The Physical Cost of Common Core: Making Fitness Academic

Abstract

 This article describes the potential loss of physical activity opportunities in K-12 education with the implementation of Common Core State Standards and the dangers of that loss in light of the nation’s obesity epidemic. It also outlines a supplemental physical activity program in an elementary school that supported academics and CCSS through increased activity and healthy lifestyle curriculum. The program was created based on the success of similar programs that showed academic gains with increased physical activities for students. The results of this program were increased classroom engagement and academic achievement. The success of the program spread throughout the school until all classrooms implemented it in their classroom. The article discusses the balance between addressing the needs of the whole child and their fitness needs, while at the same time maintaining and achieving high academic standards and assessments.

Paramount on the list of concerns for the majority of schools is the implementation of Common Core State Standards (CCSS) and working to get students to meet rigorous academic standards and be ready for life outside of K-12 education. With this concern comes a focus on precious seat time, and using every minute effectively. Coupling this with budget woes, extra programs and supplemental activities start to disappear. Among this, PE, extra “frivolous” recess, and a number of other programs that involved physical activity go to the wayside. But what is the price of these losses? If enough opportunity to be active is lost, do our students lose their ability to focus? Is the price of higher academics a lack of a healthy lifestyle? How do we, as schools, balance these higher academic expectations with the health of our students in light of the risk of a sedentary lifestyle (Hoffman, 2012.)?

Physical Activity and Academic Success

 The link between increased physical movement and academic achievement is well-documented, particularly so with at-risk, minority students and other “special populations” (Basch, 2011, Santiago & Disch, 2013.) However, this is a complicated relationship between fitness and academic success with many factors to consider. Are students successful because they are active? Or are they successful because they have families that are engaged and supportive enough to ensure that they are active? Is being active a byproduct of overall health and stability which leads to being engaged in school?

Sports are an excellent example of the complicated connection between physical activity and academic success. Students involved in sports are more likely to graduate (Renfrow, Caputo, Otto, Farley & Eveland-Sayers, 2011), however, with sports come a number of support systems that link to academics: coaches provide advocacy and study times for athletes, students are accountable to maintain GPA and attendance requirements and discipline infractions can be the end of a student athlete’s career (Chomitz, Slining, McGowan, Mitchell, Dawson, & Hacker, 2009.) Is it the physical activity of sports that help students succeed in school, or all of the components that go with it?

However the link is undeniable: students that regularly participate in physical activity are more likely to succeed in school, and in a far broader perspective, they are more likely to be healthier for the rest of their life (Chomitz et al, 2009.) How do we replicate that student athlete support and engagement for all students at all levels?

Elementary Foundations

Unfortunately, the loss of PE in elementary is often a result of budget cuts (Beautlieu, Butterfield & Pratt, 2009.) If students do not build healthy habits early on, the likelihood of them adding them later in life becomes less likely, and the number of children that are now considered obese indicates a pressing need to get kids moving among other lifestyle changes (Hoffman, 2012.) Unfortunately, this comes at a time where there is a considerable urgency with academics, as CCSS push rigorous expectations into 45 states. So when is the trade off? How crucial is it to sacrifice seat time for physical activity? And will it pay off in the end? Or better yet, is there a way to marry the two?

Past Success

 There are numerous studies that show links to increased physical activity and increased academic success. These studies are varied, some taking place in the form of increasing physical education or the focus of the physical education time (Senne, 2013), other create stand-alone programs that supplement physical education classes (Everhart, Dimon, Stone, Desmond, & Casilio,2012). This success can be seen in general populations as well as special populations that are in need of interventions to be successful.

