

Chapter 5

Patterns of Interaction in Online Learning

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ABSTRACT

This chapter describes a case study which examines detailed data related to student and tutor usage of an asynchronous discussion board as an interactive communication forum during a first semester associate degree course in applied psychology, and identifies 'what works' in relation to discussion board use. The case demonstrates how students gradually create an online community, but only if they are prompted in a timely and appropriate way by the course and assessment structure. Three distinct phases in online interaction are identified, and the case suggests these might be largely mediated by assessment tasks.

INTRODUCTION

Learning facilitation, using the Web as a vehicle for content dissemination and teacher-student interaction, continues to dominate debates related to online learning (Nash, 2004). However, research conducted in this area tends to focus on examining the importance of teacher-student and student-student interaction in the online learning process, and in particular the use of discussion boards to assist in creating an effective online

learning environment (Downing & Chim, 2004a). Some research suggests effective ways of creating such an environment, (Chou, 2001; Gilbert & Dabbagh, 2005; Henri & Pudelko, 2003) but relatively few studies (De Laat & Lally, 2004; Yukselturk & Top, 2006) have undertaken detailed week by week analysis of tutor and student discussion board activity throughout a semester, and then used this data to make recommendations about how an effective online learning community can be established with appropriate use of online discussion board tools.

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Online Learning: Interactivity, or Lack of Interactivity

With the exponential growth in information and communication technology, educators are presented with opportunities and challenges in terms of the use of the internet for formal educational purposes and web-based instruction (Boettcher, 1999; Downing, 2001; Mc. Naught & Lam, 2005). The development of metacognition in undergraduates is an area of focus for both traditional classroom based and online learning environments (Downing et al, 2009). For example, the impact of social and cultural factors on cognitive development has long been recognised, with even Piaget (1977) acknowledging the impact of social factors and peer interaction on cognitive development, and more recent studies have generally confirmed this view (Downing et al. 2007). Consequently, the need to cultivate and maintain interactivity within online learning environments remains a major challenge. Previous research has generated consistent concern about a perceived lack of interaction in online educational environments (Hron & Friedrich, 2003), prompted by the probably erroneous assumption that our 'traditional' classrooms are filled with the vital learning interactivity that online environments supposedly lack. For example, according to Robertson and Klotz (2002), the literature provides evidence that online courses are often configured and delivered in a style associated with independent study and that, whilst this format might work in some instances, it leaves what they call a 'missing link' in student learning. Consequently, researchers argue that students in an online learning environment lack opportunities to experience the benefits of both structured dialogue and the sense of community that can be created in the more traditional on-site classroom environment. Cook, (2000), Seabolt and Arends, (2000), and Muirhead, (2001) support this view that the interactivity of the traditional classroom is a vital, yet missing part of web-based instruction, and argue that online interaction is

somehow flawed because it does not allow for the social and emotional interaction allegedly taking place in traditional classrooms. Downing and Chim, (2004b) take a very different approach, investigating the relationship between personality type, preferred learning style, and different learning environments, and demonstrating that classroom based 'introverts' behave more like 'extraverts' when involved in online discussion forums, and that students with a more reflective learning style are actually more active in online discussions than when based in the classroom. In some ways, well-designed online learning can be seen as a form of problem-based learning which requires the same facilitation or scaffolding that is evident in the latter approach (Downing et al, 2009). In fact, it is perhaps an anomaly that the criticisms directed at online learning are not often used against the problem-based approach which is often effectively online learning without being online whereby students are given problems to follow up and not always in collaboration with their peers!

Synchronous and Asynchronous Discussions

Synchronous learning is often referred to as 'live' learning in which student-student and student-tutor interactions occur in real time. The critical difference between synchronous (real time) and asynchronous (anytime, anywhere) discussions is described by Boaz *et al.* (1999) who suggest that the growth of online 'chat' is evidence of the potential value of synchronous online discussion activity. Certain situations best lend themselves to synchronous communications, including group meetings or activities requiring group consensus or simultaneous response. Synchronous discussions are especially useful for brainstorming or replicating the face to face situation, and tend to be more successful when utilised by small groups (Conrad & Donaldson, 2004). However, one of the problems of synchronous discussion boards or

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