Enhance P.E. Task Force

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Illinois Enhance Physical Education Task Force

Recommendations and Report

Executive Summary

August 2013

This is the Executive Summary of the *Illinois Enhance Physical Education Task Force: Final Recommendations and Report* to the Illinois General Assembly and Governor. The Executive Summary and the full report are available for download at: http://www.isbe.net/EPE/html/EPETF.htm.

The full *Illinois Enhance Physical Education Task Force: Final Recommendations and Report* includes:

- An introduction describing the formation, purpose, charge, and activities of the Task Force
- Summary of the activities of the two committees of the Task Force
- Recommendations to promote enhanced P.E., listed with their rationale
- Full text of proposed revisions to the Learning Standards and performance descriptors for IL State Goals 19-24
- Appendices, including a research summary that explores the link between physical activity, fitness, and cognitive function; lists of committee members; the Task force's Action Plan; a fact sheet and resource guide developed by the Task Force, a glossary of neuroscience terms, and proposed criteria for highly qualified P.E. teachers.

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The Illinois Enhance P.E. Task Force

Overview

Public Act 97-1102 established the Illinois Enhance Physical Education (P.E.) Task Force in 2012 to promote and recommend enhanced physical education programs that can be integrated with a broader wellness strategy and health curriculum in elementary and secondary schools in this state. The Task Force was also charged with making recommendations for revising Goals 19-24 of the Illinois Learning Standards for Physical Development and Health such that they reflect existing neuroscience research.

Enhanced P.E., which entails increasing the amount of time students spend in moderate to vigorous physical activity (MVPA) in P.E. class, is an evidence-based approach. The Task Force reviewed extensive research showing that children who are more physically active - in P.E. class, throughout the school day, and during recess – perform better in class and on standardized tests, have better classroom behaviors, and improve health outcomes.

The Task Force, as a whole, met five times between December, 2012 and August, 2013 to consider evidence and approaches to achieving its charge, deliberate on recommendations, and develop its report. In order to accomplish the goals set forth in Public Act 97-1102, the Enhance P.E. Task Force divided into two committees: the Standards Revision committee and the Enhance P.E. Promotion committee.

Standards Revision: Taking into consideration the realities faced by schools today and with support from expert reviewers, the Task Force revised Goals 19-24 of the Illinois Learning Standards for Physical Development and Health. In addition to updating many of the standards to reflect current best practices, two new standards were added that incorporate the latest research and model practices for achieving optimal student health and academic achievement: 1) *Goal 22, Standard D: Describe how to advocate for the health of individuals, families and communities*, which is based on model national standards for health education, and 2) *Goal 23, Standard D: Describe and explain the structures and functions of the brain and how they are impacted by different types of physical activity and levels of fitness*, which translates the existing neuroscience research into practice to maximize the academic and health benefits.

Enhance P.E. Promotion: The Task Force also began implementing an outreach and engagement strategy and developed recommendations on the various components of its charge to the Illinois Governor and General Assembly. It focused on promoting enhanced P.E. programs to seven key audiences: superintendents, principals, school boards, P.E. and adapted P.E. teachers and coordinators, non-PE teachers (e.g., academic, arts, and other non-P.E. teachers), parents, and students. Their goal was that all Illinois K-12 school students will participate in daily, high-quality physical education in order to promote academic achievement and realize the lifetime benefits of exercise and fitness. The committee developed messaging to support this goal and then created promotional materials catered to each audience. Members conducted presentations throughout the state and disseminated information through Task Force members' networks and associations via their websites, mailings, professional conferences, etc.

Why enhance physical education?

In May, 2013, the Institute of Medicine of the National Academy of Sciences issued the report *Educating the Student Body: Taking Physical Education and Physical Activity to School*, which declared that physical education (P.E.) is as important as math, science, or any other core subject, not only because of its importance to lifelong health and well-being, but also because of the benefits that quality P.E. has on academic performance.

The Community Guide defines Enhanced P.E. as "programs that increase the length of, or activity levels in, school-based physical education classes." Specifically, the Task Force discussed Enhanced P.E. as increasing the amount of time students spend in moderate to vigorous physical activity (MVPA) in P.E. class; the Task Force also spent considerable time discussing the importance of integrating physical activity (as distinct from P.E. class) throughout the school day, to reap even more benefits.

While various evidence-based P.E. curricula are available for purchase, enhanced P.E. can also be implemented in settings with limited resources or other constraints. In addition, with its change in focus from athletics to fitness, enhanced P.E. is applicable to students of all levels of physical ability (see Figure 1, below). Quality enhanced P.E. programs ensure that at least 50 percent of class time is spent in MVPA.

