



Open Research Online

The Open University's repository of research publications and other research outputs

Argumentation in a multi party asynchronous computer mediated conference: a generic analysis

Journal Item

How to cite:

Coffin, Caroline; Painter, Clare and Hewings, Ann (2005). Argumentation in a multi party asynchronous computer mediated conference: a generic analysis. *Australian Review of Applied Linguistics*, S19 pp. 41–63.

For guidance on citations see [FAQs](#).

© 2005 Not known

Version: Accepted Manuscript

Copyright and Moral Rights for the articles on this site are retained by the individual authors and/or other copyright owners. For more information on Open Research Online's [data policy](#) on reuse of materials please consult the policies page.

oro.open.ac.uk

ARGUMENTATION IN A MULTI PARTY ASYNCHRONOUS COMPUTER MEDIATED CONFERENCE: A GENERIC ANALYSIS

Caroline Coffin Open University, Milton Keynes, U.K.
Clare Painter University of New South Wales, Sydney, Australia
Ann Hewings Open University, Milton Keynes, U.K.

Caroline Coffin is a Senior Lecturer in the Centre for Language and Communications at The Open University. Her area of interest is the application of functional linguistics for practical purposes. In particular she is interested in using functional grammar to provide insights into disciplinary knowledge and the nature of electronic communication. Recent publications include *Applied English grammar: functional and corpus approaches* (co-edited with A. Hewings and K. O'Halloran) (Hodder-Arnold, 2004) and *Teaching writing in higher education* (co-authored with M.J. Curry, S. Goodman, A. Hewings, T. Lillis and J. Swann) (Routledge, 2003).

Clare Painter is Senior Lecturer in the School of English, University of New South Wales. She has teaching and research interests in educational linguistics, discourse analysis, children's language and literature and systemic-functional theory. She is the author of *Learning through language in early childhood* (Continuum, 2000) and numerous papers in language and literacy development.

Ann Hewings is a Senior Lecturer in the Centre for Language and Communications at the Open University, UK. She has previously taught English in Europe, Asia, and Australia from primary to tertiary levels. She worked for a number of years on the COBUILD project, researching and contributing to English language reference materials. Her current research focus is academic writing in disciplinary contexts, particularly at tertiary level and in electronic environments. Recent publications include *Applied English grammar: functional and corpus approaches* (co-edited with C. Coffin and K. O'Halloran) (Hodder-Arnold, 2004) and *Grammar and context* (co-authored with M. Hewings) (Routledge, 2005).

ARGUMENTATION IN A MULTI PARTY ASYNCHRONOUS COMPUTER MEDIATED CONFERENCE: A GENERIC ANALYSIS

ABSTRACT

This paper draws on systemic functional linguistic genre analysis to illuminate the way in which post graduate applied linguistics students structure their argumentation within a multi party asynchronous computer mediated conference. Two conference discussions within the same postgraduate course are compared in order to reveal the way in which computer-based argumentation may differ from that operating in written essays and to show the influence of tutor role and task set in shaping the discussions in this mode. The analysis undertaken demonstrates differences in both conferences between the 'stages' found in written argument and those found in the electronic discussion and also differences *between* the two conference discussions attributable to differences in the discussion task. In particular, in one conference, there was a higher frequency of counter-argumentation, while in the other there was a greater degree of disclosing personal and professional experiences on the basis of which participants (often collaboratively) constructed claims. It is hoped that these findings will point to fruitful new lines of enquiry both in terms of a) the special characteristics of computer mediated conferencing, particularly its use within an educational context and b) the methods of analysis which we developed as a means of illuminating a relatively new form of communication.

INTRODUCTION

Over the last decade there has been considerable interest in the nature of computer mediated communication (CMC) and its role in education, including higher education. Much of this literature is located in the fields of psychology (Crook, 2002; Joiner & Jones, forthcoming), education (Lea, 2001; Marttunen, 1997a, 1997b, 1998; Smith & Stacey, 2003) and educational technology (Andriessen, Baker

& Suthers, 2003), but to date there have been few linguistic studies which have specifically focused on the way in which argumentation operates in text-based electronic conferences. Given that a fundamental aim of higher education is to develop in students a critical attitude towards knowledge and the ability to present well supported and reasoned arguments (Terenzini, Spinger, Pascarella & Nora, 1995) and given that there have been several claims concerning the effectiveness of CMC in developing argument skills (Andriessen et al. 2003; Marttunen, 1997a), linguistic research illuminating the relationship between CMC and argumentation is potentially of high educational value.

This article therefore aims to extend the research conducted to date by drawing on notions of genre and generic staging developed within systemic functional linguistics (SFL) to focus on the character of argumentation within two electronic conference discussions located in a postgraduate module in applied linguistics. In particular we address the issue of how argumentation is structured in this mode and whether contextual variations such as tutor role and the design of the discussion task influences the way in which different points of view are put forward and negotiated.

ARGUMENTATION

Argumentation and educational uses of CMC

There have been a number of studies investigating the influence of CMC on argumentation processes with several researchers claiming that by providing the text of messages in a form that can be reviewed and manipulated, asynchronous electronic conferencing aids the articulation, critique and defence of ideas (Harasim, 1989; Henri, 1995; Lea, 2001). Other studies, in contrast, point to the complexity of factors which influence both CMC exchanges and argumentation. For example, while on the one hand, Marttunen's study (1997a) provides empirical evidence that argumentation skills can be promoted through e-mail discussion, subsequent findings (e.g. Marttunen, 1997b, 1998; Marttunen & Laurinen, 2001) have questioned the generality of this finding, noting that email discussions can result in a low quality of argumentation in terms of students' reluctance to disagree with or respond to each other. In turn, however, this outcome appears to be at least partly dependent on whether the discussions are student or tutor led, with increased levels of counter-argumentation (and at a higher level) in student directed groups compared to groups with a greater degree of tutor control and intervention (see also, Ahern, Peck & Laycock, 1992).

