Exploring the attitudes, experiences and dynamics of interaction in online groups

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Abstract

The aim of this research was to improve understanding of the attitudes, experiences and dynamics of interaction of students working in online groups. This was achieved through a case study of postgraduate Information Studies students using the WebCT discussion board at City University in the academic year 2004–2005. Qualitative and quantitative methods were employed in combination including questionnaires, interviews, document analysis, and discussion board analysis. The latter method involved adapting an existing content analysis framework. The findings highlight the significance of group member participation, collegiality, and familiarity among group members. Students enjoyed working in online groups and found the discussion board useful, but often gave preference to other communication methods. Lecturer presence in online groups was found to be important to students, but interaction on the group discussion board was mostly student-centred. Provision of non-referential topic-related information, opinion, and solidarity were the most common types of interaction.
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1. Introduction

Higher education institutions are increasingly introducing courses partially or completely online in order to increase participation and social heterogeneity and to compete with other institutions (Armitage & O'Leary, 2003; Palloff & Pratt, 2001; Song, Singleton, Hill, & Koh, 2004). These courses are usually delivered through virtual learning environments (VLE) incorporating computer-mediated communication technology, such as WebCT, and are seen as having the potential to improve student learning through providing access to resources and facilitating interaction and collaboration online (McConnell, 2000; Salmon, 2002b). However, although collaboration in face-to-face groups is considered constructive for learning (Johnson & Johnson, 1989; Laurillard, 2002), the implementation of learning

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technology in higher education institutions has shown comparative success online is not guaranteed (Delport & De Villers, 2004). The dynamics, attitudes, and experiences of online groups is less understood compared to face-to-face groups (McConnell, 2000; McGrath & Hollingshead, 1994; Meyer, 2004; Palloff & Pratt, 2001; Salmon, 2002a). There is a need for further qualitative research investigating student perspectives on the importance, purpose, motivation, usefulness, and challenges of using asynchronous discussion for group work (Hara & Kling, 1999; Song et al., 2004; Vonderwell, 2003), and the experiences, processes, and success factors involved in working in online groups (Edirisingha, 2004; McConnell, 2000; Lock, 2002). In addition, there is much scope to explore the dynamics of interaction in online groups through adapting existing frameworks which have been developed to understand face-to-face groups (Johnson, Suriya, Yoon, Berrett, & La Fleur, 2002; Meyer, 2004). Consequently, this case study provided the opportunity to improve current understanding of online group interaction and to test the usefulness in this context of a particular content analysis framework.

2. Background

It has been argued that computer-mediated communication (CMC) technology provides students with the opportunity to collaborate and exchange ideas, experiences, opinions, interpretations, and resources (Hiltz, 1998; McConnell, 2000; Stacey, 1999), to share workload (Bruhn-suhr & Hamadeh, 2004), and ultimately to solve problems (Collins & Berge, 1996). The potential for students to develop higher-level cognitive skills through online asynchronous collaboration, such as reflection (Ellis, 2001; Hara, Bonk, & Angeli, 1998; Salmon, 2002b), elaboration, and clarification (Pena-Shaff & Nicholls, 2004), has also been emphasised. According to John Seeley Brown (in Schrage, 2002), this ability to "link, lurk, and learn" amounts to "the most successful form of learning that civilization has ever seen".

Indeed, much research has focused on the benefits and effectiveness of online education, often in comparison with the traditional face-to-face mode of study (Hiltz, 1998; Warkentin, Sayeed, & Hightower, 1997). Most early research was particularly optimistic (Hiltz in Burge, 1993) and this initial hype has since been criticised for taking a biased view of technology and exaggerating its potential to improve learning (Hara & Kling, 1999). In light of more recent studies identifying negative student and lecturer experiences with online technology, Jones and Steeples (2002) argue that "the idea that the technology either requires collaboration or is especially fitted to collaborative activity appears to be an unwarranted determinist assertion". This is supported by Armitage and O'leary (2003) and Kreijns, Kirschner, and Jochems, (2003) who clarify that technology only provides the platform for group interaction and Laurillard (2002) who argues that the "properties of the medium…do not determine the quality of the learning that takes place". Accordingly, there has been much research addressing factors that lead to successful group outcomes.

Asynchronous discussion board messages have provided researchers with the opportunity to analyse interaction and learning. Structural analysis entails measuring participation levels and interaction patterns between participants. For example, Masters and Oberprieler (2004) have measured the number and length of discussion messages of undergraduate students using WebCT in order to test whether participation could be encouraged without awarding grades. However, a key limitation of all structural analysis studies is that they do not indicate the quality of interaction or learning occurring in the discussions (Drops, 2003; Vonderwell, 2003). Consequently, research has been undertaken using hierarchical content analysis frameworks, whereby discussion text is systematically coded in order to achieve a better understanding of online interaction (Busch et al., 2005; Hara et al., 1998; McDonald & Gibson, 1998; Pena-Shaff & Nicholls, 2004). Meyer (2004) measured the level of thinking and intellectual and ethical development of students through four different content analysis frameworks (King and Kitchener, Garrison, Perry, Bloom in Meyer, 2004). These frameworks were found to be useful in measuring student learning processes, although Meyer stressed that more research is needed to understand how "a group conversing online works as a group, how it works together to develop an understanding of and solutions to a problem".

There has been research pertaining to the attitudes and experiences of students and lecturers in higher education towards the positive and negative aspects of working online and perceived strengths and weaknesses of using asynchronous discussion for learning. Burge (1993) studied two small groups of part-time students on two Masters of Education distance courses to address how asynchronous discussion was perceived. Access to peer knowledge, availability of students to provide feedback, ability to access the technology at their convenience, and opportunity to reflect on messages were identified as positive aspects of using the technology for learning. The latter two strengths were also identified by students in Ellis' (2001) study of groups using a VLE to supplement face-to-face lectures, whilst