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Guiding the Creation of Knowledge and Understanding in a Virtual  
Learning Environment

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Abstract

This article reports findings from an in-depth case study investigating processes of teaching and learning within one tutorial group studying an e-learning course presented as part of the Open University's MA in Open and Distance Education. Drawing on contemporary socio-cultural theory and research, the instructional techniques used by the tutor-moderator to guide the creation of 'common knowledge' and the construction of understanding are explored. The significance of tutor contributions for fostering a supportive culture of enquiry is also discussed.

## Guiding the Creation of Knowledge and Understanding in a Virtual Learning Environment

For students involved in earlier generations of open and distance education, regular opportunities for interaction with their tutor and other students were simply not available. However, human history is characterised by technological innovation and change, and developments in computer technology now enable learners studying at a distance to participate in ongoing learning ‘conversations’ with others sharing similar interests and commitments. For example, through participation in networked conferencing environments, students are potentially able to actively construct knowledge and understanding through discussion with their tutor and peers. E-learning thus ‘expands the rich tradition of independent study associated with earlier generations of distance education and provides and often mandates a variety of synchronous and a-synchronous learning activities (p. 44)’<sup>1</sup>. One of the challenges currently facing open and distance educators is therefore to ensure that learners have opportunities to engage in productive computer-mediated interactive learning experiences - where the tutor’s task is ‘that of structuring challenging conversations among a community of learners rather than channelling expertise or knowledge to the student (p. 199)’<sup>2</sup>. At the very heart of the e-learning experience, then, is the facilitation of discourse for the purpose of building understanding: ‘Facilitating discourse recognises the role of the community of enquiry as enabling and encouraging the construction of personal meaning as well as shaping and confirming mutual understanding. This element represents the fusion of purpose, process and outcome. It is where interest, engagement and learning converge (p.68)’<sup>1</sup>.

All this suggests that research is needed to establish how ‘personal meanings and understanding are created, negotiated and enriched within interpersonal exchanges (p.369)’<sup>3</sup> in e-learning environments. This is an important research endeavour, not least because developing an understanding of such processes has important implications for pedagogical development , instructional design and intervention.

There is a growing body of work investigating the processes through which students learn collaboratively on-line<sup>4,5,6,7,8,9, 10, 11</sup>. However, as an essential complement to this work, it is imperative that researchers understand how tutors guide the creation of knowledge and the construction of understanding. Researchers and educators need to understand both the nature and significance of the instructional techniques tutors use. The work reported in this paper was thus undertaken to develop an understanding of the processes of teaching on-line and contribute to the emerging literature addressing this issue<sup>1,12</sup>.

An important influence on the work reported here is the contemporary socio-cultural research concerned with how teachers guide the construction of knowledge in face-to-face educational contexts. This work provides a characterisation of the ways in which teachers talk when they are attempting to guide the construction of knowledge by learners. Drawing on this body of research, Mercer (p.25)<sup>13</sup> claims that in educational settings teachers use interaction to do three things:

- ‘(a) *elicit knowledge from students*, so that they can see what students already know and understand and so that the knowledge is seen to be ‘owned’ by students as well as teachers;
- (b) *respond to things that students say*, not only so that students get feedback on their attempts but also that the teacher can incorporate what students say

into the flow of discourse and gather students' contributions together to construct more generalised meanings;

(c) *describe the classroom experiences that they share with the students, in such a way that the educational significance of those joint experiences is revealed and emphasised.*'

In the work reported here this characterisation is adapted and used to investigate the techniques deployed by a tutor to elicit knowledge from students, respond to things that they contribute and describe shared educational experiences whilst working in a course-based FirstClass conferencing environment over an academic year. The aim is to understand the processes by which a tutor, working with members of their tutorial group, guides the construction of knowledge.

