



Is s/he really necessary? The effect of tutor presence before and during synchronous CMC discussion

S.A.Walker

School of Education, University of Leeds, UK

Synchronous CMC debate can be an effective way for students to develop augmentation skills and improve critical thinking. However, as this paper shows, for such development to occur, the discussion needs to be prepared and facilitated by a tutor. This paper looks at CMC discussions amongst a group of students aged 9-14 in an out-of-school learning centre. The study explores the effect of both actual and virtual tutor presence before and during the discussion and finds that the tutor's presence is a significant factor in the quality of talk.

Introduction

Argumentation is an important aspect of developing critical thinking skills. For example, Kuhn et al.^[1] show improvement in reasoning discussions and Burnett^[2] shows the value of 'constructive conflict'. However, to be effective, argument needs to be of good quality, containing challenges, counter-arguments and clarification^[3]. Mercer et al^[4] categorised classroom talk as cumulative (simple agreement), disputational (simple disagreement) or exploratory. Exploratory talk includes challenges, justifications and active investigation of ideas and is thus the most successful talk type for the scaffolding of learning and argumentation.

Synchronous computer-mediated communication (CMC) offers one tool that may be used to help students develop argumentation (e.g.^{[3][5][6][7][8][9]}). For example, Walker and Pilkington^[9] show that, over time, students participating in CMC discussion produce longer and better contributions that contain more of the features of 'exploratory talk'. However, studies into the use of CMC tend to focus on the students (e.g.^[11]) or they examine the teacher's instructional strategies (e.g.^{[10][12]}) even though the simple fact of a tutor's presence or absence might make a significant difference to the quality of discussion^[13]. This study, therefore, examines the tutor's presence in CMC both before a discussion (through careful setting of a topic and discussion questions) and during the CMC session.

1. Method

This study was carried out at an inner-city out-of-school learning centre in the UK. There were 21 students in the group (11 F, 10 M) aged between 9 and 14 years. The students came from a range of ethnic and linguistic backgrounds; for most, English was a second language. The students engaged in a programme of synchronous CMC debate, facilitated by a tutor, using WebCT™. Discussion topics were uploaded to WebCT and then students used the WebCT chat tool to conduct the debate. After the discussions a small group of students posted a summary to the WebCT discussion forum. All discussions were automatically recorded by WebCT. The transcripts were then evaluated the Mercer et al^[4] model of exploratory, cumulative and disputational talk.

2. Presence before the session

Table 1 shows a session which began with a pre-posted topic (“Everyone should have a religion”) with a few ‘starter’ questions. When students arrived for the class, some began to prepare for the discussion. Khaliq, for example, read through the initial questions and prepared answers which he propped against his monitor for reference during the discussion. Turn 5/3 shows Khaliq’s answer to the first of those questions (What is a religion?). In this session, the tutor was able to log on to the CMC environment before the discussion started and thus established his online presence from the outset. The very first contribution is a discussion opener from the teacher which sets a context for the discussion and asks a question for students to answer.

Table 1: A CMC session begins as designed

Turn	Speaker	Content
5/1	Tutor	Religion is a very complex subject. Many people believe in many different things that are not God or anything to do with God. Smoe believe in money and are prepared to do anything to get it. Some believe in power and are prepared to kill others to get it and keep it. What do you believe in? What do you worship, class?
5/2	Firoz	god
5/3	Khaliq	A religion is a faith that a person belives in.In the world there are 6 diffrent relig-ions called:- Islam, christianity, Judhaism,Budhsim,sikhism & Hinduism.

It is notable that there is no significant off-task behaviour in session 5 although there is a tendency for the topic to drift onto a related topic (from religion to racism) but this cannot be considered off-task. Furthermore, the students decided that racism was a theme that they wanted to discuss and so suggested this as the topic for the following session. Mercer et al’s classification^[4] was applied to session 5 and as Figure 1 shows, the largest category of talk was exploratory with 41% of student talk being of this type.

