



Virtual Worlds for learning: done and dusted?

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When Second Life first came to the attention of the mainstream media in 2007, educators recognised the potential of virtual worlds for teaching and learning. They seemed to be the ideal environments to facilitate authentic learning, alleviate the tyranny of distance for students not on campus, and provide an inexpensive and safe environment to teach skills that were too dangerous or expensive to teach in the real world. In spite of all this fanfare, virtual worlds have failed to gain significant traction in higher education. This paper outlines a preliminary investigation into the reasons why virtual worlds have not been adopted for learning and teaching. The reflections of the six authors on this topic were subjected to a thematic analysis with themes arranged under four broad topics. This information informed the development of a survey to be distributed more widely to further explore this phenomenon.

Keywords: virtual worlds, higher education, Second Life

Introduction

In the first decade of the 21st century, virtual worlds were seen as a boon for educators because they provided a diverse and relatively inexpensive environment suitable for authentic learning experiences (Mishra & Foster, 2007), potentially removing the tyranny of distance for students studying away from campus (Ritzema & Harris, 2008), and accommodating a range of learning styles (Bonk & Zhang, 2006). Even after all this fanfare, virtual worlds have failed to live up to their potential; many educators are abandoning virtual worlds and a tour of the most popular of these, Second Life, reveals that many educational builds are deserted (Pfeil, Ang & Zaphiris, 2009). A general search through the literature over the past few years shows a notable decrease in the number of papers published about learning and teaching in virtual worlds. Even ascilite contributions show a decline in the number of papers (full and concise), posters, symposia and workshops: 15 in total in 2010, as compared to 10 each in both 2011 and 2012 (ascilite 2010, 2011 and 2012). Claims made by information technology research

and advisory firm, Gartner, support these findings, asserting that virtual worlds are just above the "Trough of Disillusionment" on the Gartner Hype Cycle (Petty & Van der Muelen, 2012). This paper presents a preliminary investigation as to why educators have abandoned or have failed to adopt virtual worlds for learning and teaching.

Method

The authors of this paper are employed at Australian higher education institutions and work in roles that use virtual worlds (VWs) for education, either as teachers or in roles that support and advance the use of technology in higher education. Two work in the area of health, two in the area of teacher education, one in a central teaching and learning unit and one in the future of information technology in higher education. Over the years, the authors have noted a shift in attitudes towards the use of virtual worlds in education. Once many educators were getting "on the bandwagon" and embracing the affordances of virtual worlds for research, teaching and learning. Now, it appears the hype is over and there is a trend away from the use of virtual worlds. With a view to discovering the reasons behind this shift, the authors wrote about their experiences and perceptions as to why virtual worlds were not widely adopted in learning and teaching across the sector. These reflections were subjected to a thematic analysis. Thematic analysis is a means of encoding qualitative information whereby the encoding is reliant upon an explicit 'code', generally a list of themes. For this exercise, a theme is defined as a pattern discerned in the educator reflections that describes and organises observations of the phenomenon (Boyatzis, 1998), specifically perceptions of why virtual worlds have not been widely adopted into teaching and learning. As the emerging themes were strongly linked to the data itself, the identification of themes can be said to be inductive (as compared to deductive) (Patton, 1990).

Emerging themes

After examination of the data, the following themes emerged under four broad categories: issues relating to - institution, staff, students and virtual world technology. These themes are now discussed in more detail.