#### The Course Context: H801: Foundations of Open and Distance Education

The tutorial group studied comprised eleven students who were taking the course H801: *Foundations of Open and Distance Education*. H801 formed Year 1 of the Open University's MA in Open and Distance Education and constituted 60 points of the 180 points required for the award. Assessment of the course was by continuous assessment and the submission of a project proposal (the examinable component).

The tutor, who supported the students' learning across the year, was a highly experienced distance educator and on-line tutor who had been involved in the conceptualisation, design and authoring of H801.

Students studied the course in four blocks, each block representing between 110-150 study hours. The topics covered were: the theory and practice of open and distance education, teaching and learning in open and distance education, researching

the literature on open and distance education and research and evaluation methods in open and distance education. For each block the students received a large loose-leaf folder containing the study guide, selected readings and other items. They were also sent set books and audio-visual materials to study. Throughout the course the students kept personal electronic workbooks and contributed to a centrally provided interactive bulletin board/electronic workbook over the web. The students submitted and received TMAs (tutor marked assignments) electronically (via e-mail) and they were required to participate in tutor-supported computer conferences at the end of each section within each block. These asynchronous conferences, which were held between the members of each tutorial group, were designed not only to provide support for students in their studies, but also formed a crucial part of their preparation for TMAs. Two of the five TMAs for the course required students to incorporate aspects of their group's conference discussions within their responses to the questions set. For the other three assignments students were advised that, whilst there was no obligation to draw on the discussions of their electronic conference when preparing their answers, they would find it valuable to do so. Note too that the students were free to access (but not participate in) other tutor group conferences. So they were able to draw upon the discussions of other tutor groups where relevant. The intention was not to 'reward' students for simply contributing to the discussion, rather the students were given credit for the way they drew on the conference discussions, together with other sources, to demonstrate their understanding of the issues raised in the course material. A crucial feature of H801 was the development of students' understanding of learning at a distance via: the 'emphasis on critical reflection on content (p.8)'<sup>14</sup> and the promotion of discussions between students regarding how they themselves learn.

In the electronic tutor group studied four of the eleven students studied were female. The rest were males. Seven of these students were based in the UK. One student was based in Luxembourg, one was based in Hong Kong, one in the United Arab Emirates and one in Zimbabwe. The eleven students were from diverse academic backgrounds, but all were professionals involved in, or taking a career break from, education and many were taking the course as part of their continuing professional development.

All members of the tutorial group gave permission for their conference discussions to be archived in their entirety and analysed for research purposes. As Table 1 shows, the H801 conferencing environment was organised into a number of sub-conferences which were 'opened' as the academic year progressed. A number of these sub-conferences were planned to co-incide with and support the student's work on specific assignments (as mentioned above). Other conferences, however, were 'opened' to enable students to pursue specific course related issues or to facilitate general course-related discussion. As the figures presented in Table 1 indicate, the tutor's postings represent 28% of the total contributions, with 72% of the total postings to the H801 conference being made by students. As can be seen in Table 1, in the case of sub-conferences where student participation is lower, the relative proportion of tutor/student input appears to be proportionally higher.

Table 1 about here

## Techniques Used by the Tutor to Guide the Construction of Knowledge and Understanding

The H801 conferencing environment was designed, in part, to create an environment in which students were able to engage in ‘learning conversations’ with their peers. This said, the intellectual efforts of the students were crucially supported by their tutor throughout the year who guided their discussions and individual contributions along the directions required by the H801 curriculum and worked with them to establish a ‘common knowledge’ - a joint, shared version of educational knowledge (p. 25)<sup>13</sup>. The analyses reported here were undertaken in an attempt to understand the nature of the techniques being used by the tutor to guide the construction of knowledge. More specifically, the analyses focused on understanding the nature of the techniques being used by the tutor to elicit knowledge from students, respond to things that they post and describe shared educational experiences.

According to Mercer<sup>13</sup> there are six different techniques associated with the *elicitation of knowledge*, namely the use of declarative (open ended or provocative) statements; inviting a contribution from or elaboration by the student(s) (this may involve direct elicitation); cued elicitation (involving the use of strong hints and cues); the admission of perplexity (be this about students’ contributions or about the topic itself); encouraging questions from students and maintaining silence at strategic points.