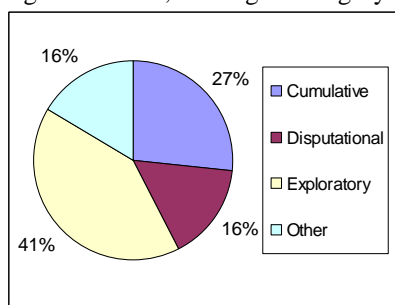


Figure 1: Talk types in session 5

Cumulative talk constitutes 27% of student contributions in this session and tends to involve unelaborated agreement. It might be expected that any discussion would always involve a certain amount of cumulative talk, especially if and as a consensus is reached.

16% of the turns in session 5 are categorised as ‘other’. This includes metastatements (about the discussion rather than about the topic) and social talk such as greeting and leaving (hello/goodbye). This category would also be used for off-topic discussion had any occurred in this session. Every discussion is likely to include turns in this category; metastatements include correcting errors (typing/spelling mistakes) and greeting is a social convention which is observed as much in the CMC environment as in the ‘real’ world. The high proportion of exploratory talk in this session, together with the low proportion of disputational talk, shows that pre-lesson tutor presence can be effective in producing quality discussion.

After a few weeks, outside pressures on the tutor and competing demands on his time meant that he was not able to plan the topic sufficiently far in advance for it to be posted to the VLE. The tutor’s first response to this was to produce the topic and questions on a handout which was distributed at the start of the lesson. Although this was effective at framing the topic for discussion, it did not allow students to

1 prepare in advance or to search for relevant information. An example of this was session 10; students did
 2 not knowing what topic they were expected to discuss which meant that the only discussion open to the
 3 participants was off-task and so they engaged in language play and banter. After approximately 15 min-
 4 utes (70+ turns) the topic handout was distributed and the topic introduced. Because the students were
 5 already in a playful mood, the first on task turn was a joke. Figure 2 shows the effect that the lack of a
 6 pre-set topic had on the discussion as a whole. Only 9% of turns can be classified as exploratory. 10%
 7 of turns are cumulative whilst 5% are disputational. This means that only 24% of the total turns are
 8 clearly about the intended topic of discussion.

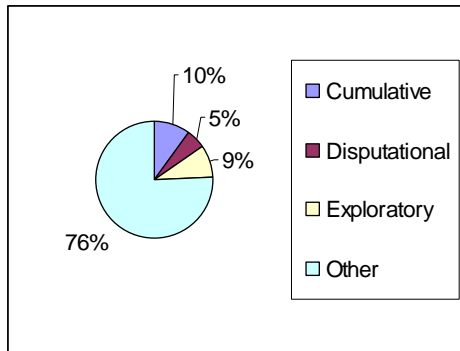


Figure 2: Talk types in Session 10

21 The difference between these two sessions shows that when the tutor gives students clear information
 22 about the topic **before** they enter the CMC environment then they are able to begin discussion quickly.
 23 Furthermore, the discussion will be more focused on the topic than if students enter the CMC environ-
 24 nment without a topic to discuss. When there is no topic, the participants will occupy their time in the
 25 environment with playful talk and it is difficult to focus their attention to quality discussion even once a
 26 topic has been announced.

29 3. Evaluation of tutor presence during the discussion

30 In this research setting the tutor has to be present in two senses. The first is physical presence within the
 31 classroom and the second is 'virtual' presence in the CMC environment. These two types of presence
 32 may be independent of each other; the teacher may be present in the classroom but not logged on to the
 33 CMC environment or could log on to the CMC environment from outside the classroom. Furthermore,
 34 even though the teacher may appear to be present in the CMC environment (i.e. logged on), s/he could be
 35 away from the computer: for example, the tutor could be supporting a student who has technical prob-
 36 lems; talking to a visitor or dealing with paperwork. Two examples from session 9 demonstrate the
 37 effect that tutor presence can have on a CMC discussion. The topic for this session is whether or not it is
 38 right to sell babies and was based on a news story about a couple who had bought twin babies over the
 39 internet. The tutor was physically present throughout the session and introduced the topic by a reading
 40 newspaper article, writing the topic on the whiteboard and asking questions related to the issues that the
 41 topic presents. As soon as the students started to respond to the questions with feeling, the tutor in-
 42 structed them to turn to their computers and discuss the topic online. This meant that the students knew
 43 and understood the topic before starting the CMC discussion and so were able to begin the discussion
 44 almost immediately (Table 2).