Joiner and Jones (in press) have also found that, in general, the quality of undergraduate argumentation used in face-to-face discussion is higher than in asynchronous conference discussions, a finding supported by Marttunen and Laurinen's research (2001), where CMC discussions were less likely than face-to-face ones to produce elaborations of, and agreements with, other contributions and more likely to result in disconnected utterances. Such findings challenge the alleged superiority of the electronic mode as a forum for discussion.

It appears then that studies conducted to date are largely inconclusive as to whether CMC environments promote effective argumentation. One likely explanation for this is that it is not necessarily the medium (CMC) per se that promotes argumentation but rather the type of pedagogic activity engaged in within that medium. Another possible explanation for the disparity in the findings lies in the variation in the methods used for analysing argumentation, not all of which may be well adapted to illuminate the arguing process within a CMC environment. It is for this reason that we propose in this paper an alternative method of analysis.

Analysing Argumentation

Researchers have used a number of different analytical frameworks to look at CMC argumentation, including most prominently content and interaction analysis. Using content analysis, electronic messages or postings have been classified in terms of the "researcher's general estimation of the individual messages' level of argumentation – good, moderate and poor" (Marttunen, 1997b, p.350), with the assessment largely turning on the degree to which the message supports or 'grounds' a standpoint or counterclaim with supporting reasons.

Whilst illuminating the quality of argumentation (according to certain criteria), content analysis does not provide a picture of how the views put forward are interconnected, which is an important feature of CMC discussion. Interaction analysis, a method used by Henri (1992) and Marttunen (1998), in contrast, is designed to do this by establishing the degree to which students refer to previous ideas in a discussion. However the perceived nature of the relationship between messages is restricted to *agreement* or *disagreement* and whether these are grounded in evidence - or not. Thus the analysis does not encompass other types of connections between the phases of the argument, for example whether a contribution is an expansion of a previous argument or claim.

An alternative analysis that focuses more on the way in which argumentation develops across the course of a CMC discussion has recently been developed by Joiner and Jones (in press), based on Felton and Kuhn's scheme for analysing spoken argumentation (2001). It appears more useful in including more 'delicate' categories, such as Add (an extension or elaboration of the preceding speaker's utterance) and Counter-A (disagreement with the preceding utterance plus counter-argument), which aim to capture the elements in argumentative sequences. However the framework is problematic in having been developed in the first place for the analysis of dyadic spoken interaction of abstract ideas rather than for the 'multilogue' of asynchronous conferencing as shaped by different pedagogical contexts. It is thus a pre-established schema imposed upon CMC data rather than one emerging from it.

In addition to frameworks applied to CMC discussions, there is the broader field of *Argumentation Studies* which can provide insights into the structure of argument and debate. This multidisciplinary field generally defines argument in terms of social and pragmatic purpose, rather than according to the rules of formal logic, and in line with this, several theorists have developed frameworks for the analysis of argument structure (usually in written texts). For example, Leff (2002), foregrounds patterns of opposition and resolution with his categories of *thesis*, *antithesis*, and *synthesis*, whilst seminal work by the philosopher Toulmin (1958) has led to the development of frameworks which account for the various phases or elements marking the progress of an argument in terms of *claim*, *sub-claim*, *data* (or *grounds/evidence*) and *warrant*. Van Eemeren, one of the leading proponents of argumentation theory, emphasises social purpose, reasoning and dialogue as key dimensions:

Argumentation can be defined as a verbal, social and rational activity aimed at convincing a reasonable critic of the acceptability of a standpoint by advancing a constellation of propositions justifying or refuting the proposition expressed in the standpoint. (van Eemeren, 2001, p.11).

In effect he sees the thesis/claim and its justification (grounds/evidence) or rebuttal (antithesis) as defining elements of argument.

Work within argumentation theory is quite consonant with the analysis of written argument undertaken within SFL, using genre based frameworks for analysing texts (Coffin, 2000; 2004; Iedema, Feez and White, 1995; Martin, 1989; Rothery, 1994). Here the structure of any text is seen as sensitive to its socio-cultural purpose and the 'stages' through which a writer or speaker moves in fulfilling that purpose are identified from linguistic features and labelled in terms of their rhetorical function. A written argument or 'exposition' has the key stages of *thesis* (the 'claim' or 'standpoint' mentioned by argumentation theorists) followed by *arguments* and *evidence* (equivalent to 'subclaim' and 'justification' or 'data') and concluded by a *restatement of thesis*. An optional stage of *counter-argument* ('antithesis') may also be included. There is, thus, general agreement between these different approaches in terms of the essential elements of an argument text.

In sum, analyses of CMC discussions have so far focussed either on content or on basic aspects of interaction or, in trying to combine these, have imposed analytical categories derived from face-to-face dialogue of abstract ideas, without taking into account the situated nature of argumentation and reasoning and how these may develop differently depending on factors such as the number of speakers and degree of interactivity (the mode), the social status, roles and degree of distance or closeness between interactants (the tenor) and the topic of argument together with its location in a particular disciplinary context (the field) as well as the task set. (See Love, 2002, for a discussion of the way in which field, mode and tenor can provide a map for reflecting on the use of on-line discussions for text response purposes). At the same time, studies from argumentation theory and SFL have independently identified key stages of argument texts in similar terms, but have focussed principally or exclusively on written texts and have not yet explored the hybrid mode of an electronic tutorial.