The Task Force reviewed extensive research showing that children who are more physically active - in P.E. class, throughout the school day, and during recess – perform better in class and on standardized tests. Improving opportunities for physical activity is an imperative for improving our children's academic achievement and their health. Changing policies and practices to ensure more time is spent in MVPA during physical education and physical activity programming will maximize the positive impact on health, behavior, and learning.

Unfortunately, the national research demonstrates that the time spent being physically active during P.E. classes is generally very low. In a typical 30-minute (K-6 grade) class, students engage in only about 11 minutes of physical activity. Thus, a traditional P.E. class contributes very little to ensuring students are meeting the 60 minutes per day of exercise recommended in the Physical Activity Guidelines for Americans set by the U.S. Department of Health and Human Services.

Illinois has long been a leader in valuing children's education and health. Although many states require P.E., Illinois was the first state in the nation to require daily P.E. for all K-12 students. Many schools have designed or adopted model programs to meet this requirement and create opportunities for physical activity.

Some characteristics of "Enhanced P.E.," as compared to "Outdated P.E." are shown in Figure 1.

Figure 1: What it looks like: Outdated P.E. vs. Enhanced P.E.

	OUTDATED P.E. PROGRAMS	ENHANCED P.E. PROGRAMS
Curriculum	• Skills and rules to play team games (e.g., basketball, football, soccer, baseball)	• Physical competence and cognitive understanding about physical activity so students can be active for a lifetime (e.g., fitness activities, outdoor education, individual lifetime activities, dance, integrated lessons)
Grouping	• Large groups; limited equipment • Athletes are leaders	• Small groups; adequate equipment for active participation • All students have opportunities for success
Fitness Emphasis	• Skill-related • Comparison to national norms	• Emphasis on health-related fitness components • Students engaged in self-testing, applying principles of fitness, designing an individual program based on personal goals • Students understand that they 'own their own fitness' and learn to maintain and improve it to optimize health and well-being • Students understand how level of fitness affects health and cognitive function
Instruction	• Teacher-directed • Teacher controls and paces the entire lesson	• Teacher as coach/guide • Uses instructional strategies to allow students to progress at individual pace and to self-assess • Maximize time engaged in moderate to vigorous activity in order to reap benefits to cognitive function and cardio-respiratory health
Social Skills	• Emphasis on competition – winning and losing	• Emphasis on cooperation, working together as a group, leadership, conflict resolution during active participation situations • Develop self-awareness and self-management skills to achieve school and life success* • Use social-awareness and interpersonal skills to establish and maintain positive relationships* • Demonstrate decision-making skills and responsible behaviors in school*
Grading and Assessment	• Based on attendance, dress, skill level, fitness scores	• Based on self-improvement, self-evaluation; peer assessment; skill rubrics • Used to monitor and reinforce student learning
Games	• Teacher officiates games, giving feedback on skill performance and knowledge of rules; large group games; students waiting in line to play; winning emphasized	• Students engage in activities and sports with a health-related fitness component • Emphasis on participation and getting everyone active
Technology	• Stop watch	• Computers; pedometers; heart rate monitors; other fitness technology

*Social-Emotional Learning Standards

Adapted from materials by: American Academy of Pediatrics, Illinois Chapter; IAHPERD; American Heart Association

Why do Physical Education and physical activity matter to schools?

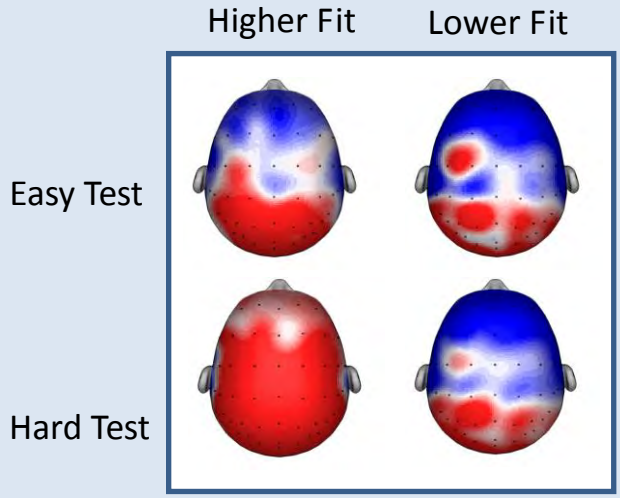
Learning and behavior
There is substantial evidence of a relationship between physical activity, fitness and improved cognitive and executive functioning. Such brain functions play a significant role in goal-directed behavior and the ability to concentrate, remember information, and multitask. Improved executive functioning allows students to organize and prioritize tasks and information, and is strongly linked to scholastic performance. [1, 2, 3]

Fitness: Cardiorespiratory fitness, a measure of how well the body can transport oxygen to its muscles during exercise, is related to optimizing task performance across one's lifespan as well as improving academic achievement and test performance. Studies demonstrate that higher fit children display higher levels of executive control, better task performance, faster reaction times, enhanced working memory, and better attention (see Figure 2).[4,5,6] Further, higher fit children are found to have enhanced math and reading abilities.[7] Higher fit children also have greater brain structure in specific regions of the brain that support memory[8] and executive control[9].

