Developing Decision-Making Skill: Experiential Learning in Computer Games

Kurt A. April, Graduate School of Business, University of Cape Town, Breakwater Campus: Greenpoint, Cape Town, South Africa
Katja M. J. Goebel, Graduate School of Business, University of Cape Town, Breakwater Campus: Greenpoint, Cape Town, South Africa
Eddie Blass, Business School, Swinburne University of Technology, Hawthorne, VIC, Australia
Jonathan Foster-Pedley, Henley Business School, Johannesburg, South Africa

ABSTRACT

This paper explores the value that computer and video games bring to learning and leadership and explores how games work as learning environments and the impact they have on personal development. The study looks at decisiveness, decision-making ability and styles, and on how this leadership-related skill is learnt through different paradigms. The paper compares the learning from a lecture to the learning from a designed computer game, both of which have the same content through the use of a spot test, taken immediately after the lecture and the game, and seven day retest scores. It also presents data collected and evaluated on decision-making from three distinct groups: executives (including entrepreneurs), gamers and non-gamers.

Keywords: Collaborative Leadership, Computer Games, Decision-Making, Declarative Knowledge, Leadership Development, Learning Environments, Procedural Knowledge, Video Games

INTRODUCTION

According to Beck and Wade (2004a), a new breed of leaders and entrepreneurs is emerging from the game generation that is naturally comfortable with constant innovation and change, are emotionally engaged, and do not distinguish work from play. They are visionary and possess high decision-making ability, which can be distinguished into decision-making ability and style.

High decision-making ability is expected to be present in any successful leader. According to Nutt (as cited in Vroom, 2003), more than half of the decisions made by managers fail. Singling out decisions that were made using a participative style, the success rate increases to 80%. Participative decision-making, although seemingly vastly superior in organisational settings, is not the norm. The research by Beck and Wade (2004a) indicates, however, that con-
sulting their subordinates is gamers’ preferred decision-making style.

Decision-making ability depends on personal growth. A study by Hunt and Baruch (2003) shows that top managers, who underwent a five-day classroom-based interpersonal skills training programme, showed statistically significant improvement in all but two factors, one of which was decisiveness, the other giving one-to-one feedback. They suggest this may be an indicator that decisiveness, because of its cognitive base, cannot be improved with this type of training.

As Taylor (2001) shows, emotions are also particularly important for decision-making, playing two important roles. Emotions provide a valence to the different choices, helping to prioritize the alternatives and limiting the number of factors the brain will take into consideration.

Additionally, decision-making takes courage, because choosing the wrong outcome induces the fear of failing (Arsham, 1994). This is a polarity that can be managed: courage and fear. On the fear side, decision-making can be enhanced by providing training in tools like Edward de Bono’s 6 Thinking Hats® (1999) to better analyse the alternatives, thus reducing the fear of making the wrong choice. On the other side of the polarity, Beck and Wade’s (2004a) research shows that game play improves confidence.

This paper presents a study that compares the learning in decision-making, using de Bono’s 6 Thinking Hats, through the medium of lecture and computer game.

LITERATURE REVIEW

With the average massively multi-player online game player spending more than 20 hours per week in the game (Yee, 2006), games seem to have ever more profound effects on individuals: they also teach lessons in leadership. In their groundbreaking study into the opinions and values of gamers, Beck and Wade (2004a, p. 3) found that gamers have the potential to become great leaders through the continuous seeking of opportunity and improvement. Most early academic research, though, focused on possible negative effects, like social isolation, or the reduction of inhibitions and resulting increase in violent behaviours. Sherman (as cited in Beck & Wade, 2004b) points out, however, that following the introduction of violent electronic games in the U.S., a significant reduction in juvenile violence occurred and newer research has shown the positive learning effects that games have.

In contrast to hardware-driven virtual reality simulations in which the goal is to create a photorealistic representation of the real world with objects and characters looking and behaving exactly as would be expected in real-world encounters, games rely on immersion; “empathy with the [fictional] character’s emotions and predicaments, through the suspension of awareness of the narrative’s created—or artificial—nature” (Maldonado & Hayes-Roth, 2004, p. 7). McGonigal (2003, p. 15) points out, however, that for games to be immersive, the internal mindset is not sufficient, but that an external performance of belief is necessary: “participants must convey an active belief to their fellow players”. To create this kind of empathy, that is to elicit emotions from the player, games employ sophisticated techniques way beyond those used by film and television. Freeman (2004) describes 32 distinct categories, with over 300 techniques, of how to create and deepen the emotional experience in immersive games. The goal is to make the player care about the world of the game, create emotionally complex relationships between the player and others, including non-player characters, and to motivate the gamer to play through to the end of the game. As many as 75% of the techniques, such as plot and relationship-deepening, or creating emotionally complex situations through incongruence or violation of integrity, are designed not to be noticed by the gamer.

Beck and Wade (2004b) describe the generation gap between the baby-boomers and the game generation. Their research revealed significant differences in attitudes and behaviours. Overall, they affirm that the game generation is more entrepreneurial than previous generations,
Green Computing: An Indian Perspective
[www.igi-global.com/article/green-computing-indian-perspective/52765?camid=4v1a](www.igi-global.com/article/green-computing-indian-perspective/52765?camid=4v1a)