

# Effect of Self-Directed Learning Readiness by Learner's Interaction on Social Network Games

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## EXECUTIVE SUMMARY

*The purpose of this study is to find the educational meaning of activity on social network games. It was explored whether social network games can be used effectively to support learning via focusing on interaction. Social network games have a structure to facilitate self-directed learning readiness that is the nature of game-learning activity in terms of four dimensions. Four types of interaction on game learning activity are as follows: player-corresponding player interaction, player-content interaction, player-NPC (non-player character or game system) interaction, and player-context interaction. The result of this research, there are meaningful difference of self-directed learning readiness between learners who perform social network games and did not perform in their effect on the student's self-directed learning readiness on social network gaming activity. In other words, the group that performed the experience activity on social network game of higher interaction experienced improving of self-directed learning readiness than the group that did not perform the game.*

*Keywords:* Interaction, Learning, Player-Content Interaction, Self-Directed Learning Readiness, Social Network Games

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## INTRODUCTION

Innovations in Computer and Information technologies affected Game Industry and Education invariably. Although, first computer game was created in 1961 called Spacewar by Steve Russell from MIT, computers were scarce in 1960s (Rabin, 2010). A noteworthy issue in the educational usage of games is the provision of support (Meij, Leemkuil, & Li, 2013). 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 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.

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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. Hiemstra (1994) said that most learners spend a considerable time acquiring information and learning new skills in this situation. The rapidity of change, the continuous creation of new knowledge, and an ever-widening access to information make such acquisitions necessary. Learners need to prepare some skills for the future learning such as self-directed learning in which learners have primary responsibility for planning, implementing, and even evaluating the effort.

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 learn and the development of students' abilities to acquire appropriate techniques in problem solving activities are the focus. The emergence of digital media such as games as teaching and learning tools and its environment are comparatively recent foci, stemming largely from a set of socio-technical transitions such as wider access to broadband, the development of powerful technologies and platforms, the emphasis upon social and experiential interactions, and through advances in the uses and applications of the Internet. Learning environments of online games have various interaction formats among a variety of elements, including teacher and student perceptions, learner properties, instructional practices, and learning needs in the same way as classroom environments would mirror.

The processes and outcomes of human communication via interactivity vary systematically with the degrees of interactivity afforded or experienced. Interactions between

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