The Oxymoron of Serious Games in eLearning: Gender Differences from an Internet-based Survey in Thailand

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Abstract

This research study examined gender attitudes towards playing serious games in eLearning contexts as there is a lack of comprehensive reports and academic commentary on how to apply and link serious games effectively to learning. The results were based on a large scale Internet-based survey, which involved 803 participants drawn from every region in Thailand. Sixty-one per cent of participants were females (61.2%) and the majority of them were teenagers and adult (36.8% and 24.1% respectively). The survey sought information on participants’ attitudes and behaviours related to their computer game preferences, game-playing habits and their attitudes to playing computer games. A 5-point Likert scale in comparing the two gender groups was used. The study addressed its core research question: what are the attitudes and behaviours of each gender group towards playing educational computer games? Sub questions were asked complementing the overall question and are elaborated upon in the text. The research results showed that participants chose both virtual game activity on the computer and actual activity in reality as their favourite activity on an equal basis (39.8%). The actual activity was slightly preferred rather than the virtual game (29.2% and 24.6% respectively). Almost half the participants chose only an entertaining computer game while a minority preferred to play educational computer games (49.2% and 15.1% respectively). Actually playing computer games generated both high levels of positive engagement and anxiety that were blended responses - as opposed to being separate. Computer games are played for their relaxation but increasing risks of eyestrain featured in this research. The research findings confirmed that females thought differently about playing computer games to their male counterparts.

Keywords: Attitude, eLearning, Game-based learning, Gender differences, Internet-based survey, Online survey, Habit of playing computer game, Serious game

1. INTRODUCTION

Research into eLearning contexts investigating attitudes and behaviours of computer game preferences and game playing habits in Thailand is highly required. Because Thailand is one of the emerging developing nations with a noticeable rise in smart phone ownership and Internet usage [1], research has indicated that more than two thirds of Thai people always have a mobile device with them [2]. Thai smart phone penetration increased from 11 per cent in 2012 to 80 per cent in 2014 [3], which is in line with smart phone penetration in developed countries such as Australia where it was 89 per cent by early 2016 [4]. Ninety-nine per cent of teens in the United States of America own mobile devices and 70 per cent use three or four devices regularly [5]. European smart phone penetration is almost 100 per cent [6]. ‘Games are the biggest portion or higher than three quarters of applications downloaded from ‘Apple App Store’ [7], [8], implying that playing games on mobile phones is the most popular activity among users [9]. In 2011, the United States of America mobile phone gaming penetration was almost 26 per cent and expected to reach more than 63.1 per cent by 2019 [10]. Increases in game usage with the associated financial implications has inspired, and will continue to inspire the production of quality mobile games embracing high-end capability of devices such as smart phones [11]. Playing games on mobile phones is one of the top five activities for Thai users [12]. Therefore, to respond to this popularity of mobile gaming and extend its potential from entertainment gaming to game-based learning or so-called serious game learning, the need to conduct research to explore attitudes and behaviours regarding computer game preferences has become necessary.

The oxymoron, “serious games”, has been coined since it contains the apparent contradiction between the entertainment of the game structure in contrast to its educational application designed for a serious or non-