Game Rhetoric: Interaction Design Model of Persuasive Learning for Serious Games

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Abstract. Serious Games is an emerging technology that can be used in a learning environment. This technology is an effective interaction design paradigm which can be embedded as a persuasive learning tool to attract learners’ attention. This article will explore the concept of game rhetoric as an element in game systems for persuading students to engage with the learning context. We identified three types of rhetorical concept that can be integrated with the current game rhetoric model to support attention elements: visual, procedural and digital rhetoric. Three interaction design elements have been used in the model to support learners’ attention: cognition, emotion and social interaction. In this paper, we propose a new interaction design model based on game rhetoric perspectives to support user interaction in Serious Games for persuasive learning.

Keywords: Game rhetoric · Serious game · Interaction design · Persuasive learning

1 Introduction

The embedding of persuasion is undoubtedly very important in today’s learning environments. The technology can enhance social interaction among students when the computer application is used for interaction among them in the classroom (Dauz et al. 2013). Human Computer Interaction (HCI) emerged in the late 1970s, and generated much research into interactive systems intended to persuade user interest (Carni 2014). Following from this, there has been much more research into persuasion technology, which has contributed to changing student behaviors, attitudes, and generating learning outcomes. Serious Games (SG) is the one an interactive media technologies that combines animation with narration to improve player performance based on a games rule system (Sorden 2005). The emergence of SG in the late 1970s changed the traditional concepts of education when capology was embedded in various computer platforms as a type of educational persuasive technology for achieving learning outcomes (Fogg 2003). A new paradigm in learning environment is needed in SGs which aims to improve the concept of persuasion. We have identified previous studies to support the concept of persuasion in SGs. Much of the research on SGs, such as motivation, persuasive design process of complex cognitive process of complex systems, and interactive Al-Furqan Cuon design and multimedia interaction is very important in the development of SGs. Based on the persuasive model, we propose to develop a ‘game rhetoric interaction design model,’ which consist of pathos, ethos, and logos to persuade players to interact with the game’s goal and challenge. The three elements of interactive serious games: Cognitive interaction, interactive visual user interface, and graphical user interface are three elements of interaction that can be included in the interaction design model to support learners’ attention.

1.1 Objectives of the Study

The objectives of this paper are:

1. To review existing research in the learning context.
2. To propose an interaction design model based on game rhetoric.

1.2 Structure of Paper

This article will present a representation of game rhetoric and propose a literature review in Section 2. Section 3 will discuss the cognitive role of game rhetoric and the structure of the game rhetorical interaction design model. Section 4 will discuss the proposed interaction design model for persuasive learning.