Studies have shown time and again that there is a positive association between fitness and academic achievement, as measured by standardized tests and improved grades. This relationship has been observed in China, Illinois, Massachusetts, California, and Texas. [10, 11, 12, 13, 14, 15] A 2013 study suggests that students in the Fitnessgram® "Healthy Fitness Zone" (HFZ) for cardiorespiratory fitness were more than two times more likely to meet or exceed the Illinois Standardized Achievement Test (ISAT) reading and math test requirements than students who were not.[16] As fitness level increases, so does academic achievement.[17]

Figure 2. Cognitive Effects of Fitness on Preadolescent Children

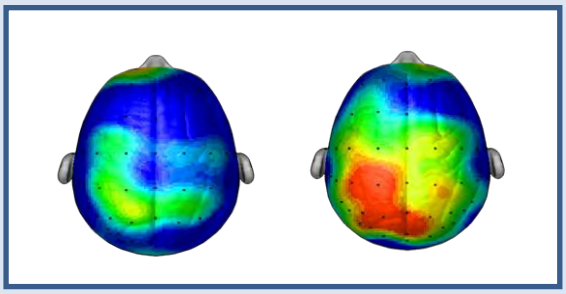
Average composite image of higher- and lower-fit student brains taking easy and hard cognitive tests



Pontifex, et. al. (2011). *Journal of Cognitive Neuroscience.*23(6):1332-45
Scan compliments of Dr. Charles Hillman University of Illinois

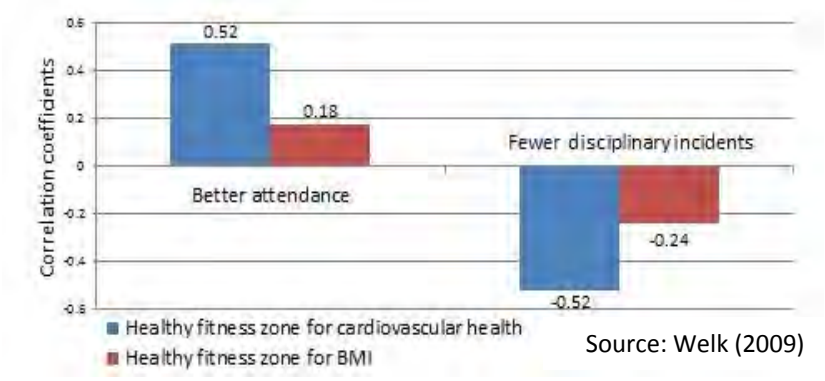
Figure 3. Cognitive Effects of Physical Activity on Preadolescent Children

Average composite of 20 students' brains taking the same test after 20 minutes of:



Hillman, et al. (2009). *Neuroscience.* 159(3):1044-54
Scan compliments of Dr. Charles Hillman University of Illinois

Physical Activity: As indicated in the Institute of Medicine's May 2013 report, a "growing body of evidence also suggests a relationship between vigorous and moderate-intensity physical activity and the structure and functioning of the brain. Children who are more active show greater attention, have faster cognitive processing speed, and perform better on standardized academic tests than children who are less active."[18]



Source: Welk (2009)

Figure 4. Student Fitness and BMI Correlate with Attendance and Disciplinary Incidents

Research suggests that acute bouts of exercise [20 minutes of walking at 60% of max heart rate (HR)] are associated with physiological changes that improve cognitive processes central to problem-solving and goal-oriented action, including response speed and accuracy (See Figure 3). Regular physical activity creates physiological changes in the brain that may be associated with improved attention; improved information processing, storage and retrieval; enhanced coping; enhanced positive affect; and reduced sensations of craving and pain.[19] Additionally, physical fitness has been associated with better attendance rates and fewer disciplinary incidents that involved drugs, alcohol, violence, truancy, and suspensions (see Figure 4).[20]