THE RESEARCH STUDY

The data

The context for the research is one of three modules that form a Master's-level distance-learning program in Applied Linguistics at the Open University, UK. Teaching is conducted through traditional distance materials – a combination of print based study guides, collections of academic articles and audiovisual resources – as well as through the medium of electronic conferencing. In total, throughout the academic year, there are six asynchronous electronic conferences each of which lasts from two to four weeks. These conferences enable students (otherwise separated by time and geography) to participate - at a time of their choosing - in multi-party dialogic written exchanges. Within these

conferences (made up on average of between 10 to 18 students) tutors facilitate reflection on, and discussion of, aspects of the course content, often in relation to forthcoming written assignments. The software used is the commercially available *FirstClass* asynchronous system.

Because we were particularly interested in examining how argumentation may be influenced by the role of the tutor and task design, we collected data from the first tutorial for two electronic conference groups in the same MA course (referred to as Group A and Group C) each of which was run by a different (male) tutor with his own particular approach. These different tutoring or conferencing styles are, in part, reflected in the different task instructions provided by the tutors (see Appendix). That is, although both tutors set up a framework for a discussion on the same topic (*Factors affecting second language learning*) Tutor C, in contrast to Tutor A, foregrounded the argumentative dimension of the discussion by providing students with step by step guidance on how to comment and reflect on the diverse opinions and views expressed in their peers' conference messages. Nevertheless, whilst Tutor A did not specifically foreground the argumentative dimension of the discussion, his instruction "giving your views on either the problem or the easy learning experience described" implies that he expected students to comment on the claims made by their peers.

A further difference in tutor style across the two groups is reflected in the roles the tutors played in the discussion. Tutor A's role is best described as 'interpersonal' since most postings were directed towards encouraging students to participate and share personal experiences and towards making them feel welcome and included (see Painter, Coffin & Hewings, 2003, p.165). Tutor C, in contrast, seemed to expect a different pattern of involvement and a higher level of debate among students. That is, whilst he did not take a strong interventionist role, he contributed approximately twice as frequently as Tutor A with postings of more than twice the average length of Tutor A's (see Table 1). Most significantly, one of his contributions followed the structure of a formally structured argument genre with a clear thesis statement, followed by a series of arguments and summed up in a final restatement of the opening thesis. Given the authority of a tutor, this modelling of a more formal, essay-like posting is likely to have influenced the style of student contributions. Indeed the average length of students' contributions in Group C was generally three times that of Group A students (see Table 2).

Insert Table 1 about here

Despite the differences in tenor regarding tutor roles, relations between students were comparable across both groups in that all members of both groups were new to each other. In addition all students were under similar pressure to make a contribution to the conference discussion in that, as part of their ongoing assessment, participation in the conference was awarded marks. These marks related to their 'ability to put forward a point of view in an electronic discussion environment'. An important aspect of the context here is the field, in that the majority of students were practising teachers and it is a feature of Master's courses in various areas of Education or other domains of professional development that the students' own experiences in the field are seen as valuable and relevant by their tutors.

It should be noted that the conference discussion set up by Tutor C consisted of four activities. We have chosen to focus on the second activity only since it is the one that is most comparable with the activity set up by Tutor A. It is also comparable in terms of numbers of postings exchanged by the group, as shown in Table 2 below:

Insert Table 2 about here

In Conference Group A there were 29 students participating in the initial electronic discussion (as the result of a temporary amalgamation of 2 groups) while in Conference Group C there were 18 students.

A genre based framework of analysis

While CMC has some of the interactional characteristics of the spoken mode, it is in the written medium and so is very different in nature. As well as the fact that, in asynchronous conferences, responses to others are not strictly adjacent in time to their antecedent postings, a central difference is that, unlike in the rapid exchanges of speech, individuals can plan their contributions and can 'hold the floor' for as long as they choose when they participate. These factors mean that linguistic approaches to the analysis of spoken interaction in terms of conversational 'move' or speech function (e.g. Eggins & Slade, 1997) are not necessarily best suited for this kind of electronic 'conversation'. As Eggins and Slade (1997) point out, once a contributor to a conversation monopolises the floor for a long turn, it may be more appropriate to analyse the internal structuring of the turn using SFL notions of genre. In addition, when an interaction as a whole has a function beyond 'chat', as does an electronic tutorial discussion, it is not only the structure of an individual contribution that is relevant but the collaborative

structuring of the text as a whole. Although the SFL genre analysis of argument texts discussed above was developed for monologic print texts, genre analysis itself has been successfully applied to interactive texts (see e.g. Halliday & Hasan 1989; Ventola 1987) and features such as the provision for optional stages, recursion of stages and variable as well as fixed sequencing of stages within a genre make it readily adaptable to the hybrid mode of CMC.

We therefore applied a generic analysis to the data we had collected, considering each posting in terms of its overall purpose (or purposes), its structure and its linguistic characteristics. Where previously described genres or stages of argument were recognised, they were identified as such, and where the data required the recognition of additional elements, these were labelled according to their function. Based on this analysis, the generic stages set out in Tables 3 and 4 were identified. In the left hand column of the Tables, the generic stage or the genre with its stages (optional ones in brackets) is identified. In the right hand column a gloss and/or example is provided and key linguistic features specified. In the section following the tables we provide further discussion and exemplification of several of the key stages.

Insert Table 3 about here

Whereas Table 3 demonstrates the range of stages explicitly concerned with argumentation, Table 4 illustrates those which are not directly related to the argumentative process but which occurred in the conference data. It should also be noted that some stages that were present in the data (e.g. Recount, Request for Clarification) but which were instantiated only three times or less are not included on the basis of economy.

Insert Table 4 about here

Table 3 shows that a number of the generic stages previously established in SFL (and Argumentation) research were of relevance to the conference data. Extract 1, for example, provides illustration of a Challenge which is part of the student IK's message¹, followed by a Counter-Argument which is also part of IK's message. Prior to this Challenge stage is an extract from a previous Argument by the Tutor PB in which he puts forward a proposal in the form of a modalised declarative. (PB's supporting evidence is not, however, pasted into IK's message).

