

# Chapter 3

## Games and Their Embodied Learning Principles in the Classroom:

### Connecting Learning Theory to Practice

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#### ABSTRACT

*This chapter explores how educators can use games and their embodied learning principles as a source for student learning, motivation, and engagement. It begins by highlighting important educational issues, such as lack of motivation and how technology has affected students and communication (Prensky, 2005). It then illustrates how digital games can address these issues and support learning and foster meaningful engagement by exploring Gee's (2007) learning principles and Prensky's (2005) activities and learning techniques. Each learning principle and activity is addressed with a summary of the concept, an example of how video games exemplify the concept, and practical methods for integrating the idea into classroom instruction through games and activities. The chapter concludes with an overview of main concepts and highlights future directions for research connecting learning theories to digital games.*

#### INTRODUCTION

*Games are the most elevated form of investigation. – Albert Einstein*

Both schools and educators can learn something from video games (Gee, 2007). Why do young people eagerly pay sixty dollars for a video game that may lead to expenditure of great effort and significant frustration, but we struggle to get

them to sit still, learn, and persevere in schools, even for five minutes? The answer is that they find choice, pleasure, and empowerment in video games in ways unmatched by schoolwork. Numerous scholars have explored how such games can produce engaging and effective learning (Gee, 2007; Prensky, 2005; Squire, 2011). Pedagogical principles exist in gaming that may when utilized effectively result in deepened learning, mastery, engagement, and motivation.

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Prensky (2005) draws attention to two significant reasons that educators should consider the value of video games in education: “Learners have changed radically [and] computer games can provide a new way to motivate today’s students to learn” (p. 97). Technology permeates the lives of children. Computers and digital games are normal parts of their lives, and the use of such technologies has influenced how they learn and experience the world (Prensky, 2005). This influence should be considered by educators striving to provide both effective and engaging learning opportunities for their students. Additionally, when students lack motivation to learn in school settings—as many often do—it can be even more difficult to promote learning in the classroom. “Motivation is important because learning requires putting out effort” (Prensky, 2005, p. 97). Many students are clearly motivated to play video games, and educators can harness this motivation to promote positive learning gains for students and teachers alike. The primary objective of this chapter is to inform the audience how video games and their embodied learning principles and techniques (Gee, 2007; Prensky, 2005) can be used by schools and educators to promote student learning, motivation, and engagement.

## **BACKGROUND**

Prensky (2005) and other researchers (Becker, 2008; McGonigal, 2011; Squire, 2011) illustrate that video games can promote valuable educational outcomes, but we must ask why video games motivate and engage students in ways that schools typically do not? Most likely it is because

*Good video games give people pleasures. These pleasures are connected to control, agency, and meaningfulness. But good games are problem-solving spaces that create deep learning, learning that is better than what we often see today in our schools...Pleasure is the basis of learning for hu-*

*mans and learning is, like sex and eating, deeply pleasurable for human beings. Learning is a basic drive for human beings [but] school has taught people to fear and avoid learning, (Gee, 2007).*

As Gee (2007) notes, video game engagement is related to pleasure, learning, agency, and meaningfulness. Given the way humans are drawn to pleasure, it makes sense that educators should strive to make educational environments warm and enjoyable. While some might say that learning X is not necessarily fun, given Gee’s position on the deep pleasure of learning, one might benefit from thinking that a shift in methods or activities might make learning X more enjoyable and thereby increase student motivation and learning. Agency is another important element of Gee’s perspective. Although many educators believe in the importance of active learning in which the student has a significant role to play in the learning process, tasks assigned to children are often unclear or too difficult to allow them to develop a deep sense of self-efficacy, negatively impacting their achievement. Video games and their embodied pedagogical principles can promote pleasure, learning, and agency, all things that students (and humans in general) care about. Students find these experiences meaningful and their engagement may therefore be enhanced. Additionally, with a little creativity and planning, educators can use games and the pedagogical principles explored within this chapter to help them and their students achieve a variety of educational goals, ranging from personal goals to the Common Core. Ideas such as well-ordered problems and system thinking (Gee, 2007) to situated learning and role playing (Prensky, 2005) have tremendous potential for helping educators and students reach their goals.

Educators, researchers, and policy makers can benefit from a deeper understanding of both the theoretical foundations of learning principles embodied in video games and their practical applications in educational settings. It is important to note that while good video games embody such

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