

## Chapter 4.5

# Game Mods: Customizable Learning in a K16 Setting

**Elizabeth Fanning**  
*The University of Virginia, USA*

### ABSTRACT

A game mod describes a modification within an existing commercial computer-based game that has been created by a user. By game modding, a user can participate in the creative process by taking the setting of his or her favorite game and customizing it for entertainment purposes or to convey information. For years, commercial computer-based game developers committed considerable resources toward preventing users from hacking into or hijacking their games. Now several computer-based game developers provide editors with their products to encourage users to create content and to allow educators, for instance, to take advantage of the benefits and production quality of commercial computer games in order to create customized instruction. This chapter focuses on mainstream, accessible games with straightforward modding tools that easily can be integrated into a learning environment.

### INTRODUCTION

#### What Do Computer Games Have to Do With Learning?

*Anyone who thinks there is a difference between education and entertainment doesn't know the first thing about either.* (Marshall McLuhan, Communications Theorist)

Learning theorists from Piaget to Jonassen contend that profound, lasting learning culminates from the participant exploring, discovering, and interacting with his or her environment and culture in order to assimilate and create new meaning within his or her personal schema (Donaldson, 1984; Jonassen, 1988; Satterly, 1987). For a computer-based, constructivist learning environment, the quality of the user's learning experience is vested in the extent to which the computer responds in a way that is consistent with the learner's information processing needs (Jonassen, 1988). The level of the user's interactivity and consequent sense of empowerment and

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control over his or her learning experience will affect the extent to which surface or deep learning will occur (Jonassen, 1988). Studies using computer games in learning settings, particularly the classroom, indicate that while student test scores may not improve significantly from using games, students do learn on a more profound level and are able to describe, for instance, why an answer to a test question is correct or incorrect (Squire, 2002). While this outcome appears marginal at this point, it is worth exploring what computer games do afford a user empowerment, motivation, insight, and engagement (Gee, 2003; Prensky, 2001).

How might one harness and channel a game's learning opportunities into the classroom in a way that empowers self-directed learning and the development of conceptual tools? Recognizing that emerging and even current learners most likely have grown up with a mouse in hand or at least developed considerable schema shaped by interacting with computer-based technology, computer games have gone beyond satiating the game-playing public as a dalliance or source of entertainment and have evolved into a meaningful, socially expressive medium, a platform for discussion and reflection that continues after the game session is over and outside the context of the game. However, the resources needed to create a commercial computer-based game are formidable, in many cases requiring the expertise of game designers, computer artists, and programmers, not to mention robust marketing support. Many have endeavored to create educational games for the classroom and workplace, but most have neither the resources nor the expertise to match the production quality and comprehensiveness of content characterized by more mainstream, commercial, computer-based games.

Given these requirements and constraints, how might one harness and channel a game's learning opportunities into the classroom? Perhaps game mods could provide a means for educators to use the quality and basic format of commercial

games to create customized instruction for enabling students to create meaning in their own learning. A game mod describes a modification within an existing commercial computer-based game that has been created by a user. To do this, a user works with the game's existing assets to alter a small segment of the game's graphics, text, audio, or interactivity. In effect, a user can participate in the creative process by taking the setting of his or her favorite game and customizing it for entertainment purposes or to convey information.

### Mods: Rules of the Game and Terms of Engagement

For years, commercial computer-based game developers committed considerable resources toward preventing users from hacking into or hijacking their games (Holt, 2004); however, and perhaps in keeping with the spirit of gameplay, many game users considered these prohibitive efforts simply another challenge to master within the game environment (Holt, 2004). Now, several computer-based game developers are providing editors with their products to encourage users to create content (Marriott, 2003; Prensky, 2003). It is important to note that these editors do not reveal the entire code but only enough for the user to create several levels of modification (Holt, 2004; Marriott, 2003; Prensky, 2003).

Why do commercial game developers even offer this much? According to Chaptman (2004), Holt (2004), and Prensky (2003):

- Within the game cultures, cool game companies encourage modding; they are more respected for their responsiveness and their show of confidence in their users' technical competencies.
- The game developers are ensured continued play and sales, especially as the user can make the game continue to expand to more levels.

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