Extract 1

(Note that the labels for generic stages are given in bold and key linguistic features are underlined).

Argument (claim element only reproduced)

IK

PB writes "*we may observe that gender is a significant factor, as it often seems that girls have more aptitude for language learning than boys*"

Challenge

I want to challenge this opinion, which has also previously been heard by LP. PB himself talks about cases of boys who are better than girls but I want to question it on the whole.

(Concession)

I do agree that girls, at least in Greece, study more than boys. I believe that this has to do with social conventions and the fact that girls are more motivated to study as they want to leave their homes more than boys and studying is the safest way for that. I don't see though more aptitude.

Counter-Argument

I observe more or less the same aptitude in both genders. Girls tend to be more silent while boys apart from being more boisterous are also more willing to try using new structures and that enhances their learning. Generally I see the same language acquisition development, sometimes slow, others fast but not related to gender. Even the four cases of exceptional students I have mentioned in step 1 of activity 2 are two girls and two boys. Furthermore if I consider the four students of my Cs (5th year) who managed to write more than 60% on an FCE past paper, I will find two boys and two girls. If I consider the students with the lowest performance I will mainly find boys but they are boys who don't even open their books at home while they are usually drawing pictures during the lesson. I refuse to call that lack of aptitude, and it is a behaviour that very few girls would dare to do even if they wanted to. (Conf Data C)

In the extract above, we can see how in the Challenge stage there is a reference back to, and a questioning of, the previous Argument. The stage includes (an optional) Concession regarding the validity of certain aspects of the Argument - *I do agree...* However the main purpose of a Challenge is to criticise a previous argument and therefore the message ends with a negation of other aspects of the claim - *I don't see though more aptitude*. Mental and verbal processes are key features of this stage in addition to modalised and negated declaratives.

Following the Challenge stage is a Counter Argument stage in which IK puts forward alternative proposals (in the form of modalised declaratives) which he then elaborates and supports with evidence in the form of his professional experience (using the staging device of the cohesive adjunct - *furthermore*).

Another stage previously identified in the analysis of written genres is the Thesis/Overall Position stage. This stage makes it possible to develop a hierarchical ordering of arguments. Thus in the context of CMC, participants can express their overall stance, in addition to setting out specific arguments in relation to an issue. Such a layered approach to argumentation is illustrated in the following extract where the tutor, PB, concludes his message (in which a number of arguments have been set out) with a statement on his overall position:

Extract 2

PB

Thesis/Overall Position

In conclusion, it seems that motivation is not only one of the most important factors in language learning, but also one of the factors that we can do most about. Having said at the outset that many factors are inextricably related, it's fitting that the examples in the preceding paragraphs are structured according to age. (Conf Data C)

Aside from the anticipated stages of argumentation, the genre analysis revealed a number of additional stages not previously identified in the SFL or wider literature but which nevertheless appear to play a role in CMC argumentation within the field of Applied Linguistics. These include the stages of Expansion of Argument and Expansion of Claim where the purpose is to provide additional reasoning or evidence in order to take forward and expand a previously stated or implied argument or claim. Thus, whereas in a written argument essay a competent writer starts with an overarching thesis or position and then puts forward sufficient evidence to support their position, CMC contributors are free to put forward a set of related claims, arguments and personal assertions which cumulatively and prospectively create an overarching (but often implicit) thesis or position on an issue.

Extract 3 illustrates the Expansion of Argument stage in which the participant, LMP, pastes into the top of her message the claim element of an argument previously put forward by LG, directly confirms it (*lead me to agree*) and then expands it by using her own professional experience as additional, supporting evidence.

Extract 3

LMP

Argument (claim element only reproduced)

"Until one or two years ago I held the view that the earlier the start in learning the L2ⁱⁱ the better, but experiences of teaching children and teenagers more intensively over the last two years have made me question this idea. I still believe this to be true, but only if the child is in an intensive learning situation, not in the typical EFLⁱⁱⁱ environment." (L G, E841 Tutorial 1, 7 February 2002)

Confirmation of Argument

My experiences lead me to agree with this observation.

Expansion of Argument

Young children in typical EFL situations learn very quickly and then forget very quickly. I often notice that after the long summer holidays (nearly four months in Italy), the whole programme needs starting from scratch because most of what has been learnt has disappeared into the mists of memory. Doing the same things again is obviously very bad for motivation (they remember the book or activities), so repetition needs to be carefully disguised by presenting it through new material. However I must add that ground is covered more quickly the second time round, so input may have been partially retained. (Conf Data C)

Another key stage identified in our study is the Reasoned Observation. This is derived from Rothery's identification of the Observation genre whose primary social purpose is to establish solidarity with an audience by recounting and sharing an event which is noteworthy in some way (Rothery, 1994, p.82 – 92). In our data the event might be a single incident or a habitual state of affairs from the past. In order to give significance to the event, the APPRAISAL resources of AFFECT, JUDGEMENT and APPRECIATION: SOCIAL VALUATION are drawn on (see Martin 2000; Martin and Rose 2003 for an overview of these resources). In Reasoned Observations, an additional element which distinguishes them from Observation is the use of reasoning to explain either the causes or effects of the event/experience or the writer's reaction to it. Extract 4, for example, illustrates how the experience of learning German is appraised as 'easy' and then explained as an outcome of two factors: feelings (realised through positive lexical choices - *liked, laugh, relaxed and enjoyed, wasn't afraid*) and a particular situation (having a good teacher and her mother being a German teacher). This type of reasoning involves making personal assertions. Thus, in extract 4, BT asserts *I found the German I did in my first year at secondary school very easy to learn*. Such assertions are distinct from claims in that they relate to personal experience and are not generalisable. As a result, they are difficult to contest.