1. Issues relating to the institution

Stewart & Davis (2012) suggest that a key factor in the sustainability of any virtual world project is the level of institutional support, which includes policy, ongoing funding, incentives, practical support and a plan for sustainability when individual champions leave the institution. Furthermore, they suggest that these issues should be addressed at the outset in the planning stages of any project. Similar issues were identified by the authors who also broke this broad topic into sub-areas of *institutional policy*, *lack of funding*, *lack of appropriate hardware*, *IT support issues*, *insufficient flexibility of curriculum* and *lack of planning for staff moving on*. Of particular impact to the topic of this study is the number of instances where significant resources have been put into initial development but funding has not been renewed. The result is that these projects are lost. As one respondent noted:

Monetary requirements/funds need to be an ongoing discussion within institutions. Unfortunately, as this does not happen, many educators have acquired their space due to a grant without anything in place to sustain the space beyond the life of the grant. (R3)

A second area which the authors believe has a strong bearing on the decline of involvement in virtual worlds is the lack of IT support provided. Incompatible firewalls set up by IT administration commonly restrict access to virtual worlds (McDonald, Ryan et al., 2012; Dudeney & Ramsay, 2009). It can be a source of frustration when the onus is on teaching staff to have the knowledge of the technical requirements of the virtual world, in order to communicate these to IT support. A further source of frustration is the practice of limiting access to certain computer labs and locations.

2. Issues relating to staff

The adoption of a new technology is strongly correlated to its perceived usefulness and perceived ease of use (Davis, 1989). Both of these attributes are highly relevant to the adoption of virtual world technologies by educators. *Difficulty of use* and *the steep learning curve* involved are significant factors which elicit a negative response by staff. Other factors identified by the authors include the *lack of teaching support or mentoring*, *ignorance of the potential benefits*, *sensitivity to poor student feedback*, *lack of appropriate technical skills*, *high workload*, *believing misinformation about virtual worlds* (from media, colleagues and so on), *concern over*

inappropriate content, discomfort with the environment, and non-committal attitudes and behaviors. Staff are often unwilling to commit to new methods when they are concerned with how their teaching is accepted by the students, particularly when the new methods involve a considerable time commitment. As two respondents commented:

[Staff] have enthusiastically talked about virtual worlds ... and say they can see the potential. However once I try to get them in world they spend very little time there. (R1)

Negative student feedback is a major factor in favour of maintaining the status quo. 'Will this decrease my scores?' is a likely question that is asked of [*sic*] staff considering virtual worlds in teaching. (R2)

The issue of time commitment also figured heavily in the authors' perceptions.

High workload is an issue such that educators are unwilling to look into any new technology for learning and teaching. Though they are not especially opposed to the use of virtual worlds, they do cite lack of time as the reason why they can't engage with that particular technology. (R4)

3. Issues relating to students

There is continued discussion on the importance of e-literacy (Bennett et al., 2008) and the extent of the current generations e-bility. The authors identified that many students display a *lack of appropriate technical skills* in a virtual world environment.

Although students may have experienced the 3D virtual world in games, this does not flow over into a willingness to engage with them for their studies. (R5)

A further difficulty noted is that many students experience real or perceived *technical issues* with some having poor access to the *connectivity, bandwidth* and *hardware* required.

4. Issues relating to virtual world technologies

Two particular obstacles inherent in the use of virtual worlds are *lack of scalability*, thus educators with large classes are inherently excluded from using them or users of small areas are in danger of becoming lost in an open world environment, and a *poor user experience*. Users are deterred when access to a virtual world is characterised by a sometimes 'laggy' (slow and jerky) experience and unreliable features such as voice and video.

Educators cite these kinds of issues related to the stability and reliability of the environment as a reason as to why they couldn't be bothered with virtual worlds. (R4)

Where to from here?

Based on the themes that have emerged from this reflective exercise, the authors are investigating further to determine if their assertions are held more broadly across the sector but also to unearth any other factors that they have overlooked. A short survey has been developed with questions designed to interrogate the themes identified but with space provided for other reasons the authors have not yet identified. Demographic data will also be collected. The survey was designed and deployed in Qualtrics with the link disseminated through the mailing lists and social networks of the authors. Ethics approval was secured to conduct this research. At the time of writing, more than 260 people worldwide had completed the survey and many of the respondents have contacted the authors directly to elaborate on their views. This is obviously a highly topical issue across the sector.