In terms of *responding to students’ contributions*, Mercer<sup>13</sup> identifies five techniques that are commonly used, these being: confirmation of students’ contributions; repetition of learners’ contributions in order to draw attention to

features of educational significance; re-formulation of contributions so as to provide a better 'fit' with crucial teaching points; elaboration of an issue raised by a student to expand and/or explain its significance to other learners; and occasionally rejection outright of an incorrect contribution or wrong answer – note however, that teachers often ignore such contributions.

In *describing shared experience* Mercer<sup>13</sup> notes that the tutor may use 'we' statements to try and re-cast past experiences so as they are made relevant to present circumstances. This helps learners to see that they have relevant collective past experience and shared understanding. Literal recaps and re-constructive recaps are used to frame and re-frame previous experience to fit the teachers' pedagogic framework.

All messages posted by the tutor, across all the sub-conferences, were analysed for evidence of the use of these instructional techniques in order to establish which were the most frequently used. Any aspects of the tutor's contributions not captured by this characterisation were also noted. Note that it was possible for a single message to demonstrate the use of multiple techniques and this is reflected in the frequency data (with the frequencies associated with the use of instructional techniques exceeding the total number of messages posted by the tutor). The inter-rater agreement relating to the characterisation of the instructional techniques was 83% (two raters).

## Results

Table 2 about here

Table 2 reveals that the tutor (a male) largely divided his time between eliciting knowledge from the students and responding to what they contributed. There is very little activity that could be characterised as ‘describing shared experience’.

### *Eliciting knowledge*

When writing about knowledge elicitation techniques, Mercer<sup>13</sup> described six techniques that are used by teachers in face-to-face settings. In the computer-mediated conferencing environment investigated here, there was evidence of five of the six techniques being used, albeit to varying degrees (see Table 2). It was not possible to investigate the sixth technique, described as ‘maintains silence’, in this context - but as Table 1 shows, only approximately a third of the on-line contributions were from the tutor. It can thus perhaps be inferred that the tutor was ‘listening’ for approximately 70% of the overall conference.

One of the aims of providing a conferencing environment for students working at a distance is to afford opportunities for collaborative learning. It is thus important that students are given space to discuss issues together, whilst still feeling supported by the tutor. An efficacious on-line pedagogy clearly involves a judicious balance of opportunities to participate in discussion with peers and opportunities for interaction with a tutor who is able to guide the joint construction of knowledge in line with course and disciplinary requirements. Achieving this judicious balance is a hard thing to do. Students have specific expectations and beliefs about teaching and

learning relationships and, whilst valuing contributions from peers, there is evidence to suggest that students participating in CMC tutorial interactions accord particular salience to tutor contributions<sup>15</sup>. The data presented in Table 1 provide one crude indication that the tutor is not dominating the discussion, at least with respect to the overall number of messages posted. The tutor does appear concerned to ‘give the floor’ to the students although his messages have a vital role to play in guiding their joint construction of understanding.

Analysis of the incidence of knowledge elicitation techniques employed by the tutor suggests that only 2% of his statements could be classified as declarative. Mercer<sup>13</sup> defines declarative statements as those which could be provocative, but which are used primarily to provoke a response. An example of this type of declarative statement is illustrated in Extract 1 below. At the point when this message was posted, the students had read Ellie Chambers’ (one of the course authors) consideration of the nature and purpose of education.

*Extract 1: Declarative statement*

Ellie’s three strands of thinking about the nature and purposes of education are not the only ones: somebody else could arrive at a different classification that was equally valid.