Extract 4

BT

Reasoned Observation

I found the German I did in my first year at secondary school very easy to learn. I think there were two reasons for this; I really liked the teacher - he made us all laugh, so I felt relaxed and enjoyed the classes and also my mum was a German teacher, so I had been exposed to the language already and wasn't "afraid" to use it. (Conf Data A)

Although Reasoned Observations are not explicitly argumentative in nature it appears that the inclusion of reflection and reasoning often generates an implicit claim. For example, implicit in extract 4 above, is the claim: it's easy to learn when relaxed and enjoying oneself and not inhibited. An implicit claim can then trigger a Claim stage in which the claim is made explicit - either by the writer themselves or a fellow conference participant. Extract 5 exemplifies the movement from a Reasoned Observation to an explicit Claim.

Extract 5

RP

Reasoned Observation

As an ab initio mature student in Spanish I found my first year at "Poly" very difficult, but nonetheless enjoyable. However, after being told that my group would be offered the chance to go to Guatemala, I found a purpose which gave me such enthusiasm that learning, before, during and after the trip became a "labour of love" rather than the necessary and sometimes tedious process of acquiring language skills in order to proceed in a career, as seems to be the case for a lot of my English language students, at least initially.

Claim

Therefore, purpose together with enthusiasm, determination and fun are the key words that facilitate the learning process, both as a teacher and once again as a student.

The identification of the Reasoned Observation stage in our data leads to two important insights. First, it seems that within Applied Linguistics, personal and professional experience is an important means of generating claims and arguments. In other words generic structure is likely to vary according to field. Second, it appears that the CMC mode makes it possible to argue in a way that would not be possible in a traditional and formal academic essay. That is, as noted earlier, in most forms of written argumentation, it is the overall argumentative position or Thesis that is the starting point for the essay (referred to as macro-Theme by Martin & Rose (2003)). Equally, in the body of the essay, each claim supporting the overall position or Thesis is typically foregrounded in the initial section of each paragraph (referred to as the hyper-Theme) before being substantiated through supporting evidence. In our CMC data, in contrast, claims are often generated on the basis of, and emerge out of, specific data. They may then be supported through further evidence in an iterative fashion.

A further key insight emerging from the genre analysis is the way in which, in multi-party environments, arguments and claims can be dynamically co-constructed through the Confirmation and Expansion stages. That is, particular positions on an issue are built up cumulatively as they are revisited, confirmed, reinforced and made more persuasive through the addition of further evidence and

reasoning by various participants. Similarly the stages of Challenge and Counter Argument also reflect the way in which collaborative interaction can serve to dynamically refute and refine propositions. It is also likely that the written form of the arguments (as indicated in the practice of cutting and pasting into new messages key elements of previous messages) facilitates their review, critique and defence (see ARGUMENTATION section).

The extracts discussed above illustrate the most commonly occurring argumentative stages. Whereas these stages focus on the exchange and negotiation of ideas and are therefore ideationally oriented, it emerged that a number of stages in the data were either more interpersonally oriented (for example, to do with 'building solidarity') or more textually oriented, being concerned with the mechanics of electronic conferencing and the management of information.

The presence of stages found in Table 4 such as Solidarity Building and Request for Technical Help show that, unlike in a focused argumentative essay, conference argumentation develops in a far less linear manner. For example, the flow of discussion may often be interrupted by requests for technical help. The Solidarity Building stage, on the other hand, may be interpreted as not necessarily detracting from the argumentative process but as a crucial prosodic element in encouraging and motivating students to exchange opinions and points of view, particularly given the absence of prompts and supports that would support students in face-to-face discussion (see Joiner & Jones, in press.)

Finally it is important to note that much of the language realising the different stages illustrated above echoes the informal, unplanned dialogic nature of face-to-face talk. For example, the reference to the previous 'speaker's' turn – *PB writes...*, the use of contraction (*don't*) and the repeated use of the personal pronoun I in clause initial or Theme position are not features that would be common in formal academic argument (Baron, 1998; Hewings & Coffin, 2004; see also Eggins 1994, p.301). On the other hand, there are several features of the CMC interaction which are generally associated with the written mode and which would not be typical of spoken interaction. For example, nominalization in compact nominal groups (e.g. *students with the lowest performance...*), the use of formal cohesive adjuncts (e.g. *furthermore*) and in some messages a complete absence of personal pronouns (e.g. Extract 2). In sum, it would seem that the mode of communication (CMC) not only affects the nature of the argumentation stages but also influences the linguistic realisation of these stages, with participants drawing on the resources of both spoken and written English.

USING THE GENERIC FRAMEWORK TO COMPARE THE TWO CONFERENCES

The analysis of our conference data revealed how the identification of generic stages can illuminate our understanding of how argumentation operates within a multi-party, text-based, asynchronous CMC environment. These findings relate specifically to CMC discussion within the field of Applied Linguistics and we have discussed how certain stages such as Reasoned Observation may be particularly (or indeed only) relevant to that disciplinary context. In addition, it may be the case that the type of role adopted by the tutor and the type of tasks set by them are equally influential in the way a discussion is generically structured. In this section, therefore, we compare the two conferences to see if there are differences in the structure of each which could be related to register variation such as differences in tenor relations between tutor and student and differences in field focus connected to task design.

In Tables 5 and 6, the number of times each stage occurred in the two conferences is displayed. (Note that where a previous message is pasted into a subsequent message it is not counted twice).

Insert Table 5 about here

Table 5 above shows that there is considerable variation in the distribution of Argument stages in the two conferences. Table 6 likewise reveals that there is considerable variation in the distribution of non argument stages.

Insert Table 6 about here

In sum, tables 5 and 6 reveal that the distribution of stages is markedly different within the two conferences. The most significant differences are as follows.

- There are many more Arguments in Group C but more Claims in Group A.
- There are virtually no Challenges or Counter Arguments in Group A.
- The Overall Position stage only occurs once in Group A compared to 9 times in Group C.

