Group Leadership in Online Collaborative Learning

Agnes Kukulska-Hulme The Open University, UK

INTRODUCTION

Online collaborative learning emphasizes student activity and is associated with changes in perceptions of who is responsible for leading groups of learners. It raises questions about the roles of teachers and students as leaders. A teacher may act as the guide or as a member of the group and a co-learner. An important question is whether the success or failure of online collaborative learning depends on the role and skills of a group leader. There is reason to believe that online groups do need guidance, but there is a need to consider the extent to which instructors make students aware of their roles, and the degree to which they are tangibly present in an online environment.

A related issue is the skill set of the online leader, variously known as the online moderator, facilitator, coordinator, and so on, depending on his or her role. In actual fact, there may be different ways in which group participants contribute to leadership and numerous ways in which teams of teachers share responsibility for leading online groups. Group leadership should always be considered in the context of a range of factors that impact group dynamics. It is useful to be aware of the different philosophies that underpin online discussion and group working, the tasks in which learners engage, and the skills that instructors and students have or need to develop. Self-direction is a pivotal concept for the consideration of emergent leadership in online groups. Other important issues are leadership styles, social roles, relationships and norms, as well as the tools and media that may play a role in how collaboration is experienced by learners.

GOALS AND OUTCOMES OF COLLABORATION

Much has been written on the subject of collaborative learning, but it is not always clear what types of learn-

ing are taking place during or as a result of collaboration. A brief examination of terminology gives some insights. Panitz (1996) has considered the distinction between collaboration and cooperation. Collaboration is a personal "philosophy of interaction"; it suggests ways of dealing with people that respect their abilities and contributions. Collaborative learning has British roots, based on the work of teachers encouraging students to take a more active role in their learning, and ties into the social constructivist movement. There is an underlying premise of consensus building. On the other hand, cooperation, or cooperative learning, is a "set of processes" geared to the accomplishment of specific goals or to developing an end product. It is teacher centered, directed, and controlled. Cooperative learning has largely American roots, going back to John Dewey's writings on the social nature of learning. This tradition tends to focus on achievement or products of learning. One should also be aware that in the research literature the term "collaborative learning" may be used to describe something that would more accurately be named "cooperative." Dillenbourg and Schneider (1995) state that under the label "collaborative learning" most research actually focuses on learning through collaborative problem solving.

It is often assumed that students learn effectively through discussion and collaboration. Laurillard (2002) gives some examples of studies that have shown benefits of computer-mediated communication (CMC) to students who have been part of thriving online communities. In addition to a "sense of community," these have brought opportunities for mutual support, for alternative perspectives and explanations, and to learn from the mistakes and insights of other students. But there are limitations. Although argument among students about a topic can be an extremely effective way of enabling them to find out what they know and do not know, "it does not necessarily lead them to what they are supposed to know" (Laurillard, 2002, p. 158). Laurillard concludes that discussion among students is

an excellent partial method of learning, but that students need to be able to consult a tutor.

THE NATURE OF COLLABORATIVE TASKS

There are indications that a teacher's role in an online setting depends not only on the premise on which collaboration is established but also on the nature of the task. Online environments can encourage teachers to reconsider the tasks they set, for example in mathematics, moving away from textbook problems focused on producing "an answer," toward model-eliciting problems that focus on patterns, procedures, strategies or methods, addressed by groups of learners through collaboration (Nason & Woodruff, 2004). Rodriguez Illera (2001) explored tasks that have genuinely interdependent components, describing students who organized themselves into teams to produce a multimedia product. A complex activity of this kind requires negotiation of meanings. Activities that involve interdependence among those who carry out various sub-tasks raise the question of whether there is such a thing as a "group zone of proximal development (ZPD)." A group ZPD might be thought of as "the gap between what the group can realize on its own in relation to a specific task and what it can learn through the help of a tutor from outside the group" (Rodriguez Illera, 2001, p. 491).

Dillenbourg and Schneider (1995) claim that some tasks are inherently distributed, which means that group members work independently from each other, without sharing the process of reasoning. Other tasks are so straightforward that they do not leave any opportunity for conflict or disagreement or they rely on processes that are not open to introspection. A task can be modified to make it more suitable for collaboration, for example, by providing group members with partial data. Nevertheless, maintaining online discussion and collaboration can be challenging. Bonk, Wisher, and Lee (2004) have outlined some of the more common problems and solutions, addressing issues of task structure, how to set expectations, and practical tools for learners such as think sheets or question guides.

CRITICAL THINKING AND DEEP LEARNING

The nature and outcomes of online interactions have been examined by Newman, Johnson, Webb, and Cochrane (1997), who evaluated CMC in a group-learning context as a means of promoting deep learning and critical thinking in addition to surface information transfer. Having compared face-to-face seminars with asynchronous computer conferencing in the same class, they found evidence for critical thinking in both situations. However, the detail is important: the face-to-face seminars produced more spontaneous interaction, more new ideas and greater participation, but the computer conferencing encouraged a "worthier, more considered" style of interaction, leading to more important statements, and making it easier to link ideas together. In a similar vein, Armitt, Slack, Green, and Beer (2002) make a case for deep learning in a pilot course that made use of synchronous communication for case studies in occupational therapy. The authors claim that students who are used to working in groups, such as health care students undertaking problem-based learning, are used to taking advantage of opportunities for reflection in the process of interaction. Interestingly, their study suggests that students who have never met each other do not spontaneously collaborate in a peer group—instructors need to ensure at an early stage that learners understand their expectations regarding when and how to collaborate. Depth or quality of learning may therefore depend on how online collaboration is managed.

THE SKILL SET OF THE ONLINE INSTRUCTOR

Alongside typical teaching tasks, such as looking for gaps in knowledge or understanding and asking questions, teachers can use skills and strategies that are more specific to the online medium. Salmon (1997) has summarized techniques for CMC based on evidence from experienced moderators. Examples include using e-mail until a conference is established; providing daily news flashes; setting up sub-conferences if small interest groups emerge; archiving; and threading. Instructors can also appoint students as moderators. In her book published three years later, Salmon (2000) devotes a chapter to e-moderating qualities and roles. The

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