46 Table 2: Start of discussion in session 9

Turn	Speaker	Content
9/16	Viviane	do you think selling babies is tight?
9/17	Faisal	what does every body tink on sellin babies

51
52

1
2
3 However, due to difficulty logging on to his computer, the tutor was not able to join the discussion at the
4 outset; he finally entered the CMC environment 25 minutes after the discussion had started during which
5 time 158 turns had been contributed. Although the participants stay more or less on topic, only 3 of the
6 40 turns in before the tutor's online arrival can be classified as exploratory talk with the other turns
7 clearly disputational. Whilst there is an attempt at discussion of the topic, the students quickly lose fo-
8 cus. It appears that the students **want** to discuss the topic and try to discourage participants who do not
9 take the task seriously (turns 9/40 to 9/43, in Table 3 for example) but, without a facilitator to 'hold' the
10 discussion it can be difficult for the participants to maintain a clear focus on the topic or the arguments.
11

12 Table 3: Excerpts from discussion with no tutor presence

Turn	Speaker	Content
9/35	Hijrah	i think that selling babies is not good
9/36	Faisal	why do u say that firoz
9/37	Anwar	why
9/38	Firoz	it is good for the trade
9/39	Anwar	why
9/40	Viviane	you're messin ain't ya?
9/41	Faisal	r u just trying 2 be awkward
9/42	Firoz	shut up
9/43	Faisal	fizzi be serious

21
22 By contrast, Table 4 shows excerpts from the same session, after the tutor has established presence. Of
23 the 40 turns following the tutor's online arrival, 17 (that is, almost half of the student turns) can be classi-
24 fied as exploratory. This concurs with Harwood's findings that, where a teacher was involved in a dis-
25 cussion, children were more likely to maintain focus and continuity and to have fewer interpersonal
26 interactional difficulties ^[13].
27

28 Table 4 contains three tutor interventions (turns 9/212, 9/222 and 9/239). The first of these (9/212) is a
29 metastatement ^[14] for the purpose of group management and focusing the discussion. The second teacher
30 turn is a 'counter' move ^[14] in response to Anwar's view (turn 9/210) that he would never sell his baby.
31 By presenting a counter-argument the teacher is challenging the student's view in the hope that he will
32 defend his position. This move is successful: in turn 9/243 Anwar presents an argument to support his
33 case. Turn 9/239 opens a new aspect of the topic. As Walker ^[10] shows, 'open' ^[14] is generally an effec-
34 tive move in terms of generating student participation in discussion. In this case, the intervention re-
35 ceives a response from the student to whom it is addressed but also from another student. However, this
36 facet of the topic (pricing babies according to skin colour) is not fully developed and would benefit from
37 more teacher interventions – challenge, counter or probe moves – in order to encourage students to ex-
38 plore the issue in depth.
39

40 Table 4: Excerpts from discussion with tutor presence

Turn	Speaker	Content
9/210	Anwar	I WOULD NEVER SELL MY BABY
9/212	Tutor	Concentrate on the topic everybody. Do not pick on any one person, please.
9/222	Tutor	Anwar you are not actually poor so you will never know people feel about their babies when they are too poor to look after them.
9/239	Tutor	what do you think of the cost of the babies according to their skin colour? Which colour do you think costs highest, Viviane?
9/243	Tutor	sir, IF PEOPLE CAN NOT LOOK AFTER A A BAVY THEN they should think before they decide to have one

1 These examples show that it is important for the tutor to be present in the CMC environment (that physi-
2 cal presence in the classroom is not sufficient) and to demonstrate his or her presence through participa-
3 tion in the discussion.
4