The residual cognitive benefits of exercise have been found to last from 30 minutes to about 1 hour. [21, 22, 23,] This suggests that physical education classes should be held before challenging academic subjects to take advantage of the residual effects of exercise on students' abilities to focus, elevated concentration and improved cognitive skills resulting in higher academic scores.[24] Research has also found that longer doses (40 min) of exercise are more beneficial than shorter doses (20 min.).[25]

P.E. can also enhance social and emotional learning because of the unique social development opportunities that arise from peer interaction, physical action, and a variety of emotional states.[26,27] The importance of social and emotional learning for students has been well documented in literature and plays a critical role in a student's capabilities for lifelong learning.[28] Quality P.E. that incorporates social and emotional development provides students with life skills such as self-management, self-concept, and decision making.[29 30]

Health

The impact sedentary lifestyles are having on Illinois children is alarming. In 2007, a national survey on children's health showed that only three states – Mississippi, Georgia, and Kentucky – had a higher childhood obesity rate than Illinois. [31] This means children in Illinois are at excessive risk for serious lifelong health problems like diabetes, heart disease, high cholesterol, and arthritis. [32,33,34] A sedentary lifestyle not only imperils the health of kids, it also threatens our economic future, which could make funding public education and other critical services more challenging than ever before. A growing body of research suggests that obesity is largely to blame for our ballooning healthcare costs. Right now, 75% of all healthcare costs are spent on the treatment of chronic diseases, many of which are obesity-related. Obesity is a rapidly escalating problem that costs the Illinois healthcare system and taxpayers nearly $4 billion per year – including more than $1 billion to Medicaid and $800 million to Medicare annually.[35] Some experts predict that, if nothing changes, the cost of obesity to the Illinois healthcare system will increase to $14.8 billion a year by 2018.[36]

The relationship between learning, behavior, fitness, physical activity, and health is important for all students, including those with disabilities and/or special healthcare needs. Members of the Task Force worked diligently to ensure recommendations and resources on enhanced physical education programs were inclusive of students with disabilities.

The Enhance P.E. Task Force Deliberations

Context of Discussion
While revising the learning standards, developing an action plan, and drafting recommendations for the Illinois General Assembly, Governor, the Illinois State Board of Education (ISBE), and other stakeholders, the Task Force discussed multiple considerations related to the current state of physical education in Illinois:

- Illinois schools are facing resource constraints as they try to meet a variety of mandates with limited funds and staff. The Task Force recognized these limitations and attempted to make recommendations that enhance educational outcomes without harming the financial solvency of schools or burdening schools with additional administrative requirements.

- The Task Force had a number of discussions about the extent to which schools are currently implementing the daily physical education instructional requirement, understanding that the process of enhancing P.E. must build on the foundation of what schools are currently providing. While there were no data on this subject available to the Task Force, during its deliberations the members learned that as part of its larger transparency goals, ISBE plans to compile and publish schools' code compliance information collected by the Regional Offices of Education, including compliance with the P.E. instructional requirement. ISBE plans to share these data by spring 2014 via an online, searchable database that allows parents and other interested community stakeholders to drill down to school-level data to understand their school's standing.

  The Task Force supports these steps to increase transparency with respect to P.E. and encourages ISBE to engage a diverse array of stakeholders – such as those sectors represented on the Task Force - in building an online portal for accessing data on the implementation of the K-12 daily P.E. instructional requirement. When convened, the Enhance P.E. Roundtable would be an ideal set of stakeholders to support and inform the development of ISBE's online portal.

- With an increased emphasis on standardized testing and common core subjects, there may be less of a focus on physical education by school administrators, other teachers, and parents, yet the P.E. curriculum plays a critical role in helping students learn and be healthy. The Task Force developed resources and recommendations to help school leaders, teachers, parents, and the public better understand the value and importance of physical education. To ensure quality instruction, the Task Force discussed the need for physical education and health teachers to be able to be recognized as "highly qualified," just as other academic subjects are taught by highly qualified teachers in those subjects.

- There is a distinction between physical education and physical activity. Physical education is the planned, sequential and developmentally appropriate K-12 curriculum that provides cognitive content and learning experiences using physical activity as a teaching tool. In contrast, physical activity is a movement of the body that expends energy. This distinction is important as schools work to improve the quality of their physical education programs and increase the amount of moderate to vigorous physical activity throughout the school day. Physical activity can be incorporated into classroom time and other academic subjects can be integrated into physical education. The Task Force primarily focused on the quality of the *physical education* provided in schools, but also identified resources that classroom teachers can use to incorporate physical activity into lessons to support learning and behavior goals.

