ARE STUDENTS' ATTITUDES TOWARDS COLLABORATION MIRRORED IN ONLINE EDUCATION?

Tor Söderström, Anders D. Olofsson and Ulf Stödberg
Department of Education
Umeå University
Sweden

Abstract

In this article, the aim is to explore the relation between students' attitudes towards collaboration and their actual online interaction. The article reports on a small case study based on a university course. Data was collected using a questionnaire and log file analysis. Seventeen students were studied. The students foremost use the LMS as a forum for information, for reading teachers' and other students' postings, and for watching streamed online lectures. The results show that students who perceive themselves as cooperative and group work oriented did not participate in higher extent than students with lower estimations of their group work orientation.

Introduction

In contemporary society, new flexible teaching methods have achieved prominence as a result of the increased digitalisation of education. For instance, Solimeno et al. (2008) suggests that the application of cooperative and collaborative teaching models in online education is related to new technologies that facilitate social interaction (Jaldemark, 2008). In relation to this technological progress, the field of learning and information and communication technology (ICT) is sustained by a related discourse about knowledge and learning. Participation, interaction and communication with other students are considered as a core factors for learning to take place (Säljö, 2001). Consequently, online education has changed from distributing information to communication between learners and between teachers and learners (e.g. Jaldemark, 2008; Solimeno, 2008; Williams et al., 2006). Collaborative learning strategies are also popular when designing educational settings since collaboration is considered to contribute to the sharing of arguments and opinions within a group, encouraging the kind of reflection that leads to a deeper learning of the subject (e.g., Head, 2003; Jonassen et al., 2003; Mörch & Dolonen, 2004).

However, previous research on online education shows that students differ in how much they participate in the online communication (Haythornthwaite et al., 2000; Olofsson, 2007; Olofsson & Lindberg, 2006; Svensson, 2002). Participation on the net is explained to depend of factors such as size of group, knowledge of other participants, student experience, clarity about task, ownership of task, need for and type of system and prior experience of CMC but also depending on personality based factors (Tolmie & Boyle, 2000). For instance, personality based factors that

may prevent people to talk in face-to-face conversations partly disappear on the net (Stone, 1997). The absence of physical attributes can make it easier for less vocal students to communicate. Personality based factors could also be explained by Hrastinski's (2007) behavioural factors, which embrace student attitudes toward online participation.

In this paper, we focus on student attitudes to collaboration and how these are reflected in their online participation. Research show no unanimously results regarding if and how personality based factors affect online participation. Hrastinski (2007) stresses, for example, that there is no clear relationship between learning style and performance in online education. Similarly, Rovai (2003) claims, that there is no relationship between learning styles and online classroom communities. Contrary to these findings, Williams et al., 2006, show in their study that teamwork orientation is positively associated to student learning. Kanuka and Nocente (2003), on the other hand assert that it is necessary with further research to explore the relation between personality and the experience of online education.

This study highlights students' attitudes towards collaboration in educational settings and the online interaction patterns within a university course. In specific, we will concentrate on whether students that perceive themselves as cooperative and group work oriented also participate in higher extent than other students do.

Findings

The findings presented in this paper are based on a case study of 17 distance students in their first course of a leadership and coaching programme. Data was collected on three occasions and consisted of two questionnaires and course log data from the learning management system (Moodle). The first week of the programme a questionnaire collected data about, for instance, their previous experiences about ICT and learning, motives for following the programme, and also how they perceive themselves in relation to group work. At the end of the first course, an evaluation of the course was carried out among the students. The second questionnaire focused on, for instance, how the course was carried out and how they worked with the learning management system. The log file data concentrated on the students' viewing and posting activities during the course.

The course was managed with an open source learning management system (Moodle) and with delayed study pace. The educational setting was supposed to facilitate for integrating theory and practice together with peer students. The educational setting supported asynchronous and synchronous digital resources for communication and collaboration independently of where the students were. The course activity was organised around tasks where students in five of eight tasks were urged to discuss and share their reflections with peer students. The analysis

of the students' opinions about their cooperativeness and online communication patterns is based on an index made from five questionnaire items (five graded scale):

- prefer to cooperate with others
- try to be active and participative in group work
- helping others developing their argument by discussions
- try to initiate discussions
- encourage others to participate in group work

Students who agreed highly on the five graded scale are regarded to have high cooperativeness. Nine students have high cooperativeness and 8 students were indexed as low based on their total score of these five items.

The Students

The students in the course consisted of 9 males and 8 females. Ten students had former experiences of higher education and 6 had former experience of being part of online higher education. When it came to former experience of using tools for computer-based communication in total 7 students can be regarded as experienced or highly experienced in relation to communication via for example MSN, desktop video conferencing, online chat sessions and participating in online community activities. A majority of the students' motives for participating in the coaching and leadership programme were to increase their personal competence, to cultivate and facilitate their spare time and to earning a university degree. The possibility to discuss the programme content with peer students seems to be less important in relation to their participation in the programme. Finally, it was estimated to be of great importance for the students that the programme mostly was carried out online and with significant flexibility.

Activity Patterns Online

All students agreed on that the LMS used in the programme was simple or really simple to use. Almost half of the students said that the course encouraged dialogue between the participants. One third of the students seemed to agree that the way the course has been organized demanded rather much communication between the participants. Twelve of the participants put forth that the teachers encouraged dialogue between the students.

