Innovative Research in Virtual Worlds 2011 Conference

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Abstract title	*Conducting empirical research in virtual worlds*
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Full abstract (up to 1000 words)	*The paper encompasses more than one theme of the conference as it pertains to the process of conducting empirical research in virtual worlds. We will provide guidance on how educators, instructional designers and designers of learning spaces can apply a number of data collection and analysis techniques within an ethically acceptable framework to conduct empirical research in virtual worlds. For example, educators may like to evaluate student experiences in virtual worlds or the pedagogical effectiveness of their initiatives in virtual worlds.* *Based on our experiences and lessons learned on four research projects (2008-2011) in which we applied a variety of research techniques, we will share our experiences of conducting empirical research in virtual worlds. These techniques include semi-structured and structured interviews, user-observations, focus groups, group discussions aided by images, tours, heuristic evaluations, thematic analysis, descriptive phenomenology, and longitudinal studies involving focus groups in Second Life, epistolary (email interviews), and individual semi-structured interviews in Second Life. The research aims in the four research projects in the e-learning and e-commerce domains relate to: designing learning spaces in virtual worlds for student learning and engagement; applying the principles of game usability, Web usability and real-world navigation to derive guidelines for ease of navigation and wayfinding in learning spaces in virtual worlds; pedagogical role of virtual worlds in supporting communication, team working and community building; and investigating the shopping and consumption behavior of users in virtual worlds.* *We will present a researcher's toolbox and practical guidance for the research process: for example, choice of complementary research techniques to match with the research aims and questions; logistics and preparations in the pre-data collection stage and receiving ethical approval from institutional ethical committees; the data collection stage including recruitment of participants; post-data collection stage of consolidation and storage of data; data analysis and synthesis; and dissemination of the research outcomes.* *We will focus on the following aspects of conducting empirical research in virtual worlds:* • *The toolbox of techniques for data collection; selection of technique(s) for the research questions* • *Tips on how the techniques need to be adapted for conducting research in virtual worlds* • *Guidance for developing research materials such as the consent form, project summary sheet, and how to address the possible concerns of*

an institution's ethics committee who may not be familiar with the avatar-based interactions in virtual worlds

- *Suggestions such as how the ethical guidelines of conducting research both in offline settings and on the internet need to be considered and combined in the preparation of research materials for conducting research in virtual worlds*
- *Outlining the issues related to in-world recruitment of participants*
- *Guidance on conducting interviewing and focus group techniques in virtual worlds; or conducting user-observations in virtual worlds; or carrying out guideline inspections or heuristic evaluations to evaluate the designs of learning spaces in virtual worlds*
- *Recommendations for the logistics of conducting empirical research in virtual worlds such as voice versus text-based data collection, developing a researcher identity or a consistent persona, choosing the locations for conducting interviews or focus groups, how to facilitate and manage the multiple channels of communication such as text (local chat and instant messaging), gestures and voice*
- *How the anonymity of the medium demands greater investment of time to establish a mutually beneficial trust relationship with participants*
- *Pointers for the skills and training needs of researchers for conducting empirical research in virtual worlds.*

Although our experiences are based on conducting empirical research in Second Life, we hope that our experiences and discussions in this paper will also be useful for researchers who aim to conduct research in other avatar-based virtual worlds.

The paper will build on and extend the framework and guidance presented in our 2010 peer-reviewed journal paper:

Shailey Minocha, Minh Tran and Ahmad John Reeves (2010). Conducting Empirical Research in Virtual Worlds: Experiences from two projects in Second Life, in the special issue on The Researchers Toolbox of Journal of Virtual Worlds Research, vol. 3, no. 1.,
http://jvwresearch.org/page/volume_3_number_1_the_researchers_toolbox

The paper will be of interest to colleagues who have either conducted research in virtual worlds, or are aspiring to do so: educators, instructional designers, virtual world researchers, and designers of virtual learning spaces.