

Ensuring Student Engagement in 3D Virtual Learning Environments (0240)

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In accord with the theory of Communities of Practice and Situated Learning, the use of 3D VLEs is being investigated as a means to supplement campus-based learning. This paper will investigate virtual learning communities through the exploration of narrative and avatars: narrative as an imaginative and cognitive creation process, which this paper proposes is essential to student engagement; avatars are the animated agents that connect sociability and interactivity. In 3D VLEs, there is the possibility for community to be re-introduced that other Web 2.0 technologies may have stripped out. A model of learning that emphasizes the individual's role within a socially regulated community will be used to analyse the existing use of virtual environments in order to evaluate different styles of engagement. As a result, this paper concludes that narrative is a mechanism that binds communities together and that avatars are a mechanism by which a personal narrative is implemented.

Outline: (957 Words)

The Internet and Web 2.0 technologies have contributed significantly to distance learning and are changing how people interact online. The role of tutor as facilitator is emphasized, in accord with the theory of Communities of Practice (CoPs) and Situated Learning, which see learning as a social practice rather than individual activity. With the increasing pressure to deliver learning at a distance, 3D Virtual Learning Environments (VLEs) are being investigated as a means to supplement campus-based learning because 3D VLEs enable a possibility for social engagement which other technologies do not.

Previous research on 3D VLEs has tended to rely on anecdotal or epithetic evidence or been technologically focused, with no initial measurement criteria designed in the early stages of investigations. In order to explore the opportunities for social engagement in 3D VLEs, this paper will investigate virtual learning communities through the exploration of the idea of narrative and construction of avatars: narrative as an imaginative and cognitive creation process, which this paper proposes is essential to student engagement; avatars are the animated agents that represent the individual participants and connect sociability and interactivity. Through narrative and the use of avatars, there is the possibility for community to be re-introduced in 3D VLEs that other Web 2.0 technologies may have stripped out. In addition, the role of the tutor in virtual learning communities is further developed as a co-participant rather than simply a facilitator, because in addition to the need for a tutor to provide scaffolding or to intervene in open-ended VLEs (*e.g.* Second Life) there is also peer negotiated and self-directed learning.

Conceptually and theoretically, “the learning community appears to be a potentially powerful educational practice” (Zhao, Kuh 2004), because the “increased opportunities afforded by learning communities for peer learning and interaction allow for the development of richer, complex ways of thinking and knowing so that students learn at a deeper level (Bransford, Brown & Cocking 2000)” (Zhao, Kuh 2004). According to Lave and Wenger (1991), learning is largely a social practice rather than something individuals do. In other words, CoPs are “groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly” (Wenger 2006). CoPs can be regarded as “self-organizing systems” (Smith 2009) and the process of collective learning within them can be described as a Self Regulated Community of Learning. Furthermore, according to Vygotsky (1978), a learner “first becomes able to subordinate her behavior to rules in group play and only later does voluntary self regulation of behavior arise as an internal function”.

A 3D VLE such as Second Life (SL) is a virtual world that “stretch[es] in space, exist[s] in time, and serve[s] as habitat for a population of animate agents” (Ryan 2001). The expected depth of student engagement can be achieved in SL because the aforementioned three dimensions “correspond to what have long been recognized as the three basic components of narrative grammar: setting, plot, and characters” (Ryan 2001).

Avatars have significant impact on virtual identity, because students will not engage in the process of learning unless they feel that they are engaged in the community of learning. Therefore, in 3D VLEs, “the motive is to define the boundaries of identity rather than the boundaries of land” (Meadows 2008) because “avatar is a specific persona, and different identity, of the driver” (Meadows 2008). Behavioural rituals “require specific sort of personalities” (Meadows 2008) and “give archetypes meaning and expression, and vice-versa. The visual representation that a person chooses for their avatar has something to do with their role in the society” (Meadows 2008).

The learning and teaching activities in SL is regarded as “serious game”, “a good game should provide a goal that is attainable but only with great effort” (MTW 2007). Hence, the built-in narrative in SL is vital, story unfold in electronic games can be achieved by a Self Regulated Community of Learning through narrative creation process rather than completely controlled by the third party, like in a MMORPG.

Case studies will focus on how built-in narrative foster student engagement in SL through CoPs. GENIE lab, a virtual laboratory at University of Leicester (bioscience); the virtual counselling centre at the University of Hertfordshire (social science) and the use of SL for entry-level programming courses in Portugal (computer science) will be evaluated and the findings will be scalable to the similar practice in the same discipline. It is worth noting that due to the technical affordance, SL is not good at simulating discovery type of experiments such as in physical science and bioscience, but it has huge potential in social science in terms of discovering the unknowns, as in the case of virtual counselling.

Under the framework of Self Regulated Community of Learning, Narrative as Student Engagement (vice-versa) will be one more step forward in guiding real practice in 3D VLEs and an addition to Postmodern Narrative Theory. Narrative as Student Engagement is an attempt to close the gap between spatio-temporal and emotional immersions in 3D VLEs. Narrative as Student Engagement

builds the sense of community. In turn, the sense of community improves the depth of student engagement.

3D VLEs such as SL has significant advantages over web 2.0, gated VLEs and single-user VLEs in terms of group building and collaborative learning. Student engagement is much easier to be achieved in 3D VLEs because they provide “an advanced level of social networking through the employment of avatars” (Kirriemuir 2007), and allow people to “act within a world and experience it from the inside” (Ryan 2001). As a result, this paper concludes that narrative is a mechanism that glues communities together; avatars are a mechanism by which the concept of the community is reintroduced and a personal narrative is implemented.

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