

Chapter 7

Games in Health Education: A Survey of Pre-Service Teachers

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ABSTRACT

Studies indicate that teachers are not effectively encouraging appropriate health and well-being strategies among their students (Turcotte, Gaudreau, & Otis, 2007). Because educational games offer many advantages in promoting health, motivation, and active participation in learning, (Sauvé, Power, IsaBelle, Samson, & St-Pierre, 2002), it is important to determine which types of games health education teachers can use best. Building on health education needs and social representation theory, this chapter presents a study of pre-service (student) teachers to identify social representations that pre-service teachers have about games, including whether they perceived games as supporting learning at home and in school, and which types and aspects of games they preferred. The answers to these questions helped the research team to create games to meet the needs of future teachers in enhancing their students' health education.

INTRODUCTION

Currently, few teachers use computerized games due to lack of resources appropriate to their education needs. As part of the Canada-wide *Simulation and Advanced Gaming Environments (SAGE) for Learning* project, a study was carried out of 300 pre-service (student) teachers and more than 150 other students on their perceptions of the relationship between the health of young people and games.

In this chapter, we present the results of the first inquiry: student teachers' perceptions of whether games can support learning at home, the types of games that students like, and the aspects of games that they prefer. The answers to these questions provided input for creation of a game designed to meet the needs of future teachers in supporting health education for their students.

The following sections present background on the state of health among young people, the advantages of non-digital games for learning, social representations, survey methodology, and survey results.

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HEALTH PROBLEMS AND YOUTH

Statistics show that young people have increasing health problems in their lives. Indeed, youth health concerns could be described as “nine Ss” (sedentary lifestyle, surplus weight, scrawniness, unhealthy sexuality, sleep (out of step with their biological clocks), stress, substances, \$\$ and suicide). Although we do not cover all these points here, we examine certain statistics and the connection between health and learning among the young as background for our study.

Sport and Physical Activity

During the school year, young people dedicate, on average, 30 hours per week to school, watch TV from 15 to 26 hours per week, and spend increasing numbers of hours playing electronic games and using the Internet (Clocksin, Watson, & Ransdell, 2002). In a study of 1,847 11-to-15-year-old students in Quebec, Pronovost (2007) found that greater consumption of multimedia corresponded to a lesser degree of physical and cultural activity (p. 125). In Nova Scotia, a 2002 study revealed that the majority of primary and secondary students in the province did not have the minimum exercise required to be healthy. In fact, of the 1,700 students participating in the study, only 10% of 16-year-olds met national exercise standards (Gagné, 2002). In Quebec, it seems that three out of five children failed to meet the minimum 60 minutes a day of activity recommended by the World Health Organization (WHO) (Allard, 2008). The Pronovost (2007) study also indicated that children who were active on sports teams expected to be more successful in their school years, and were more likely to believe in their capacities than those who were not part of a sports team.

Food and Young People

Between 1978 and 2004, the combined number of overweight and obese Canadian teenagers from 12 to 17 years old rose from 14% to 29% (Statistics Canada, 2005), with the prevalence varying by province. In 2004, the combined rate of overweight and obesity in young people between two and 17 years old in Newfoundland & Labrador, New Brunswick, Nova Scotia and Manitoba was significantly higher than the national average. In Newfoundland & Labrador and New Brunswick, the rate of obesity was sharply higher than the national average. However, combined rates in Quebec and Alberta were significantly lower than the national rate.

In addition, Statistics Canada data (2007) show that 70% of children from four to eight years old do not consume the recommended five daily servings of fruits and vegetables, and 71% of boys and 83% of girls from 10 to 16 years old do not consume the recommended three daily portions of dairy products. An Ontario study of 318 young people from 9 to 12 years old (Cohen, Evers, Manske, Bercovitz, & Edward, 2003), looking at possible links among smoking, physical activity, and missed breakfast, showed that only 48.8% of boys and 36.1% of girls had breakfast every morning. Generally, nutritionists recommend that a third of daily calories be consumed at breakfast; young people who skip breakfast risk health problems, decreased energy, and poorer cognitive performance (Bayne-Smith et al., 2004). Hospitalization rates for eating disorders in young women under 15 years old increased by 34% from 1987 to 1999 (STHC, 2007). Social pressure for an idealized physical appearance can cause severe problems of self-respect for a child, which can become an obsession. Skemp-Arlt (2006) found several consequences of eating disorders in young people, including fatigue, decreased academic performance, poor self-image, and a lack of necessary nutrients, including protein and vitamins, for growth.

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