

## **Business management education – electronic games and gamers as managers**

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Electronic games are an important part of culture, and electronic game courses are increasingly part of college curricula. Students can major in video game design, or take media and society courses that include electronic games and culture. Electronic games are relevant to business education as management simulations, to explore business and society issues, and also because the skills and attitudes youth develop by playing electronic games, and then bring to the workplace later as managers, enhance students' business expertise. Serious game design tends to focus on knowledge competency, although some games focus on attitudes and simulations may emphasize skills. In designing knowledge competency games for education, attention should also be paid to what career or non-career-related skills and attitudes the gamer student will develop. For business students, studying and playing electronic games can increase their business knowledge, managerial skills and attitudes, and multicultural perspectives.

**Keywords** business management education; electronic games

### **1. Introduction**

According to DFC Intelligence [1], the global electronic game industry market size in 2005 was \$US 29 billion, much bigger than the global movie industry which was \$US 22.3 billion in 2005 [2]. DFC Intelligence forecasts that the electronic game industry will reach \$US 44 billion by 2011, growing bigger than the recorded music industry, whose global market in 2005 was \$US 33 billion [3]. Electronic game-related merchandise has become part of many related industries. The movie industry began making movies based on video games in 1993 with Super Mario Brothers, and following with Mortal Kombat, Tomb Raider, Resident Evil and other series. Besides movies and television shows like Pokemon based on electronic games, many new games are developed as new movie tie-ins. Electronic game soundtracks have joined movie soundtracks in music store bins and world concert tours focused on electronic game music now occur every year [4]. Real world bands like Duran Duran are holding virtual concerts inside game worlds like Second Life [5], and BBC News has broadcast from inside Second Life [6]. There are toys based on electronic game characters, electronic games based on board games and board and card games based on electronic games like World of Warcraft [7, 8]. Strategy guidebooks with solutions to how to win an electronic game are often published separately when a new game is published. World cyberathlete game competitions have championship prizes up to \$150,000. Italy won the real World Cup in 2006, but England won the gaming 2005 FIFA Interactive World Cup, and the 2006 FIFA Interactive World Cup began Oct 27, 2006 [9]. There is game-related clothing, from caps and t-shirts to complete costumes used by cosplayers who like to dress up as their favorite video game character. The game Final Fantasy XII has an energy drink for sale in Japanese vending machines [10]. New York City declared October 11 2006 to be Final Fantasy XII day [11]. Electronic games continue to increase their prominence in modern global culture.

### **2. Electronic games and education**

Electronic games include computer and console games, online and offline games, single and multiplayer games, action, strategy, role-playing, adventure, simulation, puzzle and sports games. According to the U.S. Entertainment Software Association [12], the average electronic gamer's age is 33, and 38% of

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those gamers are female [5]. Although 69% of American heads of households play computer or video games [5], and their significance and impact on technological society culture continues to grow, there remains widespread public perception that electronic games at best are only for children, and at worst incite real world violence by players of violent games. Many states in the U.S. have passed laws banning the sale of violent electronic games to minors, but courts have overturned these laws due to lack of convincing evidence that game playing causes real violence. Critics have pointed out that while electronic game playing has increased, violent crime rates in the U.S. are now less than half what they were 30 years ago, having declines steadily since 1994, according to the U.S. Department of Justice [13]. Rising electronic game violence has occurred while U.S. juvenile crime rates have dropped 61% since 1993 [14].

While the controversy about electronic games teaching violence swirls, research continues on the beneficial educational aspects of electronic games. Prensky [15], Calvert [16], Holmes and Pellegrini [17], Gunter [18] and Griffiths [19] have reviewed the cognitive, social, psychological and therapeutic effects of video. Prensky concluded that digital natives have far more experience at processing information quickly, are more comfortable at parallel processing and multitasking, have hypertext minds, are used to graphics first and so have sharper visual sensitivity, and are more active, tending to learn by trial and error action immediately, rather than some older generations' approach of read the manual first before doing anything. Calvert concluded that children playing electronic games have increased visual, spatial and abstract skills. Gunter concluded that electronic game playing enhanced spatial skills, computer literacy, logic learning and memory, physical coordination skills, decision-making, following directions, and numerical and word recognition. Gunter, Holmes and Pellegrini found that electronic games do not seem to be socially isolating, and can increase cooperative behavior and social contact among children.

### **3. Electronic games and business management education**

According to Beck and Wade [20], "The biggest factor shaping the future of business is . . . video games." This is because electronic gamers who were once children are now older and becoming business managers, bringing with them the talents they have acquired by playing electronic games. As managers, gamers are committed to excellence, comfortable with digital strategy tools, excellent multitaskers, more skilled in involving subordinates in making decisions, and manage their teams as group video games. They are more flexible, learn by trial and error, and are naturally global, with intuitive technical skill.

In education, electronic games have been used for health care and disease management, liberal arts immersion, and in training simulation for many industries. In many business colleges and universities, simulations like Markstrat [21] are used to help teach marketing strategy. Electronic game courses are increasingly part of college curricula. Students can major in video game design, or take media and society courses that have expanded to include electronic games and culture. Such media courses, like those at MIT, examine the "cultural, social, aesthetic, political, ethical, legal and economic implications" of video games. Electronic games are relevant to business management education not only as management simulations, or to explore business and society issues, but also because, as Beck and Wade put it [20], "The Gamer Generation is reshaping business forever". Discussion of the electronic games industry and the skills and attitudes youth develop by playing electronic games, and then bring to the workplace later as managers, enhances students' business expertise. International and multicultural perspectives are enhanced through discussion of electronic gaming around the world, investigating similarities and differences in different countries. Discussion of piracy, the hack factory industry, and questionable business practices in the electronics game industry enhances students' consideration of ethics in business.

Larger business schools can offer individual courses in each separate subject area related to the electronic games business and the relationship of these games to society and culture. Smaller business colleges have more limited course offerings and much fewer, often more interdisciplinary faculty. They may focus on one of the game-related subject areas, or offer a more general survey course, retaining breadth at the expense of depth. Babson College is a small business college, and such a survey course is

part of our curriculum. It begins with a history of the electronic game industry, particularly the crashes. Then a look at game company internal affairs – making an electronic game, followed by external affairs – business models and marketing. Online gaming business and culture is explored using Castronova's book [22]. Virtual economics and ethical and legal issues are discussed, then global gaming and cyberathletes. With the help of Beck and Wade's book [20], we assess electronic gamers as managers, gamers' values and skills, how gamers think and learn, and their risk perspectives. Finally we consider electronic games and psychology – gender, race, bonding, romance, addiction, and violence.

#### 4. Conclusion

**Serious game design, like our institutions of higher learning, tends to focus on knowledge competency.** Many serious electronic games are intended to be a learning aid to foster subject mastery, as a potentially superior alternative to rote memorization. Recruiting tool games like America's Army, and religious or propaganda games focus on attitudes, while other electronic games like some flight or driving simulators have objectives more related to skills than knowledge or attitudes. In designing knowledge competency games for education, attention should also be paid to what career or noncareer-related skills and attitudes the gamer student will develop. For business students, studying and playing electronic games can increase their business knowledge, managerial skills and attitudes, and multicultural perspectives. In October 2006, the Federation of American Scientists released their report on harnessing the power of video games for learning [23]. They believe that video games can reshape education, and concluded that "Educational institutions need to transform organizational systems and instructional practices to take greater advantage of new technology, including educational games". This is a challenge for both business management education and liberal arts education.

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