Utilizing Intergenerational Learning to Reduce Technological Anxiety in Virtual Instruction

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With an increased interest in immersive media and changes in the way people are learning, new methods of education are being proposed. Such methods include the virtual classroom. To what extent are virtual classrooms effective? Are they just another instance of passing stimuli for learners or do they have the potential for reframing the traditional classroom? A barrier to the success of the virtual classroom is the hesitation of instructors to implement the technology into their curriculum. A reason for this is because they are uncomfortable or previously had little exposure to technology. These inexperienced instructors are expected to integrate the technology into their curriculum with little guidance. Intergenerational learning is defined as a process where knowledge is shared across generations. Taking advantage of the concept of intergenerational learning is a possible way to curb the learning gap; however, seldom is it utilized as a pedagogical tool. Implementing conceptual theories – such as Bloom's Taxonomy and the Learning Games-Games Mechanics – offer a foundation for pedagogical practices. To be able to utilize these theories successfully, the game design itself needs to be captivating and easily navigable. In further detail, learning does not begin until the player becomes immersed in the media, entering a state of "deep" learning where the player can retain information. Successful games that reach "deep" learning are those that facilitate the concept of emergent media. The ability of the digital classroom to be successful depends on the relationship between the instructor and the student. With technology on the rise it seems that the traditional classroom will become obsolete. There is potential to have successful curriculums that are entirely virtual as recently proven by universities throughout the United States in response to the COVID-19 pandemic. This thesis aims to prove that it is possible to overcome technological anxiety, specifically within the virtual classroom, experienced by older instructors by means of intergenerational learning.

Keywords: *serious game, intergenerational learning, pedagogy, Learning Game - Game Mechanics, "deep" learning, Bloom's Taxonomy, Mihaly Csikszentmihalyi's theory of flow, testing effect, self-efficacy, technological anxiety, technological ambiguity, Canvas, Discord, Zoom, Game Maker, COVID-19*

I. INTRODUCTION

Digital communication is an inevitable aspect of society's current day and age. "Since [the] 1980's, the number of video game players has been growing surprisingly." (Zhang et al., 2010) This number only keeps increasing. As the number of households with technology grows, so does the number of children raised by it. As a means to accommodate a generation acclimated to technology, educational institutions are making attempts to adapt the classroom to a digital means. "In recent years, digital or web-based games have increasingly supported learning." (Vlachopoulos & Makri, 2017) It should be noted that many instructors grew up during the advent of digital media. So why is it that a group of individuals raised on technology still have not transitioned their teaching policies to properly address a digital classroom, especially when it is so prominent in today's society?

1.1 Description

Minimal existing research focuses on using intergenerational learning as a pedagogical tool in virtual settings. However, an analysis of existing related research demonstrates that intergenerational learning may be a key factor in supporting the virtual classroom. "With the growing expansion of technology, instructors and those who create educational policy are interested in introducing innovative technological tools, such as video games, virtual worlds, and Massive Multi-Player Online Games."(Vlachopoulos & Makri, 2017) A systematic review of the psychological, theoretical, and pedagogical attributes in connection to game design