

Chapter XLVI

Development, Identity, and Game-Based Learning

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ABSTRACT

This chapter considers the use of computer games to help students construct their personal identity and develop dispositions that become active and responsible citizenship. It argues that the construction of identity requires both performative and narrative components and that these elements can be realized in a learning environment that affords students the opportunity to engage in a dialectic interplay between role playing in a game world and dialogic interaction outside of the game world. Research findings from an initial data set showing how students project their identities onto in-game characters are shared. The findings suggest that role playing in computer games can be effective in fostering attitudes, values, and beliefs desired of citizenship education.

INTRODUCTION

There is widespread interest in the use of games for learning today. Although computer-based educational games have been widely available since bit-map graphic displays heralded the multimedia-computing era, the current resurgent interest in “serious games” marks an important milestone in the continuing evolution of games for teaching

and learning (Abt, 2002; Gee, 2003; Michael & Chen, 2005). The term “serious games” is used today to refer to games that carry an educational purpose or training intention. Before this term achieved widespread currency, such games were referred to as “games to teach.” The term “games to teach” is somewhat unfortunate because it connotes early work on computer-aided instruction and students learning through drill and practice,

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a mode of learning that is less favored today (Gee, 2004; Prensky, 2006; Shaffer, 2006).

The focus of our research, however, is on game-based learning; that is, games for students to learn *with*, as opposed to games for students to learn *from*. This distinction is important. It directs attention to the pedagogical commitments one adopts when utilizing games for learning. At the same time, it draws attention to the fact that computer games are not a unitary thing. There is actually a whole spectrum of different game types, including puzzle games, adventure games, strategy games, first-person shooter games, and role-playing games. Different game genres give rise to quite distinct opportunities for learning. As educators and researchers, we must therefore approach the use of educational games with clarity as to: (1) what role games are to play in the teaching and learning process, (2) what we regard as worthwhile educational goals in the 21st century (North Central Regional Educational Laboratory (NCREL), 2003), and (3) how we harness the potential power of games to achieve the desired educational goals. We must also be clear about the underlying motivations for the adoption of games. These could range from cost savings arising from efficient dispensation of instruction to effective learning through problem solving. Oblinger (2006) suggests that the following different types of games may be used to promote different learning outcomes as listed in the following:

- Card games to promote memorization, concept matching, and pattern recognition
- Jeopardy-style games to encourage quick mobilization of facts, labels, and concrete concepts
- Arcade-style games to improve speed of response, automaticity, and visual processing
- Adventure games to promote hypothesis testing and problem solving

The previous suggestions represent genuine options for utilizing game-based learning. As educators, however, we should seriously reflect on whether a 21st century educational agenda is better served by, say, promoting memorization or promoting problem solving.

The New Media Consortium and the Educause Learning Initiative is a research-oriented group that seeks to identify and describe emerging technologies likely to have a major impact on teaching and learning in higher education. In the *Horizon Report 2007* (New Media Consortium, 2007), authors from the group predict that the time-to-adoption horizon for massively multi-player educational gaming, and educational gaming more generally, is in the order of four to five years. It is imperative, therefore, that current research clarify and establish directions for the principled design and effective utilization of games for learning, whether in schools or other institutions of learning.

The effectiveness of learning with electronic games is a major theme in this research handbook. Keeping this concern in view, we share in this chapter our research efforts related to *Space Station Leonis* (SSL), a computer game that we have developed. In what follows, we first provide an overview of student learning with the game SSL. Next we explicate the developmental approach to learning that we have adopted in our work on citizenship education. We then situate our work on citizenship education in the research on identity and its development. Then we share findings from empirical research on students' empathetic responses arising from projecting player identities onto game characters. These findings help illuminate students' underlying attitudes, values, and beliefs related to everyday social situations relevant to National Education. We then consider the implications of our research findings. In the Conclusion, we summarize the key issues raised in this chapter.

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