Implementation Considerations

While the work of the Task Force officially ends when its recommendations are made to the Illinois Governor and General Assembly on August 31, 2013, the work to promote and implement enhanced P.E. across Illinois will extend much beyond that date. Helping teachers and school administrators make the shift from "Outdated P.E." to "Enhanced P.E." will take time and resources and the vision of the Task Force is that enhanced P.E. will be promoted and sustained in perpetuity. Specifically, the Task Force discussed the need to consider the following when implementing enhanced P.E.:

- **Time** - It will take time for ISBE to adopt and for schools to fully implement the revised learning standards for physical development and health. The Task Force intends for the learning standards to be adopted by the spring of 2014 so that schools can plan for their implementation during the 2014-15 school year and fully implement the changes in the 2015-16 school year. Further, a long-term investment will be needed to promote and sustain enhanced P.E. in schools across Illinois over time.

- **Professional Development**- P.E. teachers, adapted P.E. teachers, and non-P.E. teachers will need resources and opportunities to improve the quality of their physical education classes and their ability to incorporate physical activity into other classes. There is a need to identify the scope of professional development needed and develop materials to fill the gaps for all teachers across Illinois.

- **Professional Pipeline** - In order to permanently implement enhanced P.E. in Illinois, academic and training institutions will need to adapt their curricula to meet the revised learning standards and ensure future teachers, school administrators, and others are comfortable teaching and promoting enhanced physical education.

- **Measuring Progress** – For school leaders, parents and communities to understand the progress that Illinois has made in improving policies and practices, and the impact that those changes have had on student fitness, activity levels, and academic achievement, it will be necessary to collect and analyze data. Four key elements of data to be analyzed at the district level to assess the quality of a P.E. program may include: student fitness (e.g., as measured by Fitnessgram® standards), whether schools have Highly Qualified P.E. teachers, whether schools are meeting the P.E. instructional requirement, and if schools' curricula follow the Learning Standards for Physical Development and Health (Goals 19-24). The Task Force has made some specific recommendations related to potential metrics on the impact of Enhanced P.E., but state and local leadership should take advantage of new types of data that become available or opportunities that arise to integrate the collection and analysis of P.E.-related data within future educational data systems. Data collected should utilize tools that can be adapted to include students with disabilities.

- **Moving Toward Enhanced P.E. in all Schools** - The Task Force has an express goal that schools move toward providing daily physical education taught by a qualified and trained P.E. teacher. Due to resource and facility constraints, in some schools (primarily at the elementary level) non-P.E. classroom teachers are currently charged with teaching P.E. some days. In such cases, districts, regional offices of education and ISBE should provide these teachers with the resources and training needed to implement quality physical education opportunities for students that will result in academic, behavioral, and health benefits. At the same time, schools and districts will need technical assistance and support to identify and dedicate the time, facilities and space, staff, equipment, professional development, and other resources needed to develop their daily, professionally taught P.E. program.

- **Resources** – The Task Force developed the *Enhanced Physical Education Resource Guide,* an extensive set of resources to support the implementation of enhanced P.E. This web-based Guide provides links to an array of national initiatives to improve P.E. and wellness that schools can use as a framework; quality P.E. curricula options; brain breaks that can be used by classroom teachers; recommended tools to evaluate P.E. teachers and P.E. programs; requirements, model policies, and guidance for wellness policies; resources for engaging school boards; national and state standards and recommendations related to P.E.; tools for supporting enhanced P.E. for students with disabilities; existing awards and recognition programs; and links to training and professional development. The Resource Guide was shared with all Task Force members to distribute to their networks and will be housed on the Task Force's website: http://www.isbe.net/EPE/html/EPETF.htm.

Task Force Recommendations

The Task Force's recommendations are listed below and a rationale for each recommendation is included in the full report, which can be accessed at www.isbe.net/EPE/html/EPETF.htm.

General Charge: Propose Revisions to Learning Standards

- ***Recommendation 1:*** The Illinois State Board of Education (ISBE) propose adoption of the Task Force's recommended revisions to Goals 19, 20, 21, 22, 23, and 24 of the Illinois Learning Standards for Physical Development and Health with the intention of fully implementing the revised standards for the 2015-16 school year. *[The proposed revised standards and performance descriptors can be found starting on page 19 of the full Task Force report, available at http://www.isbe.net/EPE/html/EPETF.htm.]*
- **Recommendation 2:** At a district level, examine the revised Physical Development and Health standards as they relate to the forthcoming new science and social-emotional standards.

