Exergaming: New Directions for Fitness Education in Physical Education:
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Video gaming technologies combined with physical fitness activities in school physical education programs is slowly becoming a trend. This is particularly significant given the growing childhood obesity epidemic in America. In order for children to value the importance of physical activity in their daily lives policymakers must devise strategies that support and encourage school systems to develop physical activities that are engaging, exciting, rigorous and enjoyable. One new approach that policy makers and school officials can support is referred to as exergaming and it appeals to the intellectual and fitness needs of 21st century students, now known as the “gamer generation (Beck & Wade, 2006).”

Many have labeled video games as a sedentary addiction that is contributing to the epidemic of childhood obesity. But exergaming entails the active usage of video games to help children be more physically active. This clever combination of gaming and physical activity has made exergaming attractive not only to children, but to parents and educators interested in helping find solutions to the obesity issue.

One of the unfortunate outcomes of No Child Left Behind legislation is the limitation of learning to sedentary academic activities, which has had the effect of reducing the level of physical activity among students in our public schools. However, research suggests that increasing time for physical activity during the school day does not detract from an academic mission and may actually improve academic performance. A few states have begun to mandate increased time for physical education. For example, Florida has recently legislated up to 150 minutes of physical education per week for elementary students and the Governor’s Council on Physical Fitness (Governor’s Council on Physical Fitness, 2007) suggests requiring 225 minutes per week of physical fitness education for students in middle and high school.

Despite these modest efforts, childhood obesity is still on the rise and participation of youth in daily physical activity is on the decline. About one-third of American children and teens (25 million kids) are either overweight or obese and about two-thirds or approximately 136 million adults are overweight. It is estimated that 80% of obese adolescents become obese adults. Obesity has reached epidemic proportions despite considerable evidence that shows that physically active children have lower levels of risk factors for cardiovascular disease, diabetes, high blood pressure, colon cancer and other ailments related to obesity (Health and Human Services, 2007).

Children are less physically active at school and outdoors after school and spend more time in indoor settings engaged in such activity as television viewing and play on high tech gaming. Technology has captured the interests of children causing a decrease in the amount of daily time available for physical activity.

The obesity crisis cannot be totally blamed on technology. Technology can be a powerful tool in combating childhood obesity. The use of technology in schools has been shown to be an effective tool to learn from and with. Even the most simple technology devices appear to engage the learner and enhance the learning environment. We know, for example, that the introduction of technology into classrooms can significantly increase the potential for learning (Nelson & McGarthy, 2007). The technology that has so dramatically
changed the world outside our schools is now changing the learning and teaching environment within them. This change is driven by the current generation of students who are born and comfortable in the age of the internet. Just as technology is changing the academic learning environment so may it also have a positive influence on physical activity?

Exergaming is a modern-day approach to increasing children’s daily physical activity. The approach uses the popularity of technology to motivate. Instead of children sitting in front of a television playing video games, exergaming requires children to move their bodies to play the games while increasing the heart rate and developing an increased level of physical fitness. In addition, part of the enjoyment in these exergaming activities is gaining the problem solving skills that are required to advance to higher levels. As players acquire skills they begin to experience success. This success keeps the players engaged and develops a certain level of attachment to the possible outcome of the game. Players become so engaged and attached to the outcome they forget they are actually exercising.

Walk into an exergaming school environment and the first response is that of entering a Sci-Fi futuristic arcade zone with a mirage of illuminating lights and sounds. Some users may choose to strap on a “magic” belt and see themselves on a TV screen jumping around inside a virtual game while striking falling balls before they hit the floor. Others will be pedaling on a bike that will advance the character on the screen through an off road path while racing a friend – the faster they pedal, the faster the characters move. Dancing may be preferred – stepping to the rhythm of a song that requires foot-eye coordination to match up arrows that advance up the TV screen in a variety of directions. The games are engaging and entertaining and they offer the user the positive benefit of exercise.

In summary, a new approach to physical fitness programs in schools is necessary in order to provide children with essential daily physical activity. Health minded school officials and policy makers who understand the connections between daily physical activity, physically fit children, and success in the academic classroom, will want to investigate and put into practice technology driven physical education programs. Such practice holds tremendous promise as a novel remedy to the problem of childhood obesity.

References


