

Chapter 10

Playful Transition: Serious Games for the Middle School Years

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ABSTRACT

What is the role of play in middle school education? Typically, play is not integrated into the middle school day to the same degree as in elementary school, yet researchers have found that children in this age group are perfectly primed to learn from the rich experiences offered through play. Serious games, which blend content and skill instruction with entertaining play, provide an ideal mechanism for addressing the unique needs of the middle school student. This chapter provides game designers, instructors, and other stakeholders with an overview of the typical middle school student, as well as the role of serious games in middle school education. Drawing from a case study of an actual game under development, the authors present specific design principles in order to guide stakeholders in the design and use of serious and learning games in the middle school classroom.

INTRODUCTION

Middle school. These two words conjure up numerous others, many of them negative. Nouns such as *anxiety*, *puberty*, and *drama*. Verbs such as *changing* or *bullying* or *struggling*. The adjectives associated with middle school are perhaps most telling of all; words such as *awkward*, *confused*, *sullen*, *doubtful*, and *hypocritical*. Yet middle school also heralds a positive, magical time, when children become more self-sufficient and aware of the world, themselves, and each other. In the middle

school years, children have the capacity to learn at astonishing rates and tackle complex problems in and out of the classroom. This juxtaposition of positive and negative, awkwardness and magic, highlights the incredible contradictions that go hand in hand with pre-adolescence.

From a purely physiological standpoint, the middle school years constitute one of the most remarkable periods in all of human development. At the same time that puberty begins and children transition into their adult bodies, their brains transform as well. As a result, middle-schoolers

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enter a critical period in cognitive development, second only to the critical period experienced during the first few years of life. During this time, children acquire skills, knowledge, and habits that influence the entire rest of their lives.

One of the most fascinating, and poignant, aspects of the middle school years is the disparity between the physical appearance of students and their state of cognitive and emotional maturity. While students at this age begin to look and behave like adults, they still retain many of the qualities of younger children. Notably, students in middle school continue to want (and need!) to play. The type of play that pre-adolescents and early adolescents enjoy is somewhat different than that of younger children, but the urge to participate in play remains strong.

Taken together, the overall picture of a middle school student is quite intriguing. A middle school student possesses the playfulness of a child, yet demonstrates a growing capacity for complex thought. Is it possible to harness these two qualities, and use them to support learning during one of the most dramatic and important transitions in the human life span?

Game-based learning is one way to do just this. Games, by their very nature, invite players to engage in thoughtful, exciting, and rich interaction with content – just the sort of experiential learning that has been shown to be most effective with middle school students. By providing a game that blends the fun and joy of play with instruction and practice in specific key concepts and skills, a middle school educator can offer students a bridge between the elementary school environment and the more rigorous, structured middle school setting.

This chapter provides game designers, instructors, and other stakeholders with an overview of the role of serious games in middle school education, as well as best practices for designing effective learning and serious games for the middle school audience. In order to create quality game designs for this audience, it is essential to

first build a clear understanding of the needs of the average middle school student. Within this context, we review existing research and theory relating to the changing role of play in the middle school years, and survey current play practices of students in this age range. Because much of this play now takes place socially and/or digitally, we also discuss current technology use among middle school students. Finally, we present guiding principles for middle school serious game design, drawing upon a case study of an actual game in development for this audience.

BACKGROUND

Play

Play is a remarkable phenomenon. The act of playing does not serve to feed, clothe, shelter, or provide humans with any tangible benefits or protections. Yet all humans feel the instinct to play, and in fact engage in play behaviors beginning in infancy and continuing throughout the lifespan (Casby, 2003). Why is this? What *is* play? What role does it fill in our lives?

Although play is often viewed as a frivolous, childish, and purposeless activity, many researchers have found that play is critical to human development. Though it is notoriously difficult to define as a whole, most agree that play involves behaviors and activities that are voluntary, organized by the players, and are undertaken for their own sake rather than as a means to another end (Bergen & Fromberg, 2009; Cohen, 2007; Conklin, 2014; Gray, 2011). As noted by prominent play researcher Brian Sutton-Smith (2009), play can take infinite form, and can be adapted or built to accommodate any environment. Some types of play are momentary, such as the wordplay that is involved in telling a joke, while other types of play span long periods of time, such as the sports play that takes place in the Olympics or the play involved when engaging in a massively multiplayer

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