

# Chapter 7

## Interaction to Facilitate Learning in Social Network Gaming

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### EXECUTIVE SUMMARY

*This chapter explores whether social network games can be used effectively to support learning via focusing on interaction. The aim of this chapter is to find an interaction structure to facilitate learning on social network games by analyzing the nature of game-learning activity in terms of four dimensions. To this end, the types of interaction which can be applied in a game learning process through previous studies and related literature are suggested. The four types of interaction in game learning activity are as follows: Player-Corresponding Player interaction (PCP), Player-Content interaction (PC), player-NPC (non-player character or game system in social network game) interaction, and player-context interaction. Pioneer Trail, a social network game by Zynga and linked via Facebook, was analyzed in terms of suggested interaction formats.*

### INTRODUCTION

Today's learners have sophisticated technological skills, and since technology offers learners a myriad of new and highly effective tools which they can use to learn autonomously, digital games could be a case for such an educational use (Oblinger & Oblinger, 2005; Reeves, 2008). According to PEW Reports (2008), computing

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has become ubiquitous in our daily lives through the use of devices such as smart phones, and via technologies like social software, and games. One of these, games, has become one of the most popular forms of entertainment with 53% of adults and 97% of teens taking part.

Games consisting of an elementary variety, for example, graphically, complexity and attention to interaction between players with systems and a narrative structure are encouraging signs that the concept of games for learning is gaining acceptance among educators. Furthermore, a majority of people believe that games are engaging, that they can be effective, and that they have a place in learning (Van Eck, 2006).

Through advances in Information Communication and Technologies (ICT), the genre of digital gaming format has increased in variety, and especially most recently in the form of a mixture of traditional genres and the emergence of a new game style is showing an evolution of digital games. For example, current communication technologies that feature increased interactivity which facilitate two-way communication with users based on Computer-Mediated Communication (CMC) systems, and computer networks via an online environment of the Internet, help bring this evolution to fruition.

According to research results over the past decade relating to aspects of digital games in education, characteristics of digital games and the design imbedded for learning showed positive impact(s) upon the learners' abilities for improvement, particularly in terms of motivation and retention (Beedle, 2004; Dickey, 2007; Kafai, 2006; Kirriemuir & McFarlane, 2005; McFarlane, Sparrowhawk, & Heald, 2002; Prensky, 2001; Squire & Jenkins, 2003). Furthermore, games are able to help facilitate conceptual learning, problem solving, collaboration, and practical participation (Gros, 2007); and virtual environments created by games can develop situated understanding, effective social practices, powerful identity, shared values, and various ways of thinking (Shaffer, Squire, Halverson, & Gee, 2005).

As shown in the studies, using digital games is increasingly growing usage in higher education and in the corporate settings where one of the key variables for successful online learning is through interaction (Salen & Zimmerman, 2004; Whitton, 2010). Despite the importance of online interaction, previous studies have investigated specific aspects of online interaction, yet fail to aptly reveal the dynamics of online interaction in digital gaming and virtual reality. However, Tung and Deng (2006) claim that computer-mediated learning attempts to provide children with a rich learning experience by using varied instructional content. The interactive component and feedback in game play, as one of the computer-mediated learning environments, has a significant impact on children's motivation and consequently the effectiveness of the learning experience. A primary reason for this is that technology in online digital games meld well with latest learner generations, known as digital natives (Prensky, 2001), and this is especially true when the focus on motivation to

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