Conclusion

This paper describes a preliminary investigation into the reasons why educators working in higher education have not adopted or not continued the use of virtual worlds for learning and teaching, given the well documented affordances of these environments. Six educators experienced in the use of virtual worlds for learning and teaching, documented their reflections of the perceived barriers to use of virtual worlds. These

reflections were subjected to a thematic analysis and a number of themes emerged which could be grouped under four headings: 1) issues relating to the institution; 2) issues relating to staff; 3) issues relating to students; and 4) issues relating to virtual world technologies. An analysis of these themes formed the basis of a questionnaire which has been widely deployed through networks and social media to further investigate the reasons why virtual worlds have not been widely adopted for teaching and learning across the higher education sector.

References

- ascilite. (2010). Ascilite 2010, Sydney. Retrieved from <http://www.ascilite.org.au/conferences/sydney10/Ascilite%202010%20handbook%20complete%20v10.pdf>
- ascilite. (2011). Program. Retrieved from <http://www.leishman-associates.com.au/ascilite2011/downloads/ascilite-program-v3-23Nov.pdf>
- ascilite. (2012). Ascilite2012 Conference Programme. Retrieved from http://www.ascilite2012.org/images/custom/ascilite_2012_final_programme_15-11-12.pdf
- Bennett, S., Maton, K., & Kervin, L. (2008). The 'digital natives' debate: A critical review of the evidence. *British journal of educational technology*, 39(5), 775-786.
- Bonk, C. J., & Zhang, K. (2006). Introducing the R2D2 model: Online learning for the diverse learners of this world. *Distance Education*, 27(2), 249-264.
- Boyatzis, R. E. (1998). *Transforming qualitative information: Thematic analysis and code development*. Thousand Oaks, CA: Sage.
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS quarterly*, 319-340.
- Dudney, G., & Ramsay, H. (2009). Overcoming the entry barriers to Second Life in higher education. In C. Wankel & J. Kingsley (Eds.), *Higher Education in Virtual Worlds: Teaching and Learning in Second Life* (pp. 11-28). Bingley, UK: Emerald.
- McDonald, M., Ryan, T., Sim, J., James, J., Maude, P., Scutter, S., & Wood, D. (2012). Multidiscipline role-play in a 3D virtual learning environment: Experiences with a large cohort of healthcare students. ascilite Conference. Wellington, New Zealand.
- Mishra, P., & Foster, A. (2007). *The claims of games: A comprehensive review and directions for future research*. Paper presented at the Society for Information Technology & Teacher Education International Conference.
- Patton, M. Q. (1990). *Qualitative evaluation and research methods* (2nd ed.). Newbury Park, CA: Sage.
- Pettey, C., & van der Meulen, R. (2012). Gartner's 2012 Hype Cycle for Emerging Technologies Identifies "Tipping Point" Technologies That Will Unlock Long-Awaited Technology Scenarios. Retrieved from <http://www.gartner.com/newsroom/id/2124315>
- Pfeil, U., Ang, C. S., & Zaphiris, P. (2009). Issues and challenges of teaching and learning in 3D virtual worlds: real life case studies. *Educational Media International*, 46(3), 223-238.
- Ritzema, T., & Harris, B. (2008). The use of Second Life for distance education. *Journal of Computing Sciences in Colleges*, 23(6), 110-116.
- Stewart, S., & Davis, D. (2012). On the MUVE or in decline: Reflecting on the Sustainability of the Virtual Birth Centre developed in Second Life. *Australasian Journal of Educational Technology*, 28(3), 480-503.

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Please cite as: Newman, C., Farley, H., Gregory, S., Jacka, L., Scutter, S., & McDonald, M. (2013). Virtual Worlds for learning: done and dusted? In H. Carter, M. Gosper and J. Hedberg (Eds.), *Electric Dreams. Proceedings ascilite 2013 Sydney*. (pp.622-626)

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