).

At present, few states have laws at all grade levels that require students to meet specific time requirements for physical education (Sallis et al., 2012). As a result, the whole-school approach and the recommendations in the 2013 IOM report *Educating the Student Body: Taking Physical Activity and Physical Education to School* are meant to inform local, state, and federal decision makers that everyone should be working toward developing a healthy school environment for students. Each of the aforementioned IOM recommendations are essential policy initiatives that must be achieved. More work needs to be accomplished and part of this process relies on the current state of national policies and how well individuals and groups advocate and implement these policies in schools.

### The National Physical Activity Plan

Key to policy adoption and maintenance are guidelines provided by national/professional organizations. The National Physical Activity Plan (NPAP; see <http://www.physicalactivityplan.org>) was launched in 2010 with the vision that all Americans will participate in daily PA where they live, work, and play. An outgrowth of the 2008 *Physical Activity Guidelines for Americans* (Physical Activity Guidelines Advisory Committee, 2008), the NPAP includes recommendations to improve opportunities to be physically active in the following nine sectors: business and industry; faith-based; public health; community, recreation, fitness, and parks; health care; sport; education; mass media; and transportation, land use, and community design. In the United States, the education sector is especially important because approximately 50 million youth are in kindergarten through 12th grade.

Despite efforts to improve school-based PA policies, the NPAP goals have not been met. The NPAP released a grade report to assess levels of PA and sedentary behavior in the United States (National Physical Activity Plan Alliance, 2014). Ten indicators were chosen based on their relationships with youth PA to determine how well the United States is providing youth with opportunities to be physically active. Unfortunately, the overall PA grade was “D–.” Only Community and Built Environment (B–) received a grade higher than “C–.” Organized Sport Participation and School were awarded grades of “C–.” Sedentary Behaviors received a “D” and Active Transportation received an “F.” Active Play, Health-Related Fitness, Family & Peers, and Government

Strategies & Investments received grades of “incomplete.” Clearly there is room for improvement. Revised education sector strategies for impacting PA in schools presented at a Washington, DC, NPAP meeting (February 2015) included strategies that can lead to enhanced physical education and PA experiences across all education settings:

- The comprehensive school physical activity program should be implemented.
- High-quality physical education programs should be provided in schools.
- Afterschool programs should ensure participants are appropriately physically active.
- Standards for childcare and early childhood education programs should be adopted to ensure children are physically active.
- Colleges and universities should provide students and employees with opportunities and incentives to be physically active.
- Preservice and in-service educational experiences should be provided to prepare teachers to deliver effective PA programs.
- Professional and scientific organizations should develop and advocate for PA among all students.

Consistent with the IOM recommendations, the NPAP recommendations are intended to influence policies. Any education adoption/change/maintenance will necessitate collaborative efforts across all individuals and agencies involved in delivery of PA-related school-based programs.

It is important to recognize how PA policies can influence behavior at multiple levels. Lounsbury and colleagues (2013) conceptualized an ecological model illustrating how PA policies at the state, district, and school levels can affect the school environment and children’s PA. They highlighted how comprehensive state policies can impact district policies, which can then affect school policies and the school environment. Adopting PA policies at any of these levels is believed to impact children’s PA, but this adoption does not mean the policies will be implemented. For example, many schools have policy recommendations for the amount of time that students should spend in physical education, but a lack of time is regularly cited as a reason for not meeting this policy (Lounsbury, McKenzie, Trost, & Smith, 2011). However, even if schools do not fully implement PA policies, partial implementation can still increase the amount of time that students spend in physical education or recess each week by approximately 36 min (Lounsbury et al., 2013).



## Exemplars for improving physical education and physical activity experiences

Regardless of the difficulty involved in policy creation, adoption, and evaluation, these functions are important and can be accomplished. By using appropriate intervention models (e.g., the whole-school, whole-community, whole-child approach or comprehensive school physical activity program), children and adolescent PA behaviors in and outside of school can be positively impacted. It is important to focus on the key points of implemented programs as well as the specific, targeted strategies within those key points that are designed to create more PA opportunities. Examples include the *Presidential Youth Fitness Program (2013)*, which provides grants, professional development, resources, and online courses for physical education teachers, and *Let's Move (White House Task Force on Childhood Obesity, 2010)*.

In Texas, every district has a school health advisory council, or SHAC. These advisory councils can evaluate how well schools are implementing physical education and recess policies. For example, many children in Austin, TX, were being withheld from recess for various reasons (e.g., time to control behavior or to do unfinished work) across several campuses. As a result, the local SHAC got involved as part of the school improvement team and the parent representatives on the school improvement team are now in the process of writing a recess policy. Specifically, school policy now requires recess every day because children have the right to play.