General Charge: Promote and recommend enhanced P.E. programs

- ***Recommendation 1:*** ISBE, in partnership with the Illinois Department of Public Health (IDPH), update its model wellness policy to include a policy that students spend at least 50% of P.E. class time in moderate to vigorous physical activity (MVPA).
- ***Recommendation 2:*** ISBE and IDPH promote the updated model wellness policy statewide, making resources available for teachers and administrators to implement the model policy.
- ***Recommendation 3:*** ISBE, in partnership with IDPH, recommend and provide technical assistance for voluntary completion of School Health Index to assist in the process of developing wellness policies.
- ***Recommendation 4:*** ISBE will coordinate with Regional Offices of Education/Intermediate Service Centers to provide support for enhanced P.E. programs and approaches.
- ***Recommendation 5:*** ISBE recommend a limited class size for physical education similar to other classroom settings for optimal instruction. The recommendation set in the *Shape of the Nation 2012* report is that the teacher/student ratio in physical education be no greater than 1:25 (elementary) and 1:30 (middle/high).

Sub-Charge A: Educate and promote leadership on enhanced P.E. among school district and school officials

- ***Recommendation A1****:* ISBE implement recognition and award programs to encourage adoption of enhanced P.E. programs and principles by school district and school officials

Sub-Charge B: Develop and utilize metrics to assess the impact of enhanced P.E.

- ***Recommendation B1:*** ISBE recommend Presidential Youth Fitness Program (PYFP) as a tool for measuring fitness, accessing professional development, and recognizing achievement.
- ***Recommendation B2:*** ISBE aggregate data from schools participating in PYFP.
- ***Recommendation B3:*** When technically possible, ISBE link and report aggregate PYFP data with academic achievement, attendance, and discipline data.
- ***Recommendation B4:*** ISBE include a measure on the School Report Card about the number of minutes of instructional P.E. provided for different grade levels as a measure of health.

Sub-Charge C: Promote training and professional development in enhanced P.E. for teachers and other school and community stakeholders

- ***Recommendation C1****:* ISBE should convene a committee to determine the scope of necessary professional development for physical education and health teachers, what is currently available, what gaps need to be filled, and how IDPH and ISBE can collaborate to close those gaps. This could be a committee of the sustained voluntary Enhance P.E. Roundtable (Recommendation D1).
- ***Recommendation C2:*** ISBE work with its partners to develop and disseminate professional development materials that support implementation of the revised learning standards.
- ***Recommendation C3:*** ISBE implement a 'highly qualified' status for physical education and health teachers as it does for other teachers in the state. ISBE should use the criteria and submission process that is already in place for other disciplines and implement it in conjunction with implementation of the revised standards.
- ***Recommendation C4:*** ISBE and IDPH should work with their partners to provide professional development resources for integrating physical activity into the classroom (e.g., timely brain breaks during the school day; physical activity breaks before or during high-stakes testing).

Sub-Charge D: Identify and seek local, state, and national resources to support enhanced P.E.

- ***Recommendation D1:*** ISBE and IDPH sustain a voluntary Enhance P.E. Roundtable to identify resources and support a long-term campaign to promote enhanced P.E. across the state.
- ***Recommendation D2:*** The Illinois General Assembly should consider the importance of P.E. to students' learning, social-emotional wellness, behavior and health, and dedicate funding and other resources to enhance the quality of daily P.E.
- ***Recommendation D3:*** ISBE, IDPH and the Enhance P.E. Roundtable seek to align efforts and collaborate with other systems and stakeholders working to advocate for enhanced P.E. and school health.

The Task Force brought together a diverse array of stakeholders in Illinois who value the education and well-being of all students. The Task Force's activities and recommendations reflect our understanding of the compelling evidence linking enhanced P.E. with improved academic achievement, behavior, and health. The Task Force encourages the implementation of these recommendations for the benefit of all Illinois students.

Summary

The Task Force provided resources and ideas that promote and support the leadership of local schools and administrators so they can be champions and models for other local leaders. It recommended actions necessary to ensure that sufficient professional development opportunities are available to teachers and suggested specific metrics that can be used at the state and local level to measure the implementation and impact of enhanced P.E. The Task Force developed revised learning standards that will facilitate consistent implementation. The Task Force encourages the implementation of these recommendations for the benefit of all Illinois students.

The Enhance P.E. Task Force brought together a diverse array of stakeholders from throughout Illinois who value the education and well-being of the state's students. The Task Force's P.E. promotion activities and recommendations reflect its understanding of the compelling evidence linking enhanced P.E. with improved academic achievement, behavior, and health. The Task Force understands that schools are constantly struggling with budgetary constraints and other demands, and, therefore, it aimed to provide the tools and resources that will enable schools and districts to prioritize and implement enhanced P.E. without placing any additional requirements on schools.

