Chapter 11
The Importance of Focal Awareness to Learning in Virtual Communities

Peter D. Gibbings
University of Southern Queensland, Australia

Lyn M. Brodie
University of Southern Queensland, Australia

ABSTRACT

Higher education today calls for transformative rather than transmissive education, and educators need to be particularly concerned with facilitating learners to fully focus on important elements, to make connections and properly process newly learned information. Educational approaches are beginning to place a greater emphasis on participation in community activities such as collaborative learning and team-work as opposed to individual inquiry. With the rise of the global community facilitated by the Internet and advances in communication technology, connected learners are forming virtual learning communities, which facilitate the individual and social aspect of learning through communication and team-based instruction models such as problem-based learning. To achieve this requires an education structure underpinned by pedagogical values that encourage student ownership of their learning and allows exploration of multiple perspectives by social interaction. One such educational structure may involve the use of virtual learning communities. The success of such a virtual learning community depends on developing key behaviours in students, which support them to focus on awareness of their own learning needs, attitudes and processes. This chapter argues therefore that students' focal awareness is critical to learning in virtual communities.

DOI: 10.4018/978-1-4666-0312-7.ch011

INTRODUCTION

Problem Statement

Whist learning communities have been well documented in general, there has often been some doubts raised about learning in online or virtual communities. Whilst people in close physical proximity may find it easy to learn from one another, it is reported to be much more difficult to establish learning communities in an online environment. Consequently, some discussions have appeared in the literature investigating possible impediments to the transfer of the traditional face-to-face learning communities to the development of virtual learning communities.

Although it may be more difficult, due to geographic, time and resource restraints, it is important that we gain more knowledge on how to develop and maintain effective learning communities in the virtual space. The key may be to look at the issue from the students' perspective, particularly as it relates to the theory of long term memory processes and focal awareness. In the context of this chapter, focal awareness refers to phenomena to which students' consciously direct their attention.

In this chapter we demonstrate the importance of student focal awareness through investigating a case study Problem-Based Learning (PBL) course that utilises virtual learning communities to facilitate students' attainment of course objectives.

Literature Review

The aim of online instruction is to promote student learning in accordance with well documented and well accepted education principles and theories. Learning fundamental theory often involves repeating a pattern of behaviour until it becomes automatic to the learner, but discussions surrounding higher order learning should also relate to the processes that occur in the mind of the learner. Cognitive psychology has demonstrated that learning is an internal process that involves memory, thinking and reflection (Ally 2004). This internal process involves creating linkages between existing and new information in the mind and this leads to greater retention of information (Mergel 1998). These linkages are made by the consolidation of information by the hippocampus in the brain to move it from short-term (focal or working) memory to long-term memory. It is appropriate to look at how these linkages are made in the cognitive architecture of the human brain with particular attention to focal awareness.

The limbic system is a complex set of brain structures that form the inner border of the brain's cortex on top of the brainstem. The limbic system is a fundamental processing centre in the brain that helps us process our sensory experiences (Ward 2006). It appears to be mainly responsible for motivation and emotions and therefore understandably one of its primal functions is the consolidation of memories and learning (Sousa 2001; Burton, Westen et al. 2009).

When data is processed from working memory to long-term memory, a specific hierarchy is followed (Sousa 2001). Data associated with survival is given priority, then experiences that evoke emotions are processed, and only after that do we process new information that might come from general learning activities. The consequence of this is that if students do not feel 'safe' (physically or emotionally), they will not properly process new information or focus on the learning activities. It is therefore critical to provide a 'safe' non-threatening environment in which students can learn. This applies particularly to the virtual learning environment where students often form, and participate in, learning communities. For example, Reuschle (2005, 2006) found that the online environment can support learning as a community activity provided the online learning environment offered a climate that was positive, supportive, safe, tolerant, respectful, nurturing, and participatory. In this context 'safe' means feeling comfortable enough to openly express