

Quality Physical Education: Enhancing Student Health and Learning

The most effective programs do much more than merely keeping students active.

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Quality physical education programs play an important role in educating the whole child by fostering strong and healthy bodies that house keen minds. These programs do much more than merely keep students active. While physical activity (PA) is important to a healthy lifestyle, physical education (PE) is a curricular area that promotes development of the knowledge, skills, fitness levels, competence, and confidence needed to lead physically active and healthful lives, now and in the future. However, the ever-increasing pressure on schools to improve standardized test scores has narrowed the school curriculum, often at the expense of PE. This concentration on core academic subjects is brewing a perfect storm with dire health consequences for our citizens and financial consequences for our country.

We now have an obesity epidemic, and increasing numbers of our children are suffering from chronic diseases and diabetes. This sedentary generation may be the first with shorter life expectancies than their parents. The financial cost to business and government associated with the rise in unhealthy lifestyles is frightening; witness your own school district's double-digit increase in health insurance premiums. But the argument for justifying PE programs on the basis of public health and financial consequences has generally fallen on deaf ears in the education community.

PE and Classroom Performance

Recent research on the relationship between PE and academic performance helps establish the benefits of educating the whole child and provides evidence for those focused solely on improving test scores (Active Living Research, 2008). Either way, the benefits of PE go beyond those specifically related to PE content standards (Strong et al., 2005):

- The addition of PE to the curriculum results in positive gains in academic performance;
- Allocating more curricular time to PA programs does not negatively affect academic achievement, even when time for other subjects is reduced; and
- PA has a positive influence on concentration, memory, and classroom behavior.

The California Department of Education (2002) has shown a strong correlation between the number of fitness standards achieved and reading and math scores, with physically fit students performing better academically in all three grades tested (i.e., fifth, seventh, and ninth grades).

Physical Education vs. Physical Activity

Just as a set of worksheets would not be considered a quality math curriculum, a set of activities that gets students up and moving should not be considered a quality physical education curriculum. Having students play games may be enjoyable for them and easier for teachers than implementing a true standards-based curriculum, but although replacing PE with PA may help students achieve the recommended daily amount of moderate to vigorous physical activity, these programs do not increase students' willingness to be physically active outside of school. In addition, replacing PE with PA may increase the disparity between proficient students and novices by providing proficient students with additional practice, while novices struggle to perform skills they may never have been taught to perform correctly, if at all.

In contrast, a true PE curriculum provides support for students at all levels to learn, and gives them the tools they need to participate competently in a wide variety of activities, increasing their self-efficacy and enhancing their motivation to participate

in physical activities on their own. This in turn increases overall fitness levels and reduces the risk of diseases related to sedentary lifestyles.

The Physical Education Curriculum Analysis Tool, developed by the Centers for Disease Control and Prevention (CDC) (2006), outlines the four major components of a quality PE program: policies and environment; curriculum; instruction; and student assessment. Of these components, the curriculum is the cornerstone of an effective program. It provides the basis for formal instruction and delineates the outcomes on which students will be assessed (www.cdc.gov/healthyyouth/pecat).

The Exemplary PE Curriculum

In response to the need for a quality, standards-based PE program, the Michigan Fitness Foundation developed the Exemplary Physical Education Curriculum (EPEC). Unlike other curricula, EPEC shifts the emphasis of PE away from merely keeping children busy, happy, and good, and instead teaches “toward specific, highly valued objectives in a systematic way to create lasting change” (U.S. Department of Health and Human Services, 2001). In 2002, the CDC recognized EPEC as a successful public-health initiative with the Award for Excellence in Prevention Research and Research Translation in Chronic Disease.

The multiple components and subcomponents of EPEC interrelate to form a highly effective educational delivery system:

- *Minute matrix.* What is taught, where it is taught, and how long it is taught at each grade level;
- *Scope and sequence matrices* provide specific details of what is taught in each lesson;
- *Teaching/learning progressions* (TLPs) supply detailed descriptions of each of the developmentally appropriate, sequential learning steps of an objective;
- *Assessment rubrics* condense each TLP step into the essential assessment criteria;
- *Instructional segments* use these criteria and cue words/phrases as the basis for explanation and demonstration;
- *Posters* are constructed from the assessment rubrics so students know exactly what is expected of them; and
- *Reinforcing activities* add fun ideas to bolster learning on each TLP.

Ultimately, education must be about student gains, and the implementation of EPEC has yielded impressive results in students across a variety of PE outcomes. A recent study found that EPEC-taught students showed dramatic gains in health-oriented outcomes, demonstrating “the effectiveness of EPEC in increasing students’ physical fitness, motor skill development (i.e., overhand throw), and personal/social behaviors” (Kulinna et al., 2006).

Other studies and organizations have also noted EPEC’s positive influence on student fitness (DeJong, 2001; U.S. Department of Health and Human Services, 2001). For example, in comparing EPEC versus non-EPEC PE programs, “students taught by [EPEC] had significantly higher fitness scores” (Kulinna et al., 2000).

EPEC’s effectiveness was further demonstrated in a study where a diverse sampling of Detroit schools monitored fitness and PA levels using pedometers and Web-based software. The results far exceeded projections, with students’ cardiorespiratory endurance scores increasing by 41 percent and their PA levels (in and out of school) increasing by 25 percent (McCaughtry, 2005).

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The goal of EPEC, however, is not simply to increase PA and fitness, but also to teach. For a PE program to positively influence students not only in the present, but throughout life, it must equip them with the skills, knowledge, and attitudes to be physically active beyond the classroom.

Amidst the mostly minority population (80 percent) involved in the Detroit study, students’ knowledge of fitness and physical activity increased (Kulinna, Martin, McCaughtry, Cothran, & Kodish, 2005), and self-efficacy for a variety of health-oriented outcomes increased not only among students (Martin, Kulinna, McCaughtry, Barnard, & Ramirez, 2005), but among teachers (McCaughtry, 2005). Other studies have indicated that implementation of EPEC has positive effects beyond increased physical activity and fitness, suggesting that “EPEC was more effective than alternate PE curricula at increasing motor skill specific self-efficacy, improving motor skill performance, and increasing self-reported levels of physical activity” (Russell et al., 2006).

Now, more than ever, our children and youths need access to quality PE programs like EPEC, based on sound curriculum, instruction, and assessment, that provide them with the opportunity to learn while being physically active. For more information on EPEC, and to download sample materials, visit www.EPEC4kids.com.

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On the Same Page

Here are suggested questions that principals and teachers can use to spark discussion about how to apply the points made in this article to their particular schools.

1. What is the difference between a quality PE program and a PA program?
2. How can PE enhance the teaching and learning at our school.
3. Does your program support actual teaching of the skill, or does it assume students can already perform the skill? For example, are students taught to throw a ball correctly, or are they expected to already know how to throw a ball and be able use this skill in activities?
4. Is your program designed so that students can achieve mastery in the time available, or are students simply exposed to activities but given insufficient practice to develop proficiency?
5. Does your program provide time and materials for assessment, or is student progress assumed but never verified?