Even with SHAC development in Texas, policy and legislative change has not been easy. Statewide fitness testing in Texas provides yet another illustration of policy development, hurdles, and implementation. As a result of Texas Senate Bill 530 in 2007, which established standards for the amount of required physical education at all grade levels, all Texas students from 3rd to 12th grade were originally required to complete the FITNESSGRAM<sup>®</sup> assessment (Cooper et al., 2010). The fitness testing requirement was implemented as an unfunded mandate. Thus, \$3 million had to be raised from the private sector to equip approximately 9,000 schools in Texas with the Fitnessgram software and to train an estimated 20,000 teachers to administer the test effectively (Cooper et al., 2010). Since Senate Bill 530 was passed in 2007, legislative efforts have been made to repeal or modify Fitnessgram testing during the 82nd regular session in 2011 and, most recently, the 84th regular session in 2015. Fortunately, attempts to eliminate Fitnessgram testing in Texas schools were not successful because of the collaborative efforts and influence of school-based teachers and administrators

and medical/professional input before the state legislature. As a result of these collaborative efforts, adequate funding was allocated for the next two biennials (e.g., see Texas House Bills 1227 and 2804 at Texas Legislation Online, 2015). This illustrates the ongoing efforts required to enact and maintain effective policies and programs.

Miami-Dade County in Florida incorporated many strategies to ensure that 30 min of daily physical education is offered to all elementary schools. The best and most successful strategy is to offer physical education during classroom teachers' 30-min planning period. The district created a template for a school schedule that allows students to meet the state requirement for 150 min of physical education. Within this schedule, math and reading are sometimes double-dosed to help underperforming students. The schedule also includes time for recess without eliminating art or music at the expense of daily physical education. Therefore, it is possible to schedule these beneficial activities to enhance learning and health with the time that is available during a school day.

Additional local examples include groups in Austin like "Learn to Try" and "Marathon Kids" where students are encouraged to develop a passion for running, biking, and swimming. "Marathon High" recruits adolescents who have been cut from middle and high school sport teams to engage in PA experiences. Adult and peer volunteers help train the adolescents so they can complete road races and even a half marathon and full marathon.

Overall, these examples illustrate the range of programs and policies that have been created and adopted. Requisite to such implementation are the collaborative efforts conducted by school-based teachers and administrators, professionals, and parents in conjunction with district- and state-level policymakers. Collectively, engaging in universally recognized and important strategies can effectively enhance PA and physical education experiences for all students.

Importantly, technology can also be used to disseminate policy information and can enhance communication between policy developers and those impacted at national, state, or local levels. The ubiquitous use of social media to gather support for important initiatives is growing rapidly. For example, subscribing to Really Simple Syndication (RSS) feeds is one way to learn immediately about new information and to stay updated on important news in the field. This information can then be easily disseminated through e-mail, text message, Twitter, and a multitude of other online venues. Using social media to instantly disseminate examples of success and positive student testimonials has reach and impact that can influence decision makers and policy adoption.

## Strategies for policy change: Get involved and get moving

Altering policies and implementing change at the national, state, and local levels will not be easy. It takes time, effort, resources, and people. Nevertheless, it is imperative to strive to implement important policy initiatives. Reshaping physical education and PA policies can improve human capital in a unique, comprehensive way.

Even with the best intentions, gaps exist between what policies were originally intended to do, how they are implemented, how they are executed, and how they are enforced. Administrators, physical education teachers, and parents are all supportive of the promotion of children's health. However, school policies do not always reflect their support for children's health. Slater and colleagues (2012) examined the impact of state laws and district policies on the prevalence of physical education and recess in a nationally representative sample of U.S. public elementary schools. They found that mandating physical education or recess effectively increased school-based PA for youth. Schools with state laws or district policies that required 150 min per week of physical education were almost 3 times more likely to meet that standard. However, the effect of strong district-level physical education policies was independent of the effect of state law. In addition, having a state law requiring daily recess increased the likelihood (OR = 1.8; 95% CI [1.2, 2.8]) of a school having 20 min of recess each day, but district policies were not associated with a school's recess practices (Slater et al., 2012). This finding might be partially due to the inverse relationship between physical education time and recess, which indicated that schools chose to engage in either physical education or recess but not both (Slater et al., 2012).

Slater et al.'s (2012) findings demonstrated the positive effect of having support at the district or local level on students' well-being. Despite the evidence supporting PA policies, they also found that 83% of states did not have a daily recess law and less than half had a law that mandated 150 min per week of physical education. This finding illustrates the gap that currently exists across the United States between intentions to improve student health and the status of PA policies. Current estimates indicate that 44% of school administrators have dedicated time spent in physical education and recess to other subject areas, such as math and reading (IOM, 2013). As a result, many educators and administrators believe that they must choose between improving either educational *or* health outcomes, but both of these outcomes are important, attainable, and inter-related. Strategies that focus on improving education and health outcomes are needed at multiple levels (e.g., state, district,

and school levels). As strategies are considered, it is essential to first obtain data on current course offerings, school environments and facilities, and PA programs and policies (CDC, 2015a, 2015b; National Association for Sport and Physical Education & American Heart Association, 2012).

