Exploring co-location in physical, virtual and 'hybrid' spaces for the support of informal learning

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The impact of 'out-of-class' experiences on informal learning and student coursework satisfaction is attracting growing attention (Jamieson, 2009; Krause, McInnis, & Welle, 2003; Selwyn, 2007). Co-location and a sense of 'being there with others' in physical space is one catalyst for serendipitous interactions that may lead to informal learning. Co-location may also be possible within electronic forms, such as instant messaging, video conferencing and social networking communities, although there is less research concerning the sense of togetherness possible in virtual space (Schroeder, 2006). This study will draw upon self-reported 'out-of-class' student experiences to explore how the conditions particular to physical and virtual spaces support interaction, and importantly, how they impact informal learning. The study will also explore 'hybrid' spaces, which span both physical and virtual domains. It will investigate whether co-location might work differently in this context, and have its own characteristics for facilitating informal learning.

Keywords: informal learning, co-location, learning spaces, hybrid spaces

Introduction

Informal learning has become a popular term in recent years, as educators increasingly acknowledge the opportunities for learning beyond the classroom walls (Jamieson, 2009). Informal learning is a social process involving casual, spontaneous learning that occurs out-of-class, without the presence of an instructor (Krause, McInnis et al. 2003; Selwyn 2007). An environment for informal learning could be physical (e.g. library, café) or virtual (e.g. instant messaging, desktop sharing, social networking (Selwyn, 2007)). The proposed study will investigate informal learning within physical and virtual spaces based on the communication mechanisms particular to these domains. It will also consider the existence of 'hybrid' spaces that span physical and virtual settings.

Co-location and informal learning

Co-location is one of the spatio-temporal conditions that make spontaneous interactions possible (Lawrence, Payne, & Roure, 2006), and is a recurrent theme in research concerning informal learning and collaboration (Fayard & Weeks, 2007; Kraut, Fussell, Brennan, & Siegel, 2002). Having two or more people co-located in a physical setting is the most typical catalyst for interaction because where there is proximity between people there is often also social obligation to interact (Fayard & Weeks, 2007). However, co-location is enacted and represented differently in physical and virtual spaces (Schroeder, 2006), each of which comprise different conditions for support of interactions. Several researchers have considered, for example, the way in which various mechanisms of communication are suited to particular environments (Fayard & Weeks, 2007; Kraut et al., 2002). The characteristics of face-to-face communication possible in physical settings differ from those of electronic settings, where verbal and non-verbal exchanges are mediated by technologies such as email, videoconferencing or instant messaging (Kraut et al., 2002; Olson & Olson, 2000; Schroeder, 2006). It is likely that different communication mechanisms support a sense of 'being there with others' in different ways, dependent on whether the environment is virtual or physical.

Informal learning in physical, virtual and 'hybrid' spaces

Informal learning occurs when the interactions occurring within these settings culminate in unstructured exploration of ideas or collaborative activity (Fayard & Weeks, 2007; Kraut et al., 2002). For example, if two students are standing around a photocopier, and one is making copies of a research paper, the other student might express interest in the topic, perhaps giving rise to a discussion about future research collaborations (Fayard & Weeks, 2007). Higher Education institutions have recognised the importance of this and other kinds of informal learning and many have developed dedicated spaces to make informal learning possible. This includes repurposing existing venues such as libraries to support "…student-led, socially-based, informal learning." (Jamieson, 2009, p. 4) where students are physically co-located. Less attention has been given to how virtual spaces support informal learning in tertiary institutions, but clearly virtual spaces can also support co-location and informal learning using applications such as chat rooms, desktop sharing and virtual worlds, where a person can have a sense of 'being there with others' through peripheral awareness of someone's availability to chat, or watching someone's on-screen behaviour (Kraut et al., 2002). Beyond physical and virtual space, a third consideration is 'hybrid' space that spans the two. For example, sitting in a group and chatting whilst simultaneously using instant messaging to find out 'just-in-time' information from another student in a remote location. Where there is a blurring of boundaries between the physical and virtual space, there may be a different sense of co-location, or 'being there with others', that either helps or hinders casual interactions, and therefore opportunities for informal learning.

The study

This study will investigate two research questions: (i) how does 'being there with others' help (or hinder) students' informal student learning?; and (ii) does co-location operate differently in a 'hybrid' space, compared to a physical or virtual space? The first question seeks to define the role of co-location in informal learning regardless of environment (physical, virtual or 'hybrid') while the second research questions looks more specifically at how co-location may manifest itself differently in physical, virtual and 'hybrid' spaces.

Methodology

The study will involve two components. The first study will investigate the research questions with a mixed year group of Architecture students (n=12) at the University of Melbourne. This group has a weekly three-hour design studio and will use a dedicated social networking site, and their own personal social networks and mobile technologies, to interact with each other outside of scheduled class time. Students will be observed in class on a weekly basis and a smaller subset (n=6) will report twice-weekly, over a ten-week period, about their out-of-class experiences with fellow classmates using the Experience Sampling Method (ESM) (Hektner, Schmidt, & Csikszentmihalyi, 2007) .These same participants will also be interviewed towards the end of semester to clarify emerging themes and other issues of relevance to the research questions. The questions used in the ESM and the interviews will ask participants about their out-of-class interactions using constructs established in the literature review, including questions about:

- Location (e.g. physical environment)
- Communication medium (e.g. face-to-face, email, videoconference)
- Sense of distance (related to response time, cultural, geographical and other boundaries, which may affect the sense of 'being there with others')
- Discussion topics (social, educational, or a combination of both)
- Acquiring new knowledge (social, educational, or a combination of both)

The second study is due to commence in Semester 1, 2010. It will involve drawing upon the theoretical understandings established from the analysis of Study 1 data, trialling different combinations of physical and virtual conditions and technologies that are suggested to be conducive for the support of informal learning. The role of co-location for informal learning will be maintained as the primary focus of the study, with a secondary focus on further exploration and definition of 'hybrid' space.

Conclusion

The contributions of this study are intended to be both theoretical and design-orientated, expanding upon existing research into technologies and environments for informal learning conducted by the educational

technology and HCI communities. It is hoped that this theoretical understanding could then be applied in practice in higher education regarding use of technologies and learning spaces for better support of the student learning experience.

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