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A descriptive study of Turkish high school students' game-playing characteristics and their considerations concerning the effects of games

Turkan Karakus*, Yavuz Inal, Kursat Cagiltay

Computer Education and Instructional Technology, Faculty of Education, Middle East Technical University, Ankara, Turkey

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ABSTRACT

The purpose of this study is to examine high school students' preferences, playing habits, expectations, and thoughts concerning computer games. One-thousand two hundred and twenty-four (1224) vocational high school students, studying at eight different schools in six cities within four different regions in Turkey, participated in the study. The results reveal that female students expect games to have instructive elements, while males desire elements that are entertaining, competitive, and multi-player. Females complained about negative aspects of computer games, such as causation of laziness and motivation for aggressive behavior, more than males. The students suggested that computer games might be used in education for Mathematics or History courses, and that they can be used to improve mental skills. Females also stated a preference to play in "convenient" places, such as their homes or schools, rather than in Internet cafés or other outside places, which were more strongly favored by males.

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1. Introduction

Technological developments have been increasingly influencing the perceptions and conceptualizations of both educators and learners. In recent years, several attempts have been made to enhance students' learning experiences by increasing their motivation, by attempting to focus their attention, and by helping them to construct more meaningful and permanent records of their learning. In these attempts, educational computer games have won widespread popularity and acceptance within

* Corresponding author. Tel.: +90 312 210 4183; fax: +90 312 210 7986.
E-mail address: karakus@metu.edu.tr (T. Karakus).

educational environments. The 21st century has already been called a “game era” by some researchers (e.g., Leonard, 2003). There is therefore good reason to suppose that computer games may soon be widely integrated in schools.

People play computer games because of their enjoyable and entertaining attributes (Kiili, 2005). Young people especially prefer playing computer games as a leisure time activity, for reasons such as avoiding or coping with stress, passing time in non-pressuring way, escaping real life difficulties, and simply to enjoy the attractive characteristics of the games. But beyond entertainment, computer games are also becoming a vital component in many fields, such as the military, healthcare, and business. The flexible and scalable attributes of computer games make this possible.

Computer games can be effective educational tools (Alessi & Trollip, 2001; Dempsey, Rasmussen, & Lucassen, 1996), and they can provide rich interactive environments for learning (Reiber, 1996). They have the potential to positively influence students' learning outcomes, if they are used appropriately. Turvey (2006) stated that computer games can potentially help players to think critically when they are required to construct connections between virtual and real life. Game-like learning environments also provide students opportunities to develop intrinsic motivation and collaboration skills, and can help them to learn new concepts and synthesize new information (Colella, 2000).

Educational games allow students to engage in education while they are enjoying themselves (Maushak, Ghen, & Lai, 2001). The goal is to encourage students to take learning seriously while engaging in difficult tasks which are made more enjoyable because of the method of the instruction (Roussou, 2004). Computer games may be successfully used for instruction because they can easily motivate students with their enjoyable attributes. Like conventional educational games (e.g., LOGO, Reader Rabbit Series), commercial games can also be used for educational purposes (see, Squire's and Jenkin's study on Civilization III in Squire & Jenkins, 2003). Commercial games can provide intrinsic motivation to become engaged by means of their visualizations, sound, addictive qualities, and fantastic elements (Amory, Naicker, Vincent, & Adams, 1999).

Creating conventional educational games for a course might be difficult because it requires a considerable time and effort. Alternatively, available commercial games as educational tools can be used for their several educational features (Amory et al., 1999). Amory et al. have shown that adventure and strategy games are more suitable for educational aims due to their incorporation of logical thinking, visualization, mathematics, reflexes, and problem solving. Another study has shown that adventure, arcade, board, simulation, word, and also puzzle games can be used for educational purposes (Dempsey, Haynes, Lucassen, & Casey, 1996).

Analyzing students' demographic characteristics, and their perceptions and thoughts in relation to playing both educational and commercial games is important. In the literature, similar studies have been conducted to explore the educational potentials of games from students' points of view. Gender difference is a significant variable in many of these studies; for example, some researchers have concluded that males and females have different expectations of computer games (e.g., Quaiser-Pohl, Geiser, & Lehmann, 2006). Gender differences might be observed in relation to game preferences, too. It is obvious that males and females prefer playing different types of computer games (Chou & Tsai, 2007; Fromme, 2003). They also tend to emphasize the importance of different parts or aspects of games (Denner, Bean, & Werner, 2005). While females prefer to emphasize the importance of narratives and storytelling parts of games, males prefer the challenge and complexity of games and emphasize the importance of competition (Inal & Cagiltay, 2007).

Children might not be aware of the educational value or potential of games. They can only see games as a leisure time activity which is fun. For the aforementioned reasons, investigating children's perspectives on games and learning can provide data which can help designers to develop effective strategies for incorporating learning features in computer games. The purpose of the present study is to analyze students' demographic characteristics with regard to their computer game preferences and game playing habits, and also their expectations, perceptions, and thoughts on games. This data will hopefully assist instructors in their selection and utilization of computer games for educational aims.

This study investigates the following research questions:

- What are the most favored computer game genres among girls and boys?

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