In stating that somebody else could come up with ideas that are equally valid the tutor was trying to encourage the students to go beyond the given and to provoke alternative interpretations in response. With this group of students, however, the tutor did not use many declarative statements. Rather, his principal technique for eliciting knowledge involved inviting contributions/elaboration from the students. This was

often achieved through questioning the group. Extracts 2 and 3 illustrate the use of this technique. These extracts are taken from messages posted towards the beginning of the course when the tutor was more overtly directive of the students and was in some senses 'training' them to elaborate upon their ideas. In Extract 2 the tutor raised a question and then offered suggestions concerning how best to elaborate upon the answer.

*Extract 2: Invites a contribution/elaboration*

What are the purposes of education? Try answering the question from the points of view of a) a Government, b) a parent, and c) a student.

Extract 3 also illustrates the way in which questioning is used by the tutor to invite further elaboration.

*Extract 3: Invites elaboration*

Student: Holmberg's article was written quite a few years ago now. In one part of it he looks forward to what improved technology will be able to do in the future. I think the development of that technology has improved distance education from the correspondence type learning of the early OU.

Tutor: Yes, Rosvita, the whole issue of interaction is quite complex. Is there a teacher in the machine?

In her posting, Rosvita was commenting on one of the set readings - Holmberg's thoughts about the role of new technology in teaching. The tutor

confirmed her contribution and then responded with a question in order to invite further elaboration. The question was intended to both sustain and direct further study.

The technique 'admits perplexity' was a difficult one to identify in a CMC environment as facial expression and non-verbal signals were absent. In the instances observed in these data, however, the tutor seemed to show some disagreement with the student - hinting at both the complexity of and perplexity inherent within the issue being discussed. In Extract 4, for example, the tutor challenged a student's definition of 'openness' (in the context of open and distance education) and pointed to the problems inherent in definition:

*Extract 4: Admits perplexity*

It isn't just a matter of degree (or even degrees). Openness becomes a banner as Mackenzie et al said back in 1970, meaning different things (all positive) to different people.

In these data there was little evidence of knowledge elicitation through directly encouraging questions from students. This can possibly be attributed to the fact that students tended to raise questions and critique their readings without having to be directly encouraged to. However, the tutor did signal that he was available for contact and to answer questions, for example, through the posting reproduced in Extract 5.

*Extract 5: Encourages questions from students*

Good hunting ... and e-mail me if you get stuck.

Similarly, there was little evidence of cued elicitation being used as a technique with only one message, reproduced in Extract 6, partly resembling this technique. Here the tutor used strong cues to briefly signal what would be expected of students at a later date in the course. So here he was not so much concerned with the immediate elicitation of knowledge, rather with flagging expectations in relation to subsequent course-related activities.

*Extract 6: Cued elicitation*

In Part 2 there will be a chance to comment on each other's proposals for conducted guided didactic conversations in courses like this one and on the justification for these proposals.

*Responding to what students contribute*

Most of the tutor contributions were concerned with letting the students know that what they had contributed and discussed was in keeping with the thinking within their subject domain through confirmation and acknowledgement. What was evident in the message archive analysed here, was that where elaboration was used as an instructional technique, it often, although not always, followed on from a confirmatory statement. This is illustrated in Extract 9, where elaboration of a student contribution relating to home schooling follows on from a confirmation:

*Extract 7: Confirmation and Elaboration*

Yes those are good reasons for home schooling Esther. And they certainly apply in the US, but not much in Australia or NZ.

Here Esther's contribution regarding reasons for home schooling was confirmed as 'good'. However, the tutor elaborates on her ideas through commenting on the cultural specificity of her reasoning and in so doing signalled to her that there was scope for further development and refinement of her ideas. Sometimes there was evidence of the tutor repeating part of a contribution by a student, or cutting and pasting a section of their message, as a means of validating the contribution.

Occasionally the tutor reformulated a student contribution so as to provide a better 'fit' with crucial teaching points. This is illustrated in the first sentence of Extract 8 where we see that the tutor reformulated a student's account of deep learning. Notice, however, that the tutor also went on to elaborate on the terminology associated with conceptions of 'deep and surface' learning – thereby pointing to the problems of ascertaining whether one or the other has occurred.