 In a large-scale study of 254, 743 Texan students that reviewed academic and fitness test records, all fitness variables except for BMI had a significant positive association with academic performance (Van Dusen, Kelder, Kohl, Ranjit, & Perry, 2011). A similar study looking secondary students in Spain found a linear relationship between academic performance and physical activity (Morales, Pellicer-Chenolli, García Massó, Gómez, Gomis, & González, 2011). Another researcher uses such studies to call for a higher amount of physical education or physical activity based on the connection between physical activity and higher achievement in academics (Zeigler, 2011). The benefits to increased physical activity in schools are not just academic, as Senne (2013), creates the argument for increasing physical education and increasing the focus on fundamental motor skills in elementary based on the connection to lifelong increased physical activity.

 Special populations have also shown the benefits of increased physical activity. In a study of special needs students increased physical activity promoted desired classroom behaviors, increased academic engaged time, and decreased out of seat time (Nicholson, Kehle, Bray, & Heest, 2011). In a similar study of students with intellectual disabilities, researchers found improved academic work following a 20 minute physical activity session (Everhart, Dimon, Stone, Desmond, & Casilio, 2012).

 Based on these studies, which are a small sample of the literature available, one school developed a program to serve this need for greater physical activity in order to foster greater academic success.

One Example

In a small rural elementary school two teachers were frustrated with two large classes of 2nd and 3rd grade students with many different needs and academic levels. More frustrating was they just could not “sit and focus”. Their solution was to create more opportunities for them to move, but they feared the loss of instructional time. The two created a “Fit Kids, Strong Body, Strong Mind” program for their two classes to do on non-PE days (PE was twice a week in half hour sessions), that focused on physical fitness and healthy lifestyle habits. While the focus was health, the two weaved in academics throughout the program, thus creating a happy compromise and balance between increased activity and academics. The program made a concentrated effort to use math and literacy at every opportunity. Students practiced math facts while they did exercise circuits, to calculate calories burned and nutritional information. The teachers used reading strategies and literacy instruction as students read information on healthy lifestyles. More importantly, they created classrooms where it was cool to be fit and smart. Classroom discussion and writing turned to the dangers of video games and the sedate lifestyle they create, and students started considering what they ate at home and how that should change.

The program expanded beyond its structured time and began to infiltrate the classroom’s day. To transition activities, teachers began using yoga poses and “active brain breaks” to get students focused and kinesthetic activities to reinforce teaching. For example, one teacher worked out a stretching routine to support the literacy routine in the classroom and chant with movements to go with reading strategies. Additionally, the curriculum piece of the program took a “literacy across the curriculum” approach as they built vocabulary, used sight words, and developed reading strategies as they studied the health curriculum together.

The program soon changed the dynamic of the school, and other teachers started replicating the program in order to share the success. A community club paid to bring in outside instructors to lead activities like yoga, and soon the school as a whole began to re-evaluate what they did to support student health. Traditional celebrations like parties and birthdays brought in junk food on a regular basis, and required a lot of time for teacher planning. Instead of using food and crafts for holidays, the school started looking at active ways to celebrate, like the class earning a kickball session, or doing an extra session of Fit Kids. Food became another topic of conversation: As the students learned more about the importance of good nutrition, it became a natural shift to move away from traditional cupcakes and candy, and into more healthful alternatives. Even fundraising became part of our healthy culture. While a Jog-a-thon was already a part of the school, a regional healthcare provider who served as a partner created a fundraiser and awards based on tracking activity.

While the program did take some minutes of seat time, the alternatives were not as feasible. For example, creating before or after-school activities did not provide transportation, and the school knew this would be a hurdle for those students who may most need these interventions (Lennox & Pienaar, 2013.) This was particularly important for these vulnerable subgroups of students as research had also shown that at-risk students were the most likely to show a decline in physical activity at school, perhaps because more time is dedicated towards academics, so making this physical time (which supported their academics) a part of the school day was crucial (Poke, 2011.)

The community participation also gathered momentum as parents began reporting their students sharing healthier options at home, and many families asked the school about resources to help their whole family become more active. This was a critical piece for success, because reinforcing these behaviors at home made the program relevant and helped ensure that these habits would persist after they left the elementary school (Voss & Sandercock, 2013.)

