Chapter 6
Teachers and Students as Game Designers:
Designing Games for Classroom Integration

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ABSTRACT

The amount of research done on educational game integration has lately witnessed a large development. Many scholars believe that games can motivate, engage, and stimulate students' higher order thinking skills, and studies have shown that the integration of commercial and popular games in the classroom provide positive impact on students' learning. On the other hand, there are other voices that reveal the multitude of factors hampering the integration of these games into the educational environment. Generally, these factors are derived from the lack of instructional games designed to cater for classroom teaching and learning processes. In this respect, there are efforts made by the educational researchers and game designers to minimize the hampering factors. One alternative some scholars offered to this was for teachers and students to act as game designers, developing games to be used for classroom integration. This chapter explores the possibilities for both trainers and trainees to design games tailored for classroom integration.

INTRODUCTION

Game is a phenomenon that influences most teenagers' lifestyle around the world. Nowadays, the integration of games within classroom teaching and learning processes has gradually become a

widespread phenomenon, congruent with their popular reputation among students. Hence, studies have reported on the promising outcomes for games to be integrated into the classroom- to motivate, engage and stimulate students' higher order thinking skills (Barab, et al., 2012; Papastergiou, 2009), while most of the research on this topic investigated the use of the existent commercial

and popular games for the teaching and learning process (Amory et al., 1999; Charsky & Ressler, 2011; Sandford et al., 2006; Squire & Jenkins, 2003; Suh, Kim, & Kim, 2010), highlighting their successful integration into classroom activities (Charsky & Ressler, 2011; Facer, 2003; Prensky, 2001a; Squire & Jenkins, 2003; Suh, et al., 2010), even though some found these games to be unsuitable for teaching use (Ertzberger, 2008; McLester, 2005; Okan, 2003; Rice, 2007; Williamson, 2009).

Conversely, the inability of games especially commercial and popular games to be used as learning tools for students has been discussed in relation to various factors. One of the elements that hindered the integration of games in the classroom is the negative perception among teachers and parents to the idea of games used as educational components (Rice, 2007). The already mentioned groups stigmatized games as being merely entertainment devices. The negative perceptions also come from educators who debated on the danger of equating learning with fun, where students might build on a perception that there is no learning without fun. This possible change in the students' learning attitude is feared to have them take learning and studying lightly especially since higher educational level (post-secondary and tertiary) is not usually just fun and entertaining (Okan, 2003).

However, despite their negative perceptions, games are still being introduced in the teaching environment. While a majority of teachers would consider using games in the classroom (Ertzberger, 2008; Futurelab, 2009), there are more factors that prevent them from using these methods as instructional tools, to mention just a few of them: lack of cognitive value in the games due to the emphasized 'play' element (Hogle, 1996); lack of teachers' knowledge about the game/platform/software (Ertzberger, 2008; Williamson, 2009); expensive licensing and costs of games (Ertzberger, 2008; Williamson, 2009); lack of infrastructure capability in schools to effectively integrate the sophisticated and complex games

(Ertzberger, 2008; Williamson, 2009) as well as inflexible school hours to integrate the complex, challenging and time consuming games (Ertzberger, 2008; Williamson, 2009). In addition to the factors stated above, Kamisah and Nurul (2011) suggested that the most problematic nature of the commercial computer games to be used in teaching and learning process is their lack of relevance to the national educational curriculum. Essentially, any computer game needs to be relevant within the curriculum in order to be successfully implemented and integrated into the classroom teaching and learning process. Therefore, any pedagogically innovative game sequence or game on the whole must comply with the particular designated curriculum to a larger or lesser extent.

While there are efforts done by the educational researchers and designers to develop games that compromise the above stated factors, one alternative that has been raised by some scholars is for teachers and students to be game designers and develop suitable and effective games for the classroom integration (Ertzberger, 2010; Kafai, et al., 1998; Prensky, 2008). Hence, since both trainers and trainees are the people directly involved in the teaching and learning process equally, it is reasonable for them to design their own games by themselves. This way teachers and students will have no difficulty in embedding the content of a specific curriculum into the gaming sequence. This approach of designing an educational game will give those involved the opportunity to explore the potential these tools have for classroom integration and share their experiences with parents and educators. Hopefully, the effort would disseminate positive acceptance amongst teachers, parents and educators on the idea of integrating games into the classroom

This chapter will thus further explore the possibilities for both trainers and trainees to be game designers. The discussion will cover topics on

1. Development of educational games,
2. Educational game design,

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