*Extract 8: Reformulation*

First I'd suggest that deep learning involves the assimilation of knowledge into what a person already knows, rather than into that person's sphere of influence. However, let me point out that 'deep and surface' are terms that writers use freely, usually without saying how you can recognise that one or the other has occurred.

The analysis revealed no evidence of the tutor rejecting a student contribution outright. Where disagreement between the perspective of the tutor and the student emerged, this was opened up for discussion rather than immediately rejected.

It is important to note that through responding to things that the students contributed, the tutor incorporated contributions into the flow of on-line discussion and constructed more generalised meaning. This observation relates to Feenberg's <sup>16</sup>

notion that one of the crucial activities of the on-line tutor is 'weaving' - in which the flow of the on-line discussion is pulled together. Salmon<sup>12</sup> suggests that the best e-moderators undertake 'weaving' by pulling together the participants' contributions, for example, by collecting up statements and relating them to concepts and theories from the course. In this way they enable development of ideas through discussion and collaboration.

### *Describing shared experience*

Contributions which describe shared experience were relatively infrequent, there being little evidence of the use of 'we' statements or reconstructive recaps and only few literal recaps. This is perhaps not surprising given the enduring nature of the conference messages themselves. It may be the case that these messages serve as a powerful representation and record of shared experience, affording a distinctive resource for supporting collective remembering<sup>17</sup>. This may also account for why, as noted earlier, there was little use of repetition in response to learners' postings. Note also that the learners themselves were observed to help each other remember, re-cap and describe shared experience and this may in turn have impacted on the nature of the tutor's contributions.

The tutor studied here referred to the collective experience of the group using a 'we statement' only once, when he made a statement concerning where 'we', as a group, have 'got to' in the course. He also made reference to a collective, shared group experience in one other message - briefly summarising the group's progress through the course and talking about 'us' in an inclusive manner - one in which he included himself as a group member. As can be seen in Extract 9, this posting refers

briefly to shared experience, rather than describing it in detail.

*Extract 9: 'Us'*

That will take us up to about May 15<sup>th</sup>, when I'll open the TMA Workshop for you with my usual suggestions about how to tackle the questions.

On occasion the tutor literally recapped issues that had previously been highlighted as significant and reminded students of issues of importance. For example, the importance of critical reflection at Masters level had been emphasised early in the course and in the message reproduced as Extract 10, which was written some weeks later, the tutor recaps on this.

*Extract 10: Literal recaps*

Notice that critical reflection comes in again, so I hope you've benefited from the first Workshop and from anything I've said about critical reflection in marking your first TMA.

It is also clear that the tutor is concerned to integrate different aspects of the learners' experience of H801. In Extract 10 he prompts students to consider both their workshop discussions and their marked TMAs in relation to critical reflection, thereby helping the students experience coherence in their educational experience.

The one reconstructive recap used, occurred in the context of re-introducing the reading by Ellie Chambers concerning the three orientations to education. This article had been studied earlier in the course, but the relevance of this reading to the ongoing

discussion was signalled by the tutor as part of a discussion concerning influences on distance educators' teaching (see Extract 11).

*Extract 11 – Reconstructive recaps*

'Distance educators' teaching is often influenced by the hidden values, it seems to me, rather than them consciously taking up a stance based on one of Ellie's 3.'

*Fostering a culture of enquiry*

As indicated in Table 2, there were 20% of responses that fell outside the characterisation of instructional techniques considered above. This is not surprising, since the analyses reported here included all the tutor contributions and some of these were concerned with technical, organisational and administrative issues. There was also evidence of contributions that were principally emotionally supportive and encouraging. Furthermore, a number of contributions appeared to be directly oriented to community-building and fostering a culture of collaboration and enquiry and building collegial teaching/ learning relationships. Devices such as self-disclosure, sharing events and experiences were also used and seemed to play a pivotal role in the development of positive tutor-student relationships. Other messages clearly recognised and signalled the tutor's responsibilities and obligations to the tutorial group.