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References

[1] Best, J.R. (2010). Effects of physical activity on children's executive function: Contributions of experimental research on aerobic exercise. Developmental Review, 30(4), 331-351.

[2] Hillman, C.H., Pontifex, M.B., Raine, L.B., Castelli, D.M., Hall, E.E., Kramer, A.F. (2009). The effect of acute treadmill walking on cognitive control and academic achievement in preadolescent children. Neuroscience. 159(3):1044-54. doi: 10.1016/j.neuroscience.2009.01.057

[3] Segen, J.C. (1999). The Dictionary of modern medicine. Highstown. McGraw Hill.

[4] Hillman, C.H., Castelli, D.M., Buck, S.M. (2005) Aerobic fitness and neurocognitive function in healthy preadolescent children. Medicine and Science in Sports and Exercise 37(11), 1967–1974

[5] Kamijo, K., Pontifex, M.B., O'Leary, K.C., Scudder, M.R. Chien-Ting, W., Castelli, D.M., Hillman, C.H. (2011). The effects of an afterschool physical activity program on working memory in preadolescent children. Developmental Science, 14(5):1046-1058. doi: 10.1111/j.1467-7687.2011.01054.x

[6] Pontifex, M.B., Raine, L.B., Johnson, C.R., Chaddock, L., Voss, M.W., Cohen, N.J., Kramer, A.F., & Hillman, C.H. (2011) Cardiorespiratory Fitness and the Flexible Modulation
of Cognitive Control in Preadolescent Children. Journal of Cognitive Neuroscience 23(6):1332–1345.

[7] Castelli, D.M., Hillman, C.H., Buck, S.E., & Erwin, H.E. (2007). Physical fitness and academic achievement in 3rd and 5th grade students. Journal of Sport & Exercise Psychology, 29(2), 239-252.

[8] Chaddock, L., Erickson, K.I., Prakash, R.S.,Kim, J.S., Voss, M.W., Vanpattar, M.…Kramer, A.F. (2010a). A neuroimaging investigation of the association between aerobic fitness, Illinois Enhance PE Task Force Research Summary: Exploring the Link Between Physical Activity, Fitness, and Cognitive Function hippocampal volume, and memory performance in preadolescent children. *Brain Research*. 1358: 172–183. doi: 10.1016/j.brainres.2010.08.049

[9] Chaddock, L., Erickson, K.I., Prakash, R.S., Vabpatter, M., Voss, M.W., Pontifex, M.B.…Kramer, A.F. (2010b). Basal ganglia volume is associated with aerobic fitness in preadolescent children. *Developmental Neuroscience*. *32*(3), 249-256.

[10] Castelli, D.M., et al. (2007).

[11] Chih, C.H., Chen, J.F. (2011). The relationship between physical education performance, fitness tests, and academic achievement in elementary school. International Journal of Sport & Society, 2(1), 65-75.

[12] Chomitz, V.R., Slining, M.M., McGowan, R.J., Mitchell, S.E., Dawson, G.F., & Hacker, K.A. (2009). Is there a relationship between physical fitness and academic achievement? Positive results from public school children in the northeastern United States. Journal of School Health, 79(1), 30-37. doi:10.1111/j.1746-1561.2008.00371.x

[13] London, R.A., & Castrechini, S. (2011). A longitudinal examination of the link between youth physical fitness and academic achievement. Journal of School Health, 81(7), 400-408. doi: 10.1111/j.1746-1561.2011.00608.x

[14] Roberts, C.K., Freed, B., McCarthy, W.J. (2010). Low aerobic fitness and obesity are associated with lower standardized test scores in children. The Journal of Pediatrics, 156(5), 711-718. doi: 10.1016/j.jpeds.2009.11.039

[15] Van Dusen, D.P., Kelder, S.H., Kohl, H.W. III, Ranjit, N., Perry, C.L. (2011). Associations of physical fitness and academic performance among school children. The Journal of School Health, 81(12):733-740. doi: 10.1111/j.1746-1561.2011.00652.x

[16] Bass, R.W., Brown, D. D., Laurson, K.R., and Coleman, M.M. (2013). Physical fitness and academic performance in middle school students. Acta Paediatrica Nurturing the Child. Advance online publication. doi: i: 10.1111/apa.12278.

[17] Grissom JB. Physical Fitness And Academic Achievement. JEP online 2005;8(1):11-25

[18] IOM (Institute of Medicine). 2013. Educating the student body: Taking physical activity and physical education to school. Washington, DC: The National Academies Press.