- There is a high frequency of Reasoned Observation and Reasoned Expansion of Observation stages in Group A and a complete absence in Group C.
- Students in Group C interactively build on each others arguments almost twice as frequently as in Group A.
- There is a higher frequency of Personal Reports, Observations and Solidarity Building stages in Group A.
- In Group C there is a high frequency of requests for technical help.

These results show that in addition to the general effects of the electronic conferencing mode and the specific disciplinary focus (here, Applied Linguistics) on the nature of argumentation, the tutor's directions are a key variable in shaping the nature of a CMC discussion.

IMPLICATIONS AND APPLICATIONS

SFL Genre theory as a basis for the analysis of CMC discussion

One of the aims of the study reported here was to develop an analytical framework based on close linguistic analysis of CMC data. As discussed in earlier sections, previous frameworks such as that developed by Joiner and Jones (in press) and Felton and Kuhn (2001) are problematic in that they are pre-established schema imposed upon CMC data rather than emerging from it.

As this article has shown, the development of an analytical scheme located within the general theoretical framework of SFL makes it possible to take into account the situated nature of argumentation and reasoning by analysing the shifting purposes and linguistic realisations of a multiparty, CMC based discussion located in a particular disciplinary field – in this case, Applied Linguistics. This scheme, we would argue, has important implications beyond the data set presented here. It provides a platform for further exploration of a wide range of disciplinary and pedagogic contexts in which CMC plays a role. In particular, as discussed earlier, key features of SFL genre analysis, such as the provision for optional stages, recursion of stages and variable as well as fixed sequencing of stages within a genre make it readily adaptable to the hybrid mode of CMC.

In addition, the framework is able to highlight some of the key differences in the way CMC and written argumentation are differently structured. For example, the stages identified demonstrate the iterative, dynamic and collaborative nature of computer based argumentation in comparison to the more linear and hierarchically organised argumentation found in written texts. Thus the framework is able to illuminate how CMC enables students to explore a range of different perspectives and viewpoints before drawing overall conclusions – much in the same way that the traditional university tutorial does. In particular, it reveals how argumentation in this forum may be data driven with students drawing out claims and arguments on the basis of personal and professional experience.

Indeed, the place of personal and professional experience as evidence in academic argumentation was one of the key issues thrown into relief by the data. Our attention was drawn to the role of this type of evidence through the presence of the stages, Reasoned Observation and Reasoned Expansion of Observation, which by their nature foreground personal and anecdotal experience. In addition, in both conferences, Arguments and Expansions of Claims/Arguments also drew on this type of evidence although in these stages, abstract and generalised propositions were foregrounded with personal experience serving to flesh out the claims.

In an applied field such as Applied Linguistics, it is likely that anecdotal experience is an important device for engaging and motivating students, but whether this form of argument should be encouraged as a stepping stone to more academic forms of argument needs debate. In the case of Reasoned Observations, we have noted that the personal assertions optionally found in this stage may generate either implicit or explicit claims and thus interactively generate substantial argumentation. This suggests that the presence of anecdotal evidence may have value in academic as well as interpersonal terms. Certainly it would be possible to subcategorise Arguments and Expansions of Arguments according to the nature of the supporting evidence provided. And by comparing earlier and later tutorials, this type of analysis would enable a more finely-grained evaluation of conference discussion as a form of academic apprenticeship.

Applying a contextual framework to evaluate the effectiveness of CMC discussion

Another key aim of the study was to explore the degree to which contextual variables such as tenor relations (particularly with regard to the role of the tutor) and field (in terms of the specific focus and purpose of the discussion task) may influence the nature of argumentation and thus explain the variation in research findings to date. Our findings suggest that both the task set and the degree and type of tutor intervention is likely to effect a) how, and the degree to which, students put forward and

challenge arguments and b) how closely the overall discussion approximates the structure of written argumentation. Thus the greater frequency of the Position, Argument, Challenge and Counter Argument stages in the Group C data suggests that, compared to Group A, the argumentative style in this conference more closely resembles that of the traditional essay.

Although it is difficult to disentangle the effect of the tutor as distinct from the task set, it is interesting to speculate whether the more formal, essay-like messages posted by the Group C tutor (as illustrated in Extract 2) are related to the overall formality and length of the messages produced by Group C students. (Table 1 shows that Group C students produce messages which are approximately 3 times the length of those in Group A). It is possible, for example, that by modelling a formally structured argumentative essay as part of his conference contribution, the tutor set a particular standard for his group which they generally adhered to.

A particularly important question to ask is whether the different tasks and tutor styles of the two conferences had an impact on the *quality* of the discussion. To answer this question, of course, criteria for measuring quality is required. Thus, if we apply Marttunen (1997b, 1998) and Marttunen and Laurinen's criteria (2001) in which argumentative quality is related to students' readiness to disagree with or respond to each other, then Conference A is of inferior quality. This is a finding that would conflict with Marttunen and Laurinen's (2001) claim that student led discussions (where the tutor is either not present or, as here, takes a backseat role) are more likely to lead to higher level argumentation; that is, with increased levels of counter-argumentation (see also, Ahern et al. 1992).

But is it helpful to perceive argumentative quality as simply a matter of the degree of counter-argumentation? Felton and Kuhn (2001, p.152), for example, make the point that:

agreeing discourse may be fully as strategic as disagreeing discourse, although its goals differ. In articulating, supporting and enriching a position, it may be very productive.

On this basis it could be argued that the frequency of the Reasoned Expansion of Observation stage in Group A is indicative of effective argumentation. In other words, whilst not denying that a thesis argued without reference to alternative positions is less strongly justified than one that is, it is important to consider the value of other less explicitly argumentative stages, particularly in fields such as Applied Linguistics.