The primary analytic concern in this paper has been to develop an understanding of the techniques used by the tutor to guide the construction of knowledge and understanding. Yet, this particular analytic focus is in danger of neglecting complexity and creating false dichotomies between the social, emotional

and cognitive functions of the tutor contributions. For example, confirming a student's contribution to the conference discussions, can certainly serve to legitimate their ideas as valid within the relevant subject domain. Confirmation can, however, also serve to encourage and motivate the student to continue to contribute. Similarly, inviting students to contribute to discussions is not solely about eliciting knowledge, it is about inducting them into participation in an academic community of enquiry. Enabling participation and the building of confidence are crucial to establishing a positive culture of enquiry characterised by a sense of mutual trust and ease. This is a crucial point to note as issues of confidence, identity, self-presentation and social comparison clearly loomed large for these students. The students were very sensitive to the quality of their contributions relative to their peers. Messages appeared to be used as a source of informal feedback - as a means of gauging 'where everyone was at' as is evident in Extract 12.

*Extract 12: Social comparison*

Re. your message Ellice. I agree that confidence could be an issue in successful use of conference debate. Reading other people's contributions can make your own seem very 'weak' in comparison. Insecurity can also increase if no one replies to your message or if you have to wait some time for a reply. It's a useful forum for an exchange of ideas and given the distance element perhaps the only practical one.

It is important to consider this climate of comparison when considering the role of the tutor in computer conferencing environments. Some writers such as Riel<sup>18</sup> see the potential of computer-mediated communication technology in terms of changing

the role of the tutor from controlling the transmission of knowledge to providing intellectual leadership in challenging conversations among a community of learners. Yet students are very sensitive to the 'quality' of their own intellectual contributions and without tutor-supported induction into relevant discursive practices, students' may not benefit from participation in such learning conversations, and indeed the experience may be detrimental to learning rather than enabling.

In this case study almost half the tutor's contributions involved responding to what the students said. The tutor appeared to be concerned to maintain an on-line presence that would reassure and encourage the students to continue and not to consider that their contributions were in any way 'weak'. His message was clear - student comments could contribute to both individual and group enhancement of learning and more importantly they should all take advantage of this learning medium.

### Discussion

The case study reported here was undertaken to develop an understanding of the instructional techniques used by a tutor to guide the construction of knowledge in a course-based FirstClass conference environment. The results indicate that the tutor used a wide range of instructional techniques, and there is evidence that the tutor was particularly concerned to offer confirmation of students' contributions, encourage postings and invite elaboration of contributions. The emphasis thus appeared to be on knowledge elicitation and responding to students' contributions, rather than on describing shared experience.

It was argued that confirmation is a powerful technique for legitimating contributions as having validity within a particular subject domain. Inviting a contribution or elaboration can be a powerful tool for eliciting knowledge so that the tutor can see what the students already know and so that that knowledge can be 'owned' by students as well as the tutor. However, it was also noted that a focus solely on knowledge building is in danger of neglecting the potentially multifaceted function of these instructional techniques. For example, inviting students to contribute to conference discussions begins the process of inducting them into participation in an academic community of enquiry. It is also possible that the tutor's emphasis on confirming students' contributions and directly inviting postings and elaborations reflects, in part, an awareness of the difficulties of fostering participation and extended course-related discussion and debate in conferencing environments. The research literature in this field suggests that even the most diligent and enthusiastic tutors can experience difficulties stimulating participation and sustained interactive conference discussions<sup>19, 20</sup>.

As noted, instructional techniques associated with describing shared experience were seldom used. It was argued that perhaps this reflects the nature of the medium and the enduring nature of the conference contributions. Messages posted to a conference may afford a potentially powerful resource for collective remembering and may resource subsequent reflection and consideration by students at a time-point far removed from the original posting. Learners themselves also have an important role to play in supporting 'collective remembering' and describing shared experience.