Conclusions

 Was the program successful? In the second year of its implementation, the data is positive, although difficult to generalize. Individual students that had previously struggled with focus show improved engagement and work completion, and students that were formerly discipline issues have shown increased positive behavior and a reduction in office referrals. The program is motivating for students and teachers report increased focus and engagement after the physical activity sessions. The brain breaks in particular are reportedly beneficial throughout the staff, which is why they have been so widely adopted. Teachers have also reported that using the brain breaks in conjunction with neumonic devices have helped their students remember various concepts (such as acting out rules for math with a physical routine). The self-contained classes have reported that using yoga has helped teach their students self-regulation strategies and that the health curriculum has helped then through life skills instruction by making the information relevant. Students have also reported increased physical activity over breaks and holidays, and are proud to share this with their classmates. However the concrete data will come when students participate in state testing after almost two years in the program, and can be compared with their peers that did not have this program the past year.

References

Basch, C. (2011). Physical activity and the achievement gap among urban minority youth. *Journal of School Health, 81*, 626-634.

Beautlieu, L., Butterfield, S. & Pratt, P. (2009). Physical activity opportunity in United States public elementary schools. *ICHPER-SD, 4*(2), 6-9.

Blom, L., Alvarez, J., Zhang, L. & Kolbo, J. (2011). Associations between health-related physical fitness, academic achievement, and selected academic behaviors of elementary and middle school students in the state of Mississippi. *ICHPED-SD, 6*(1).

Chomitz, V., Slining, M., McGowan, R., Mitchell, S., Dawson, G. & Hacker, K. (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).

Everhart, B., Dimon, C., Stone, D., Desmond, D., Casilio, M. (2012). The influence of daily

 structured physical activity on academic progress of elementary students with intellectual

 disabilities. *Education*, *133*(2), 298-312.

Hoffman, J., Chaykin, D., Teale, S., HBO Documentary Films., Institute of Medicine (U.S.), Center for Disease Control., National Institutes of Health (U.S.), Warner Home Video (Firm). (2012). *The weight of the nation*. New York: HBO Home Box Office.

Lennox, A, Pienaar, A. (2013). Effects of an after-school physical activity programme on aerobic fitness and physical activity levels of adolescents from a disadvantaged community: PLAY study. *African Journal for Physical Health Education, Recreation and Dance*, *19*(11), 154-168.

Morales, J., Pellicer-Chenolli, M., García Massó, X., Gómez, A., Gomis, M., & González,

 L.(2011). Relation between physical activity and academic performance in 3rd- year

 secondary education students. *Perceptual and Motor Skills*, *113*(2), 539-546.

Nicholson, H., Kehle, T., Bray, M., & Heest, J. (2011). Engagement of children with Autism

 spectrum disorder. *Psychology in the Schools*, *48*(2).

Popke, M. (2011). Making fitness fit. *Athletic Business*, December.

Renfrow, M., Caputo, J., Otto, S., Farley, R. & Eveland-Sayers, B. (2011). The relationship between sports participation and health-related physical fitness in middle school and high
 school students. *The Physical Educator*.

Santiago, J. & Roper, E. (2013). The relationship among aerobic capacity, body composition, and academic achievement of fourth and fifth grade Hispanic students. *The Physical Educator*, *70*, 89-105.

Senne, T. (2013). A better path to ensuring lifelong physical activity participation. *Journal of*

 *Physical Education, Recreation and Dance.* *84*(4), 4-6, DOI:

 10.1080/07303084.2013.773702

Van Dusen, D., Kelder, S., Kohl, H., Ranjit, N., & Perry, C. (2011). Associations of physical

 fitness and academic performance among schoolchildren. *Journal of School Health,*

 *81*(12), 733-741

Voss, C. & Sandercock, G. (2013). Associations between perceived parental physical activity and aerobic fitness in schoolchildren. *Journal of Physical Activity and Health*, *10*, 397- 405.

Zeigler, E. (2011). A new “principal principle” (#14) of physical activity education is emerging.

 *The Physical Educator*, 68(3) 115-117.