A consideration of effective argumentation also entails the identification of features that decrease quality. The phenomenon of disconnected utterances has been noted by both Joiner and Jones (in press) and Marttunen (1998) as a measure of low quality argumentation. This suggests that stages which are less likely to generate interactivity may hinder argumentative development. Reasoned Observations, Observations and Personal Reports, for example, are generally put forward 'in a vacuum' with no reference to previous messages and with little likelihood (because of their lack of generalisability) of being taken up by subsequent messages. Indeed, although there are 9 instantiations of the Reasoned Expansion of Observation stage, there are no Expansion of Report stages at all. As a result, it could be argued that the frequency of Reports and Observations in Group A impedes the possibility of a connected, ongoing argumentative line. And certainly, given that CMC is intended to enable interpersonal interaction, then the less connection between postings, the less successful the discussion can be regarded, whether as argumentation or simple solidarity building.

In conclusion, the analyses have raised a number of issues that would benefit from further exploration. That is, although we have established that CMC can enable different types of argumentation and that this is likely to be influenced by tutor role and task design we have no definitive measure as to which (if either) type is pedagogically more or less effective. One way forward, therefore, might be to examine the influence of collaborative forms of argumentation on argumentation produced individually in the form of assessed essays (see for example, Coffin and Hewings, in press). But, in particular, we need to be clearer about the ways in which the CMC medium can offer unique opportunities (different in kind to spoken and written modes) for educationally beneficial argumentation. That is, argumentation that leads to students learning **from** and **about** the debate in hand as well as learning **to** debate effectively (Andriessen et al. p.9-10). We hope, therefore, that the genre based, contextual framework that we have discussed here, will provide a fruitful focus for further investigations of this kind.

NOTES

- I All student names have been initialised to make them anonymous. Note too that all original typographical and other errors have been retained for the purposes of authenticity.
- II A second language.
- III English as a Foreign Language.

APPENDIX

Instructions for Group A

- a) Post a message to your tutor group conference containing the following:
 1. a brief description of yourself (50 words)
 2. a description of a problem you have/have had learning a foreign language (50 words)
 3. a description of a time when you found something very easy to learn in a foreign language and the factors which made this so (50 words)
- b) Read the postings made by other students and respond to ONE of them giving your views on either the problem or the easy learning experience described.

Instructions for Group C

1. Choose one factor which you think influences second language learning (based on your own experience of learning a language or observations of students learning a language). Give reasons for why you think the factor is important and examples from your own experience.
2. When you have completed step 1, read your fellow students' messages and challenge or endorse at least one of the factors they put forward. Say why you think the factor is convincing/unconvincing, drawing on your own experience as evidence.
3. After you have completed step 2, choose another factor to challenge or endorse. This time say why you think the factor is convincing/unconvincing by drawing on your fellow students' contributions as evidence. When referring to conference messages, follow paraphrasing, quoting and referencing conventions as set out in the message Conference References, which I'm posting here separately.
4. Finally, after you have completed step 3, respond to one or more of your fellow students' messages by drawing on your reading of the Lightbown and Spada chapter or any other research literature that you have come across (make sure you use appropriate paraphrasing, quoting and referencing conventions).

If you wish to respond to any challenges that other students have made to the factors you have put forward, do so.

REFERENCES

- Andriessen, J., Baker, M. & Suthers, D. (2003). Argumentation, computer support, and the educational context of confronting cognitions, in Andriessen, J., Baker, M. & Suthers, D. (Eds.) *Arguing to learn: confronting cognitions in computer-supported collaborative learning environments*. (p.1-25). The Netherlands: Kluwer Academic Publishers.
- Ahern, T.C., Peck, K. & Laycock, M. (1992). The effects of teacher discourse in computer mediated discussion. *Journal of Educational Computing Research*, 8 (3), 291-309.
- Baron, N.S. (1998). Letters by phone or speech by other means: the linguistics of email. *Language and Communication* 18, 133-170.
- Coffin, C. (2000). Defending and challenging interpretations of the past: The role of argument in school history. *Revista Canaria de Estudios Ingleses*, 40, 135-153. (Special Issue on Intercultural and Textual Approaches to Systemic-Functional Linguistics).
- Coffin, C. (2004). Arguing about how the world is or how the world should be: The role of argument in IELTS tests. *Journal of English for Academic Purposes*, 3 (3), 229-246.
- Coffin, C. & Hewings, A. (in press). Engaging electronically. Using CMC to develop students' argumentation skills in higher education. *Language and Education*.
- Crook, C.K. (2002). Virtual university: The learner's perspective. In K. Robbins & F. Webster (Eds.) *The Virtual University?* (pp 105-125). Oxford: Oxford University Press.
- Eemeren, Frans H. van, (2001). *Crucial concepts in argument theory*. Amsterdam: Amsterdam University Press.
- Eggs, S. (1994). *An Introduction to systemic functional linguistics*. London: Pinter.
- Eggs, S.E. & Slade, D. (1997). *Analysing casual conversation*. London: Cassell
- Felton, D. & Kuhn D. (2001). The development of argumentative discourse skill. *Discourse Processes*, 32 (2/3), 135-153.
- Harasim, L. (1989). On-line education: a new domain. In R. Mason & A. Kaye (Eds.) *Mindweave: communication, computers and distance education*. Oxford: Pergamon.
- Halliday, M.A.K. & Hasan, R. (1989). *Language, context and text: Aspects of language in a social-semiotic perspective*. Oxford: Oxford University Press
- Henri, F. (1992). Computer conferencing and Content Analysis. In A. Kaye (Ed.) *Collaborative Learning through Computer conference*. (pp.117-136). Berlin: Springer-Verlag.