5 **5. Conclusions**

6

7 This study demonstrates that especially important elements of the tutor's role are that of establishing the
8 topic of debate before students begin and creating tutor presence in the CMC environment. When the
9 topic is established before students log on for the computer-mediated class, the participants are able to
10 begin by collecting their thoughts about the topic and researching useful information on the internet.
11 Students may even prepare contributions that they will make to the ensuing discussion. Once the discus-
12 sion has begun, the participants are more likely to engage in exploratory talk and it is more likely that the
13 discussion will remain on task. However, the tutor's role during the discussion is also significant. Al-
14 though the tutor may be physically present in the room with the students during the session this does not
15 translate to virtual presence in the discussion. The tutor needs to establish virtual presence in the CMC
16 environment through discussion contributions and active facilitation. If this is successful then the stu-
17 dent talk will be better focused and it is likely that there will be a higher proportion of exploratory talk.
18 A debate with little or no tutor presence may remain on topic but is likely to be poorly focused with
19 fewer of the challenges and justifications that are characteristic of exploratory talk.
20

21 **References**

22

- 23 [1] Kuhn, D., Shaw, V. and Felton, M. (1997). Effects of Dyadic Interaction on Argumentative Reasoning.
24 *Cognition and Instruction* **15**(3): 287-315.
25 [2] Burnett, R. E. (1993). "Decision-Making During the Collaborative Planning of Coauthors". In Hearing Ourselves
26 Think: Cognitive Research in the College Writing Classroom. A. Penrose and B. Sitko. Oxford, Oxford
27 University Press: 125-146.
28 [3] Veerman, A. L. (2000). Computer-supported Collaborative Learning through Argumentation. Published PhD
29 thesis. University of Utrecht, Utrecht
30 [4] Mercer, N., Wegerif, R. and Dawes, L. (1999). "Children's Talk and the Development of Reasoning in the Class-
31 room". *British Educational Research Journal* **25**(1): 95-111
32 [5] Ravenscroft, A. (2000). "Designing Argumentation for Conceptual Development". *Computers and Education* **34**:
33 241-255.
34 [6] Pilkington, R. (2001). "Analysing Education Dialogue Interaction: Towards Models that Support Learning".
35 *International Journal of Artificial Intelligence in Education* **12**.
36 [7] Veerman, A. L., Andriessen, J. E. B. and Kanselaar, G. (2000). "Learning through Synchronous Electronic
37 Discussion". *Computers and Education* **34**: 269-290.
38 [8] Pilkington, R. M. and Walker, S. A. (2003). "Overcoming 'Literacy Deficit': Using CMC to Develop Written
39 Argument". In Arguing to Learn: Confronting Cognitions in Computer-Supported Collaborative Learning
40 Environments. G. Andriessen, M. Baker and D. Suthers. Amsterdam, Kluwer Academic.
41 [9] Walker, S. A. and Pilkington, R.M. (2004) "Using CMC to Develop Writing Skills at CHALCS" in M. Monteith
42 Teaching Secondary School Literacies with ICT (Learning and Teaching with Information and
43 Communications Technology) Milton Keynes: Open University Press
44 [10] Walker, S. A. (2004) "Socratic Strategies and Devil's Advocacy in Synchronous CMC Debate" *Journal of*
45 *Computer Assisted Learning* 20/3 pp 172-182
46 [11] Heckman, R., and Annabi, H. (2005). A content analytic comparison of learning processes in online and face-
47 to-face case study discussions. *Journal of Computer-Mediated Communication*, 10(2), article 7.
48 <http://jcmc.indiana.edu/vol10/issue2/heckman.html>
49 [12] Kanuka, H. (2005). An exploration into facilitating higher levels of learning in a text-based internet learning
50 environment using diverse instructional strategies. *Journal of Computer-Mediated Communication*, 10(3), arti-
51 cle 8. <http://jcmc.indiana.edu/vol10/issue3/kanuka.html>
52 [13] Harwood, D. (1995). The Pedagogy of the World Studies 8-13 Project: the influence of the presence/absence of
the teacher upon primary children's collaborative group work. *British Educational Research Journal* **21**(5):
587-611.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52

[14] Pilkington, R. M. (1999). Analysing Educational Discourse: the DISCOUNT Scheme. Leeds, University of Leeds. Available from R.M.Pilkington@bham.ac.uk