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Role of Assistance in Computer-mediated Communication in Higher Education

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We intended to inform our work as it is by a good grounding in the related theories of learning, and of the role of discussion in higher education. Which then using these theories to inform on our research of the potential and actual use of assistance in online discussion form, and how the assistance given is shaped by the task type used to initiate the discussion.

Abstract

This paper reports preliminary findings of a small scale study that address the role of assistance in computer-mediated communication (CMC) in Higher Education. In particular, this study investigates whether the type of assistance in such environments is affected by the type of task used to initiate the CMC, and to see whether the instructors and students offer more or less assistance according to task type. We examine courses which use CMC in the adjunct mode i.e. students used CMC as an option rather than a compulsory learning activity (Harasim, et. al., 1999).

The messages gathered from 7 units of an MSc course were differentiated by the nature of the initiating task given by the instructors in the discussion board in the Blackboard System. Where the instructors simply invited the students to discuss any issues related to the unit, this is defined as 'open discussion mode'. Where the instructor has defined tasks with specific goals this is defined as 'closed discussion mode'. Through content analysis, we explore types of assistance used in the discussions according to task type.

We used the following definitions of categories of assistance to analyse message transactions, developed by Gallimore and Tharp (1990) adapted in Kirkley et al. (1998). They are: *Scaffolding, Feedback on Performance, Cognitive Structuring, Modelling, Contingency Management, Instructing and Questioning*.

Instructors remain the main source of learning support and enhancement in both modes of discussions, although students do offer support to one another, especially in the open format.

Table 1: Comparison of assistance given in open and closed discussion (overall and %)

Mode of Discussion	Assistance from instructor (%)	Assistance from peer (%)	Total (%)
Open (Unit 1,2a,5 & 6)	**102 (59.3)**	**70 (40.7)**	**172 (53.9)**
Closed (Unit 2b,3,4 & 7)	**85 (57.8)**	**62 (42.2)**	**147 (46.1)**
Total			**319 (100)**

Table 2: Comparison of open and closed discussion

Mode of Discussion	Messages with assistance (%)	Messages with non-assistance (%)	Total
Open (Unit 1,2a,5 & 6)	**114 (48.7)**	**120 (51.3)**	**234**
Closed (Unit 2b,3,4 & 7)	**85 (29.0)**	**208 (71.0)**	**293**

Table 3: Type of assistance by task

Assistance	Open (%)	Closed (%)	Total	(%)
Scaffolding	80 (57.6)	59 (42.4)	139	43.6
Feedback	19 (35.8)	34 (64.2)	53	16.6
Cognitive Structuring	1 (50.0)	1 (50.0)	2	0.6
Modelling	4 (40.0)	6 (60.0)	10	3.1
Contingency management	3 (42.9)	4 (57.1)	7	2.2
Instructing	37 (63.8)	21 (36.2)	58	18.2
Questioning	28 (56.0)	22 (44.0)	50	15.7
Total	172 (53.9)	147 (46.1)	319	100

The number of messages sent in closed discussion is greater than in open, but assistance is offered more frequently in open mode. Scaffolding is more often seen in open discussion, however feedback is more often given in closed discussions. Modelling and contingency management are rare overall but slightly more frequent in closed discussions. Less instructing and questioning are found in closed discussions reflecting the fact that all participants are clear as to the purpose and objectives of discussion. While more complex assistance such as cognitive structuring are almost absent in either mode.

Conclusion

For the time being, the findings reveal that the balance of assistance given by tutor and students are not affected by the task type but the overall level and nature of assistance is affected. Moreover, the tutors remain the main source of learning support as in each task type in the 'Discussion Board', they gave more assistance compared to the students.

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