[19] Centers for Disease Control and Prevention. The association between school based physical activity, including physical education, and academic performance. Atlanta, GA: U.S. Department of Health and Human Services; 2010.

[20] Welk G. (2009). Cardiovascular Fitness and Body Mass Index are Associated with Academic Achievement in Schools. Dallas, Texas: Cooper Institute

[21] Joyce, J., Graydon, J., McMorris, T., Davranche, K. (2009). The time
course effect of moderate intensity exercise on response execution and response inhibition. Brain and Cognition. 71(1)14-19. doi: 10.1016/j.bandc.2009.03.004

[22] Hillman, C.H., Pontifex, M.B., Raine, L.B., Castelli, D.M., Hall, E.E., Kramer, A.F. (2009). The effect of acute treadmill walking on cognitive control and academic achievement in preadolescent children. Neuroscience. 159(3):1044-54. doi:10.1016/j.neuroscience.2009.01.057

[23] Pontifex, M.B., Saliba, B.J., Raine, L.B., Picchietti, D.L., Hillman, C.H. (in press). Exercise improves behavioral, neurocognitive, and scholastic performance in children with attention-deficit/hyperactivity disorder. The Journal of Pediatrics.

[24] Kubesch, S., Walk, L., Spritzer, M., Kammer, T., Lainburg, A., Heim, R. (2009). A 30- minute physical education program proves students' executive attention. Mind, Brain, and Education. 3(4) 235-242

[25] Davis, C.L., Tomporowski, P.D., Boyle, C.A., Waller, J.L., Miller, P.H., Naglieri, J.A., Gregoski, M. (2007). Effects of aerobic exercise on overweight children's cognitive functioning: A randomized controlled trial. Research Quarterly for Exercise and Sport 78 (5): 510-19.

[26] Hellison, D. (2003) *Teaching personal and social responsibility through physical activity* (241-252). Champaign, IL: Human Kinetics.

[27] Lintunen, T., & Kuusela, M. (2007). *Psychology for Physical Educators, Social and Emotional Learning in Physical Education* (75-78). Champaign, IL: Human Kinetics.

[28] Zins, J.E., Weissberg, R.P., Wang, M.C. & Walberg, H.J. (2004). *Building academic success on social and emotional learning: What does the research say?* New York : Teachers College Press.

[29] Strong, W., R. Malina, C. Blimkie, S. Daniels, R. Dishman, B. Gutin, et al. (2005). Evidence Based Physical Activity for School-age Youth. *Journal of Pediatrics*, 146(6), 732-737.

[30] Le Masurier, G., & Corbin, C. B. (2006). Top 10 reason for quality physical education. *Journal of Physical Education, Recreation & Dance*, *77*(6), 44-53.

[31] Trust for American's Health. F as in Fat 2011: How Obesity Threatens America's Future. (2011). Retrieved from http://healthyamericans.org/assets/files/TFAH2011FasInFat10.pdf

[32] Tirosh A, Shai I, Afek A, et al. (2011). Adolescent BMI Trajectory and Risk of Diabetes versus Coronary Disease. New England Journal of Medicine. 364(14):1315-1326.

[33] U.S. Centers for Disease Control and Prevention. "NHIS Arthritis Surveillance." U.S. Department of Health and Human Services. http://www.cdc.gov/arthritis/data_statistics/national_nhis.htm#excess

[34] Freedman D.S., Mei, Z., Srinivasan, S.R., Berenson, G.S., & Dietz, W.H. (2007). Cardiovascular Risk Factors and Excess Adiposity among Overweight Children and Adolescents: The Bogalusa Heart Study. Journal of Pediatrics. 150(1):12-17.e2

[35] Finkelstein, E.A., Fiebelkorn, I.C., & Wang, G. (2004) State-Level Obesity-Attributable Expenditures. Obesity Research. 12(1):18-24.
[36] United Health Foundation, American Public Health Association, & Partnership for Prevention. (2009). The Future Costs of Obesity: National and State Estimates of the Impact of Obesity on Direct Health Care Expenses; Retrieved from http://www.fightchronicdisease.org/sites/fightchronicdisease.org/files/docs/CostofObesityReport-FINAL.pdf
37 Guide to Community Preventive Services. Behavioral and social approaches to increase physical activity: enhanced school-based physical education www.thecommunityguide.org/pa/behavioral-social/schoolbased-pe.html.
38 Healthy People 2010-Chapter 2222 Physical Activity and Fitness, Centers for Disease Control and Prevention and President's Council on Fitness. Available at http://hp2010.nhlbihin.net/2010Objs/22Physical.html#_Toc471793048.