Exergaming as an Alternative for Students Unmotivated to Participate in Regular Physical Education Classes

Mateus David Finco, PPGIE/Federal University of Rio Grande do Sul (UFRGS), Porto Alegre, Brazil
Eliseo Reategui, PPGIE/Federal University of Rio Grande do Sul (UFRGS), Porto Alegre, Brazil
Milton Antonio Zaro, PPGIE/Federal University of Rio Grande do Sul (UFRGS), Porto Alegre, Brazil
Dwayne D. Sheehan, Mount Royal University, Calgary, Canada
Larry Katz, University of Calgary, Calgary, Canada

ABSTRACT

With the novelty of exergames, an alternative form of entertainment and exercise emerged especially for physical education (PE). While video games have been historically associated to problems such as obesity, social introversion and aggressive behavior, exergames brought a new perspective in which these cultural artifacts could contribute to people’s education concerning the practice of physical activity. This article presents a study about the setting up of an exergame lab focusing on kids and preadolescents who usually show signs of dissatisfaction with PE. The research methodology followed a qualitative observation approach, involving twenty-four students of both genders for three months. Results demonstrated that students who were normally unmotivated to participate in PE classes showed a positive attitude regarding the exergame practices and demonstrated their willingness to collaborate with peers. The study also showed that exergaming provides situations in which students can increase the regularity of their practice of physical exercises.

Keywords: Active Video Games, Collaborative Practices, Engagement, Introversion, Sedentary Lifestyle, Physical Activity, Physical Education, Social Skills

INTRODUCTION

Gaming is a widespread activity in our culture, with millions of people playing video games worldwide. Active games, or exergames, have been introduced as a way to enable players to use body movement to control the games. As a result, exergames started to be seen as a tool that could contribute to a less sedentary lifestyle with positive effects concerning health-related
behavior (Baranowski, 2008). But although there is mixed evidence regarding the capability of such games to impact children’s fitness according to public health recommendations, it has been suggested that playing active games can contribute to the practice of light to moderate physical activity (Peng, Jih, & Crouse, 2006). Exergaming may also foster a stronger bond among players, reducing social isolation and loneliness (Mueller, Agamanolis, & Picard, 2003). A study about the motivation of children to play a dance exergame showed the preference of kids for the multiplayer and group game play over the solitary practice (Chin et al., 2008).

In Physical Education (PE) Classes, it has also been argued that exergaming engaged participants in longer periods of physical activity than did the standard PE practice (Fogel, Miltenberger, Graves, & Koehler, 2010). It is therefore important to better understand the potential of using such games in formal educational contexts, particularly when exergaming starts affecting school curriculum. In this article we describe a particular experience in the setting up of an exergame lab to complement PE classes for students unmotivated to participate in regular practices. The use of exergames in the lab has been analyzed from a qualitative perspective, focusing on the practice of physical activity and development of social skills.

**Physical Education, the Practice of Physical Activity and Development of Social Skills**

Physical Education is the discipline in school curriculum that targets the practice of physical activity. Research results have demonstrated that school age children should engage daily in moderate to vigorous physical exercise involving a variety of activities (Strong et al., 2005). Based on such evidence, the US Department of Health and Human Services (2009) claims that comprehensive school-based physical activity programs should help youth meet physical activity needs, stressing that PE practices should be enjoyable and engage kids in friendly interaction.

Several studies have demonstrated the relationship between physical activity and quality of life. Active individuals tend to be healthier, more positive about work, and deal better with everyday stress (Weinberg & Gould, 2011). Stone & Klein (2004) have also concluded that people who exercise frequently not only improve their health and fitness, but they also develop a sense of pleasure and strength, which has positive implications on other aspects of their lives.

Such results indicate the importance of setting up effective PE programs that engage all students in the practice of physical activity. In this respect, new alternatives for the practice of physical exercise should be proposed, in compliance to US Department of Health and Human Services (2009) recommendations that PE practices should be enjoyable for all students. Not only enjoyment may promote an increased level of physical activity (Dishman et al., 2005), it may also influence long-term adherence (Williams et al., 2006). And although student attitude toward Physical Education is generally positive, individual differences may lead students to be unmotivated to participate in classes (Stelzer, Ernest, Fenster, & Langford, 2004). Therefore, it is important that PE curriculum incorporates different types of activities that can be perceived as enjoyable by all students. This has been the proposal of the project presented in this article, which has focused on the setting up of an exergame lab to complement regular PE classes.

Besides health-oriented benefits, well structured PE programs may contribute to the improvement of children’s social skills, engaging them in social situations that involve cooperation, assistance, sharing and solving problems (Gregoriadis, Grammatikopoulos, & Zachopoulou, 2013). Physical education programs may provide an appropriate scenario for social skills to be addressed within the school (McHugh, 1995).

In this article we have focused on the use of exergames as a means to promote the practice of physical activity and contribute to the development of social skills. By focusing
How's My Writing? Using Online Peer Feedback to Improve Performance in the Composition Classroom
Vanessa Paz Dennen and Gabriel Jones (2006). Self, Peer and Group Assessment in E-Learning (pp. 245-258).
www.igi-global.com/chapter/writing-using-online-peer-feedback/28805?camid=4v1a