Although individuals may not be policy writers or creators, everyone can assert themselves and their knowledge to improve local schools. To successfully change school policies, there must be an internal "champion" in each school who has support from administrators. Then, when facing pushback or resistance from others, this champion should rely on scientifically based evidence, academic and professional position stands, and parents from the community for support. By using support from parents and larger communities of concerned individuals and agencies, a dialogue can emerge that will lead to opportunities for change. These opportunities exist because policies at the national level provide credence for what health and physical education professionals are trying to achieve, and state-level policies can give support for the degree of implementation. The evidence supporting policy changes to enhance physical education and PA experiences in schools is substantial. If put to a vote, it is possible that supporters will not "win" the vote, but it will be obvious that dissenters may well be voting in opposition to the overwhelming scientific evidence supporting policy adoption.

Looking forward, we recommend three strategies. **First, it is important to develop a direct feedback loop between policy, its implementation, and its upstream and downstream effects.** In regard to upstream effects, the resources needed for a policy to succeed must be considered. One important resource for this process is a health impact assessment, or HIA (Collins & Koplan, 2009). An HIA is designed to determine the potential or effects of a policy or program on the health of a population. It can help schools determine the feasibility and impact of a policy designed to provide more PA opportunities. Fielding and colleagues (2007) conducted an HIA to compare the impact of three policies on inactive students' PA levels. After compiling data from various sources, they reported that increasing moderate-to-vigorous PA would have the biggest impact on PA levels. Once a policy has been implemented, it is also important to assess its downstream effects and determine if there are unintended consequences. Then, based on the feedback received and the data collected, specific policies can be revisited and revised if necessary. For example, an area school district was unaware that every school campus was offering recess differently (some schools were not even offering recess). Once the data from all school campuses were compared, the school board was

willing to allocate money and approve policies to provide equitable opportunities. The CDC (2002) published a handbook on evaluating PA programs that includes the following six steps to evaluate the effectiveness of PA programs: engage stakeholders, describe the program, focus the evaluation, gather credible evidence, justify conclusions, and share lessons learned. Teachers can apply these six steps when trying to determine the effectiveness of their programs and whether they are increasing students' overall PA.

**Second, physical education teachers, school administrators, and other health professionals need to educate the decision makers and policymakers about the importance of physical education and PA so that specific policies can be developed and implemented.** For example, while many professionals understand the benefits of regular PA in youth (e.g., higher muscular and bone strength, increased self-esteem, lower adipose tissue, reduced negative mood states, lower risk for chronic disease or death, and improved academic achievement), many educators and policymakers are not aware of all these benefits (IOM, 2013). In addition, the amount of time that youth spend in physical education is not sufficient to achieve the recommended 60 min of daily PA. Thus, it is imperative for policymakers to recognize the importance of comprehensive PA programs (IOM, 2013). This recognition would allow for more opportunities for PA before, during, and after school and would also create a school environment that is more conducive to healthy behaviors.

**Lastly, college and university faculty involved in physical education and health-related fields need to recruit talented, conscientious, intellectually curious people into these disciplines to advance the health and physical education professions.** There are people who belong in this discipline, and scholars in the health and physical education area must encourage them to become champions for change as a credentialed physical educator, a health professional, or a health educator. In addition, these scholars need to teach about PA policy, including how to develop, implement, and evaluate PA programs. However, the number of university programs dedicated to physical education has decreased in recent years because of the decline in physical education requirements (IOM, 2013). As a result, fewer students have a sufficient knowledge base regarding the field of physical education. Through the strength of recruitment, professionals in physical education will be able to bring preprofessionals into the field with the ultimate goal of establishing policies that promote the well-being of students and seeing quality physical education and PA experiences in school that impact the total well-being of children and adolescents.

## Acknowledgments

This commentary is based on a symposium titled “Healthy School Policies: Building Healthy Students” presented by the first three authors and the last author at the 2015 SHAPE National America Conference in Seattle, WA. Kenneth Cooper, founder of the Cooper Aerobics Center, is recognized as the “father of aerobics.” Jayne Greenberg is a member of the President’s Council on Fitness, Sports & Nutrition. Darla Castelli is a professor of physical education pedagogy in the Department of Kinesiology and Health Education at the University of Texas at Austin. James Morrow serves as the Chair of the Education Sector of the National Physical Activity Plan. Mitch Barton, of the University of North Texas, was instrumental in creating the symposium and preparing the manuscript, and Scott Martin, of the University of North Texas, initiated the project and provided helpful suggestions and leadership for the presentation and manuscript. This commentary is based on their work in Texas, in Florida, and across the nation to enhance physical education and physical activity experiences. The authors acknowledge Don Disney, Norma Candelaria, Georgina Vint, and Catherine Vowell for their work in organizing the presentation.

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