Understanding design skills of the Generation Y: An exploration through the VR-KiDS project

Newton D'Souza, Department of Architectural Studies, University of Missouri, 133 Stanley Hall, Columbia, MO 65211, USA
So-Yeon Yoon, Department of Architectural Studies, University of Missouri, 137 Stanley Hall, Columbia, MO 65211, USA
Zahidul Islam, Department of Architectural Studies, University of Missouri, 132 Stanley Hall, Columbia, MO 65211, USA

As university instructors prepare to teach the current generation (Generation Y), a dire need exists to continue learning and acquiring effective tools in teaching design to reach a different generation, since most instructors grew up in the Baby Boomer Generation and the Generation X cultures. The Virtual Reality for Kids interested in Design Studies (VR-KiDS) project is an exploratory study to understand design skills of Generation Y within a digital environment, specifically virtual reality. Using the Second Life interface and the multiple intelligence frame work students between the ages of 11 and 16 participated in the design of a virtual zoo. The project outlines the conception, application and evaluation of design skills within this interface.

Keywords: architectural design, design process, virtual reality, learning skills, design cognition

Design is a diverse and creative domain that exhibits individual styles of learning – from visual, to verbal, to kinesthetic styles. These individual styles have been amplified by the current technology-intensive environment of social-networking, 3D-gaming and virtual reality worlds. As Privateer (1999) cautions, the question of whether current technology will reinforce existing learning environments or fundamentally alter conventional learning is not yet known. However, he suggests that it makes little sense for academicians to continue the traditional way of learning, which is significantly at odds with technologies that are impacting learning communities. Part of the difficulty in doing research or learning new technology for teaching, is that these technologies are fragmentary in nature, develop at a rapid pace, and consist of diverse media and tools. In this context, there exists a need to develop and evaluate new learning environments, specifically for creative domains such as design – which demands individuals who can make synergistic connections between different tools.

Corresponding author:
Newton D'Souza
dsouzan@missouri.edu

www.elsevier.com/locate/destud
0142-694X $ - see front matter *Design Studies* **32** (2011) 180–209
doi:10.1016/j.destud.2010.07.002

Hence, given the rapid changes in computational media, today's children are growing up in an entirely different learning environment than their design instructors. It would be reasonable to assume that their design thinking will be significantly influenced by the technology available to them. Today's children belong to the Generation Y or the Millennia Generation, who represent the latest cohort of young people to reach tertiary education age (Nimon, 2007). These children were born in or after 1980. However, most of today's university instructors belong to the previous generations – i.e. the Baby Boomer Generation born 1946–1964 and Generation X, born 1965–1979 (Freestone & Mitchell, 2004). While there are significant differences in the exact age boundaries, the critical factor according to Nimon (2007) is understanding a generation's characteristics and behavior, rather than fixation on an exact starting point.

According to Nimon (2007), perhaps the most predictable effect on Generation Y has been on attitudes towards technology itself. To Baby Boomer Generation and Generation X, phenomena such as mobile phones and the Internet represent tools that, while useful, are not essential. Generation Y however, consider them as inseparable from their daily existence as the clothes they wear or the food they eat. VR worlds such as Second Life even allow reinvention of the physical self through the use of personal avatars, allowing an unprecedented degree of control over appearance that can be continually updated or adapted. In other words, in the hands of the Generation Y, these technologies have been transformed from the simple tools of the Baby Boomer Generation into devices through which they experience and interact with their world.

1 Bracing to teach the Generation Y

Dobbins (2005) notes that the world of Generation Y is a '24/7' world, which has an impact on their attitudes and behavior in several ways. Firstly, they are often reported as having short attention spans. Sheahan (2005, p. 63) refers to them as 'Stimulus Junkies' and warns employers that 'if you can't keep Generation Y entertained, you can't keep them.' Secondly, the perceptual border that had separated privacy from accessibility for previous generations appears to be fading. Nimon also argues that the perception of time among Generation Y has contracted, which means they not only expect quick and immediate responses, but that they expect it within a rapid time frame that traditional institutions may not be structured to achieve.

Oblinger and Oblinger (2005a, 2005b, p. 2.9) identify the following characteristics as being typical for Generation Y: digitally literate in the sense of being comfortable and familiar with digital technology; connected to friends and the world through technology; rapid multi-tasking and quick response to communications; prefer to learn by doing rather than being told; gravitate toward activities that promote and reinforce social interaction; prefer to work and play