The tasks in the course were regarded by almost all of the students to be meaningful and motivational. Almost half of the students said that the tasks strongly encouraged them to collaborate but only 4 out of 17 students meant that they to a high degree experienced an online community feeling together with their peers on the course. In addition, more than half of the total group of students expressed that they neither had felt a strong or weak online community feeling. About one third of the students said that they had not at all collaborated with their

peers when solving the tasks included in the course. Almost half of the students said that their peers did not encourage online communication and collaboration. Most of the students used the LMS on a daily basis or two to three times a week. The weekly usage perceived by students is shown in Table 1 below.

Table 1: Perceived Weekly Usage of the LMS

Frequency	Students
Daily	11
2-3 times/week	4
One time/week	1
A couple of times/month	
Total	16

The students' estimates of what they had done in the LMS show that they foremost read other students' and teachers' postings, watched streamed lectures and listened to the course radio (Table 2.)

Table 2: Students' Estimations of Their Activity on the Net

Activity	Low extent	Neither high versus low	High extent
Read other students' postings	2	4	11
Read teachers' postings	2	2	13
Answered teachers' questions	4	8	5
Asked questions to teachers	10	5	2
Asked questions to students	13	3	1
Chatted about course content	9	4	4
Chatted about other things	12	3	2
Commented students' postings	7	6	4
Watched lectures	2	2	13
Listened to Internet course radio	1	3	13

The table illustrates that 3–4 students estimated that they had asked questions and initiated discussions. The dominant pattern is that students use the LMS as a forum for information and that they seem to rarely communicate with teachers and peers. Log data from the course confirms this picture. Table 3 below shows how the informative aspect dominates the 17 students' activities on the net.

Table 3 Log-file Data during the Course

Activity	Frequency variation
View specific discussion	22-269
View specific forum	14-542
Add new discussion thread	1-7
Add posting	3-12
Update posting	0-11

The patterns of the online activities reveal that the activity on the net foremost concerned viewing.

Cooperativeness and Online Activity Pattern

Table 4 shows that the students that perceive themselves as cooperative oriented do not use the online course platform more than other students.

Table 4: High and Low Cooperative Students' Weekly Usage of the LMS

Frequency	Low perceived cooperativeness	High perceived cooperativeness
Daily	6	5
2-3 times/week	1	3
One time/week	1	-
Total	8	8

Further, the results also show that there is no difference between high and low cooperative students' estimates of their activity on the net during the course (e.g. reading and posting activities or watching lectures). The only exception is that high cooperative students to a higher extent (5 out of 8) state that they chat about course content. This image of the online activity pattern is reinforced by viewing and posting activities from the log files.

Table 5: High and Low Cooperative Students' Viewing Frequency

Frequency (log data)	Low perceived cooperativeness	High perceived cooperativeness
View discussion <100	4	4
View discussion >101	5	4
View forum <100	5	4
View forum >101	4	4

Table 5 shows that viewing is more frequent than the posting activities (Table 6).

Table 6: High and Low Cooperative Students' Postings

Frequency (log data)	Low perceived cooperativeness	High perceived cooperativeness
Postings 0-6	3	5
Postings 7-12	6	3
Initiating disc. 0-3	3	6
Initiating disc. 4-7	6	2

However, Table 6 illustrates that the log data are contradictory. Table 6 shows that the students indexed as low cooperative oriented did more of the course postings and initiated more of the discussions.

Discussion

This study shows that there are not much discussions or peer exchange during the course. Furthermore, students who perceive themselves as cooperative and group work oriented did not participate in higher extent than students with lower estimations of their group work orientation. This conclusion both agrees with research on the relation between personality types and perceived satisfaction with web based instruction for professional development (Kanuka & Nocente, 2003), personality types and participation in networked learning environments (Ellis, 2003) and disagree with research that has shown that teamwork orientation is positively associated with student learning (Williams et al., 2006).

The overall results in this study show that students foremost use the LMS as a forum for information and they seldom communicate with teachers and peers. The overall pattern in this study makes clear that the reading activity is dominant. This could be interpreted in different ways. For instance, it might be as researchers

claim, namely that students' face-to-face communicative competence must be augmented before full membership of an online educational course can be assured (e.g. Baym, 1998; Collins 2004). It is possible that the face–to-face communicative competence not necessarily leads to virtual communicative competence (Goffman, 1963). Feng et al. (2004) showed that "communication partners who talked in an empathic accurate and supportive way were most trusted by the participants" (p. 103). The fact that the students that perceived themselves as low cooperative oriented did most of the postings can be interpreted as signifying that there is no direct transfer from real to virtual.

Another possible interpretation of the results from this study is, as other studies also have shown, that participants can be looked upon as eavesdroppers not willing to put in the emotional energy to acquire and sustain the interaction in the online educational setting (e.g. Söderström et al., 2006). The motives for participating in the programme also show that the cooperative dimension, for instance, learning together with peer students is of low value. Instead individually related motives, such as to increase personal competence, to cultivate and facilitate spare time and to earn a university degree are in the forefront; perhaps reflecting an ego-related lifestyle (e.g. Beck & Beck–Gernsheim, 2002, p. 4). Other studies notify that topics related to socializing, may be a waste of time for the goal-directed students, which also could be the case here (e.g. Baym, 1998; Hrastinski, 2007). These motives can counteract any attempt to create communication. Campbell (1996) says about communication that "until there is mutual understanding of the action concerned, *successful interaction will not occur*" (p. 126). It is possible that students, in this phase of their education, have not yet learned to use the online learning environment to foster discussions about the course contents.

Finally, with respect to the small sample in the study, it can be concluded that other factors than their perceived group work orientation play a more important role for their participation in online education. A longitudinal study combining quantitative and qualitative data could enhance the understanding of how these factors operate in order to increase participation in online education.

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