There is also an important sense, in which the messages that the tutor contributes do more than elicit knowledge and respond to things that the students

post, or occasionally describe shared experience. By posting contributions and framing them in a particular way the tutor is acting as a discourse guide. In many of the contributions posted, the tutor is modelling appropriate ways of engaging, both with the course subject matter and other course members. For instance, by posing questions and offering elaborations the tutor is indicating, through example, the process of critical enquiry and reflexivity that sits at the very heart of the course. Through flagging process issues relating to the group's progress through the course, the tutor is subtly signalling what it means to learn and be a learner in this particular kind of teaching-learning environment.

The emotional tenor of the messages was supportive throughout the conference, yet despite this some students expressed anxieties concerning the nature and merit of their own intellectual contributions. This suggests that tutor-confirmation had potentially pivotal role to play in terms of promoting confidence and enthusiasm for participation. Such anxiety, however, also suggests that careful consideration needs to be paid to how students are inducted into on-line working practices. The importance of helping students learn how to interact and learn in conferencing environments should not be under-estimated. One could speculate that in some circumstances *how* a learner engages and interacts, both with the subject matter and other learners, may potentially have a more profound and enduring impact on their circumstances than the acquisition of a better understanding of (for example) theoretical frameworks relevant to open and distance education. Learners not only need to develop an understanding of the concepts, theories and research literature relevant to the field of open and distance education, they also need to be able to participate in and engage with the discourse of the associated academic community.

They need to feel comfortable with the notion of criticism of ideas and need to be able to distinguish criticism of ideas from personal criticism.

The research reported here is part of an ongoing programme of work. Further analyses are being undertaken to pursue the issue of which instructional techniques tend to co-occur. The ongoing research is also looking in more detail at the specific contexts in which particular instructional techniques are used. The process of evaluating the effectiveness of instructional techniques is thus being progressed by further considering their use in context. This will enable the efficacy of particular techniques to be established, in respect of their suitability in relation to the kinds of activity and learning they are supposed to sustain. This work will thus contribute to the emerging literature concerning the nature and use of instructional techniques for guiding and supporting the construction of knowledge on-line. It will also complement the emerging research work addressing the structuring of on-line collaborative interactions<sup>21</sup>.

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Table 1

*Student/tutor contributions by H801 sub-conference and overall contributions*

Conference Name	Total number of messages	Number of tutor messages	% Messages contributed by students	% Messages contributed by tutor
H801 Group	82	14	83	17
H801 TMA01 Part 1	47	9	81	19
H801 TMA01 Part 2	37	11	70	30
H801 Part 1 For	12	3	75	25
H801 Part 1 Against	10	3	70	30
H801 Part 2	3	0	100	0
H801 Workshop 03	6	2	66	33
H801 Orientations	9	5	44	56
H801 3 Ellie Qs	17	9	47	53
H801 Part 1	10	4	60	40
H801 TMA03 Part 2	2	1	50	50
H801 Workshop 04 Pt.1	29	9	69	31
H801 Workshop 04 Pt. 2	3	2	33	67
H801 Workshop 05	34	12	65	35
Overall	301	84	72	28

Table 2

*The use of instructional techniques by the tutor*

(a) Eliciting knowledge		(b) Responding to students' contributions		(c) Describing shared experience	
1. Declarative statement	2% (3)	Confirmation	26% (41)	'We' statements	1% (2)
2. Invites elaboration/ a student contribution	24% (38)	Repetition	3% (4)	Literal recaps	5% (8)
3. Admits perplexity	5% (8)	Reformulation	5% (8)	Re-constructive recaps	0.5% (1)
4. Encourages questions from students	1% (2)	Elaboration	7% (11)		
5. Cued elicitation	0.5% (1)	Rejection	0% (0)		
	32.5%		41%		6.5%

32 responses fell outside this characterisation = 20%