Behind the MASK: Motivation through Avatar Skills and Knowledge

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ABSTRACT

This study begins an interdisciplinary dialogue among game developers, researchers and educators to determine and realize the potential of using Avatars in a three-dimensional (3D) virtual world to support experiential learning, role-playing, and problem-based learning. This research further investigates the pedagogical and instructional implications for transitioning teachers and students through alternative realities. This study discusses the psychological and sociocultural need for play, delineating the pros and cons of utilizing video games, virtual 3D worlds for both online and in the classroom followed by two case studies, which demonstrate the power of becoming an avatar within virtual spaces. This qualitative research investigation uses methods employed by collecting data through voluntary participation, students discussion logs, formal and informal interviews, and observation through video recording. These studies identify the significance of psychological activities and cognitive challenges using avatars to motivate learning holds true even when examined through the lens of constructivist, socioculturalist, behaviorists, psychological, developmental, cognitive, and sociolinguistic theories. Additionally this research analyzes several important studies that have shown the potential for the educational impact of, virtual 3D worlds and video games on learning.

Keywords: Accessibility, Equality and Inclusiveness, Avatars and Agents, Cognition, Identity Formation, Learner Control, Learning, Motivation

INTRODUCTION

“Carnival and commedia dell’arte. Initiation rituals and Greek tragedy. Space travel and hockey. From Paleolithic times to the present, people have used masks to add power and mystery to religion, warfare, and entertainment.” (Nunley, McCarty, Emigh, & Ferris, 1999)

In all cultures throughout time, facial masks have been used to celebrate, practice war games, mourn death, and explore fantasies. As civilization has evolved, the idea of hiding behind a mask and acting through alternative perspective has remained. In this study, the authors will bridge theory to practice in an attempt to make a case for the use of Avatars (i.e., alternate identities found in virtual worlds) to cognitively move students toward accomplishing academic objectives within classroom activities; not just for the sake of entertainment or hype.

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This study will discuss the pedagogical advantages of using avatars to motivate or engage with identity transformation. The avatars (virtual characters) found in virtual 3D worlds or “metaverse” of online communities hold potential for students to explore academic ideas and build “scientific habits of mind” (Steinkuelher & Chmiel, 2006).

Psychological Nature of Avatars

In research specifically targeted to the psychological impact of avatars in video games, Lim and Reeves (2005) found that, through the use of avatars, “players become emotionally and psychologically involved in the game” and children learn to negotiate the fictional world through symbolic representation. The symbolic representation found in most virtual 3D environments transmediates language, cultural, age, race, and gender. Psychologically, the avatar has agency, is able to make choices, can operate from a sense of personal control (Rotter, 1966; Taylor, 1989). Through agency, players are intrinsically motivated to engage in an activity (deCharms, 1968; Deci, 1981).

The personal choice and the psychological nature of behavior can be influenced by childhood dreams and fantasies, as evidenced by the Harry Potter, Percy Jackson, and Twilight series movies and books, which have fascinated millions of children and adults around the world. It is not a coincidence that our dreams, fate, and personal beliefs are mutually inclusive. Harry Potter (Rowling, 1998) has “the magic” to exercise control over his environment. Percy Jackson (Riordan, 2005) overcomes life’s obstacles using his “Olympic” powers. In the Twilight (Myer, 2006) series, the adolescent protagonist Edward, is superhuman, immortal, and able to magically protect or kill humans but protects Bella from danger. As with popular novels, within a virtual 3D environment, players “become” the avatar, take on the powerful traits of a character, and interact with the rules and content found in immersive environments. For instance, taking on the perspective of Lt. Powell, an OSS agent in North Africa (EA Games, 2002), students learn history (World War II) through a multimodal perspective, fully engaged in the intricacies of war. Personal choice then becomes the fine line between superhero and villain.

Make Believe as an Instructional Tool

For over a century, educational theorists emphasized the importance of play as a social and cognitive learning tool (Goldman, 1998; Mead, 1934; Piaget, 1978; Spodek, 1973; Vygotsky, 1978). Children need to bring down monsters. According to Jones (2002), “playing superhero” is a normal component of most childhood development. Fighting for the good of humanity while dressed up in fluttering caped crusader towels provides young children with the opportunity to show courage and face adversity. Jones (2002) stated that,

“Childhood gunplay is universal. Ethnologists have shown that in societies where guns aren’t a part of the local symbology, kids play similar games with bows and arrows or spears. In every culture, children always develop fantasy of projecting destructive power across space and knocking down a big opponent with an effortless gesture.” (p. 48)

In short, playing with others is rule-based and requires that a child take on the role and identity of a particular persona; for the enjoyment of the game is to learn and acquire the rules of the game. Cooperation and conflict are integral components of developing an individual identity.

Mead (1934) noted that, in relation to building a socially situated identity, children have a strong need to play with peers to develop the idea of self in relation to others. Children learn to develop their own identities, their own sense of how the greater society works, and what constitutes fair play in the course of one’s interactions with each other through “symbolic interactionism.” From a constructivist perspective, play then becomes a symbolic recreation of a larger community. Others, notably Vygotsky