

GUEST EDITORIAL PREFACE

Special Issue on Exploring Identity, Emotions, and Learning in Virtual Environments: An Introduction

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INTRODUCTION

This special issue explores how virtual environments (VEs) can be used to elicit emotions and perspective taking as well as help users to learn and explore their virtual avatar and physical world identities in interesting ways. VEs are computer-generated environments of real or imaginary content and include games and simulations. The articles selected for this special issue provide novel and valuable insights into a wide-range of VEs, including immersive computer-based (e.g., Second Life), as well as commercial games (World of WarCraft). The authors used a variety of psychological theories and constructs (e.g., five factor model of personality, self-determination theory, self-efficacy, empathy, and presence) to generate an interesting set of research questions to frame the use and impact of the digital environments presented in each article. The result is a special issue that explores the effect of everything from environment-external tools to embedded and customizable features of these environments

on users interactions with them and the resulting psychological (e.g., affective) and learning outcomes.

In the first article Foshee and Nelson investigate user-personalization through the customization of avatar features in a computer-based inquiry environment where learners apply scientific principles they learned in class. Their study illustrates the potential that relatively simple and therefore scalable feature (e.g., avatar's color of clothing, accessories, eyes, hair, and skin tone) manipulations can enhance situational interest, therefore positively affecting user's competency beliefs. These findings are interesting, especially in the context of contemporary commercial videogames which offer increasingly broad customization options (e.g., facial features, body type, race, sexual orientation). This research can therefore be used as a starting point to examine a range of user-customization options and consider how much and which types might be most beneficial as a starting point to increase task interest.

The second article in this special issue was written by Mirless and explored the application of virtual role-playing using Second Life to help prepare pre-service teachers for teaching in diverse classrooms by engaging them in perspective taking simulations. Results suggest that using virtual role-play can help to enhance pre-service teachers' ability to take on the perspective of students with diverse abilities and backgrounds. Further, the simulated experience provided these pre-service teachers with a safe environment to experience and learn from the psychological states (e.g., anxiety) that often accompany stepping out of one's comfort zone. Taken together, this article illustrates that simulations can be a powerful platform for students to engage in real-world activities. As such, this article may serve as a valuable methodological resource for researchers interested in conducting similar research and creating immersive environments.

The third article by McCreery, Krach and Nolen examined the relationship between players' big five personality traits and those they attributed to their World of Warcraft (WoW) avatars. Their results indicate that although a relationship does not exist for the measured personality constructs of players and their avatars, a consistent pattern of differences was found. Though the committed and expert players that were recruited represent a specific type of game and gamer population, this study provides an interesting direction of scientific inquiry with opportunities for replication in, similar and dissimilar, types of games that can inform expectations and understandings of users' avatar behavior, and in particular, its authenticity.

The fourth contribution by Holbrook and Cennamo examined whether police officers' interaction with a high fidelity simulator affected their self-efficacy. The authors present compelling pieces of qualitative evidence that illustrate strong reactions to the simulator and officers' performances within it; exposing, in some cases, changes in beliefs brought about through their experience with the simulator. This is particularly evident in the emotional arousal

that led to introspection and transformation of select participants. Moreover, it demonstrates the importance of simulator training of high-risk tasks in order to expose positions of internal strength and areas of growth. This article also reveals disconnects between results from self-report measures, corresponding observational and interview data, underlining the need for researchers to deploy multiple methods to examine psychological and behavioral phenomena. This may be of particular importance in professional situations where differences in self-perception and behavior are exacerbated due to stress, anxiety, or perceived level of consequence.

The fifth and final article by Landers and Callan was an experimental study that compared the effect of having students (1) hold a discussion through a multi-user virtual environment (MUVE; OpenSim) vs. a chat room and (2) whether these discussions were anonymous or not. Their results and discussion provide valuable context for researchers and educators to use in considering when and how to use MUVes and features of (e.g., anonymity). More generally, Landers and Callan's work highlights the importance of avoiding thinking of newer educational technologies as silver bullets in terms of their effectiveness across educational contexts and implementations; rather these environments require an abundance of context-sensitive and descriptive empirical research that identifies the boundaries of their use and replicates findings. As such, this article represents an important empirical contribution to the study of MUVes.

We hope you enjoy and find this collection of empirical studies on games, simulations, and features of, as interesting and informative for both current research and future directions as we have.

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