

Chapter 52

Digital Propensity: An Investigation of Video Game and Information and Communication Technology Practices

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ABSTRACT

There is a growing interest among educators to use video games in the classroom as part of the curriculum to meet the educational needs of today's students. This may be justified, in part, by claims in recent years about today's technology-savvy students and their adept use of information and communication technology (ICT). However, such claims have not been accepted without scrutiny; indeed, the relationship between games and learning has been tempestuous over the years. This chapter sought to identify the gaming propensity of postsecondary students ($N = 580$) through the use of a questionnaire. Age, gender, and socioeconomic status were examined as factors that might explain why students play games. Results suggest that age, gender, and socioeconomic status are composite factors that contribute to gaming, but not the most important consideration in terms of general ICT usage. The findings raise a number of implications for educators, educational policy-makers, practitioners, researchers, instructional technologists, and game developers across both the education spectrum and the entertainment industry in terms of the use and development of video games.

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INTRODUCTION

Statements such as “Don’t bother me, Mom—I’m learning!” (Prensky, 2006) have become synonymous with the idea that today’s students are fundamentally different from those of past generations as a result of their information and communication technology (ICT) use. Typically referred to as Digital Natives (Prensky, 2001a), but also commonly called the Net Generation (Tapscott, 1998), the Millennial Generation (Howe & Strauss, 2000) and Generation M (Roberts, Foehr, & Rideout, 2005), these students are viewed as native speakers of the digital age. That is, they were “born digital” (Palfrey & Gasser, 2008) into the late twentieth and early twenty-first centuries. They have grown up in a culture so fundamentally different in the technology sense that they are much more adept at using ICT than their counterparts from prior generations. What’s more, this exposure has fundamentally changed the way in which they process information (Prensky, 2001a, 2001b) to the extent that they possess learning preferences foreign by today’s educational standards. Some commentators have even gone as far as to conclude that education is not keeping pace with the needs of our students with reference to these changes (Prensky, 2001a; Tapscott, 1998).

The Role of Video Games and ICT

This line of thinking has sparked a growing interest among educators in examining the use of ICT in classrooms to help meet the educational needs of today’s new breed of learner, with game-based learning being a major vein of study (Pivec & Pivec, 2008). This should not come as much of a surprise, nor should it be seen as a new idea. Video games have been steadily increasing in popularity among school-aged adolescents for three decades (Bowman, 1982; Chaffin, Maxwell, & Thompson, 1982; Kiesler, Sproull, & Eccles, 1983; Needham, 1983), and educators have been wondering since the early 1980s whether these types of games can

be used to enhance “student involvement, enjoyment, and commitment” (Bowman, 1982, p. 14). For example, there is research suggesting that these games can increase retention of embedded instructional subject matter (Dempsey, Lucassen, Gilley, & Rasmussen, 1993; Jacobs & Dempsey, 1993; Pierfy, 1977; Ricci, 1994; Ricci, Salas, & Cannon-Bowers, 1996), particularly when focused on teaching specific skills (Griffiths, 2002). Historically, video games have been used under the guise of drill-and-practice (Jonassen, 1988) as a means to hone basic skills in subjects such as math and reading. However, they have also been examined beyond the purpose of retention of factual information, to include higher-order cognitive skills, in particular their role in higher-order thinking (Wood & Stewart, 1987), and reasoning and working through personal problems, besides being an intrinsically rewarding experience (Bowman, 1982; Chaffin et al., 1982; Trinkaus, 1983; Turkel, 1982).

Such claims have not been accepted without scrutiny. Video games have long been seen as a social concern in the United States as well as other countries (Kirsh, 2002; Schneider, Lang, Shin, & Bradley, 2004), with fierce arguments debating their psychosocial implications versus educational benefits. Furthermore, many researchers have seen the notion of the digital native as an overly simplified characterization of an entire generation, further contending that our understanding of students’ general ICT use is far from clear (Bennett, Maton, & Kervin, 2008). In fact, there is evidence that the actual uses of ICT by students are much more limited in scope than the rhetoric implies (Selwyn, 2009). Thus, some findings (e.g., Lohnes & Kinzer, 2007) suggest that students do not expect or want to use ICT in educational settings in the same way they do at home or in the community. Indeed, there is little evidence that students want more ICT integration in the classroom (McWilliam, 2002). According to Keen (2007), students are much more interested in using ICT for social-networking purposes than

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