- Henri, F. (1995). Distance learning and computer mediated communication: interactive, quasi-interactive or monologue? In C. O'Malley (Ed.) *Computer supported collaborative learning*. (pp. 145-165). Berlin: Springer-Verlag.
- Hewings, A., & Coffin, C. (2004). Grammar in the construction of on-line discussion messages. In Coffin, C., Hewings, A. & O'Halloran, K. (Eds.) *Applied English Grammar: functional and corpus approaches*. (pp. 134-154). Hodder-Arnold: London.
- Iedema, R., Feez, S. & White, P.R.R. (1995). *Media literacy: Write it Right industry research report vol. II*. Sydney, Australia: Disadvantaged Schools Program Metropolitan East Region, N.S.W. Department of School Education.
- Joiner, R. & Jones, S. (in press). The effects of communication medium on argumentation and the development of critical thinking. *The International Journal for Educational Research*.
- Lea M. (2001). Computer conferencing and assessment: New ways of writing in higher education. *Studies in Higher Education*, 26 (2), 163-181.
- Leff, M. (2002). Rhetoric and Dialectic in Martin Luther King's "Letter from Birmingham Jail". Paper presented at *The 5th International Conference on Argumentation*, Amsterdam University.
- Love, K. (2002). Mapping on-line discussion in senior English. *The Journal of Adolescent and Adult Literacy*, Vol 45 (5) pp. 382-409.
- Martin, J.R. (1989). *Factual writing: exploring and challenging social reality*. Oxford: Oxford University Press.
- Martin, J. R. (2000). Beyond exchange: APPRAISAL systems in English. In S. Hunston & G. Thompson (Eds.) *Evaluation in text*. (pp. 142-175). Oxford: Oxford University Press.
- Martin, J.R. & Rose, D. (2003). *Working with discourse*. London: Continuum.
- Marttunen, M. (1997a). Teaching argumentation skills in an electronic mail environment. *Innovations in Education and Training International*, 34 (3), 208-218.
- Marttunen, M. (1997b). Electronic mail as a pedagogical delivery system: An analysis of the learning of argumentation. *Research in Higher Education*, 38 (3), 345-63.
- Marttunen, M. (1998). Electronic mail as a forum for argumentative interaction in higher education studies. *Journal of Educational Computing Research*, 18 (4), 387-405.
- Marttunen, M. & Laurinen (2001). Learning of argumentation skills in networked and face-to-face environments. *Instructional Science* 29, 127-153.
- Painter, C., Coffin, C. & Hewings, A. (2003). Impacts of directed tutorial activities in computer conferencing: a case study. *Distance Education*, 24 (2), 159-174.
- Rothery, J. (1994). *Exploring literacy in school English, Write it Right: Resources for literacy and learning*. Sydney: Disadvantaged Schools Program Metropolitan East Region, N.S.W. Department of School Education.
- Smith, P. & Stacey, E. (2003). Socialisation through CMC in differently structured environments. In S. Naidu (Ed.) *Learning and teaching with technology: Principles and practices*. (pp. 165-176). London: Kogan Page.
- Terenzini, P.T., Spinger, L, Pascarella, E.T. & Nora, A. (1995). Influences affecting the development of students' critical thinking skills. *Research in Higher Education*, 36, 23-39.
- Toulmin, S. (1958). *The uses of argument*. Cambridge: Cambridge University Press.
- Ventola, E. (1987). *The structure of social interaction: A systemic approach to the semiotics of service encounters*. London: Pinter.

TABLES

	Total no of postings	Total no words	Average words per posting
Tutor Group A	11	745	68
Tutor Group C	21	3, 153	150

Table 1: Number of tutor postings in Conference A and Conference C.

	Total no of postings	Number per student	Total no words	Average words per posting
Group A	80	1-6	20,377	224
Group C	104	1-13	76,832	615

Table 2: Number of student postings in Conference A and Conference C.

Genre/Genre Stage	Recognition features
Argument <ul style="list-style-type: none"> • Claim • Evidence 	<p>A contestable proposition supported by either evidence (e.g. professional/ personal experience, research findings, theory etc.) or reasoning (in the form of causal sequences or specific to general). e.g. <i>I think that the most important factor for second language learning is motivation</i> (followed by evidence in the form of ‘observations in social environment’ followed by the student’s classroom experience and ‘a motivation system I have been working with...’). Key linguistic features: modalised declaratives, cohesive Adjuncts (linking evidence to proposition), APPRAISAL (see below).</p>
Claim	<p>A contestable proposition not supported by either evidence or reasoning. e.g. <i>I think sometimes teasings can be a big hindrance in learning the language.</i> Key linguistic features: modalised declaratives, APPRAISAL.</p>
Confirmation of Argument or Claim	<p>A previous Argument or Claim is confirmed by a participant agreeing with it. See example in Extract 3 below. Key linguistic features: verbal and mental Processes, cohesive reference.</p>
Expansion of Argument or Claim	<p>A previous Argument or Claim is expanded through further supporting evidence, a synthesis of evidence previously put forward or additional reasoning. See example in Extract 3 below. Key linguistic features: modality, cohesive reference.</p>
Challenge <ul style="list-style-type: none"> • (Concession) 	<p>A questioning or criticism of a previous Argument or Claim. See example in Extract 1 below. Key linguistic features: adversative conjunction, mental and verbal Processes.</p>
Counter-Argument	<p>An alternative argument. See example in Extract 1 below. Key linguistic features: modalised declaratives, negated declaratives, contrastive reference, cohesive Adjuncts (linking evidence to proposition), verbal and mental processes.</p>
Thesis/Overall Position	<p>An overall position on an issue is put forward (i.e. a thesis statement) e.g. <i>As so many factors are inter-related, it’s difficult to isolate the effects of a single factor. Also, individual variations are often more significant than specific factors.</i> Key linguistic features: modalised declaratives, a high degree of abstraction (realised through nominalisations).</p>
Reasoned Observation <ul style="list-style-type: none"> • Event • (Personal Assertion) 	<p>An event or state of affairs integrating a degree of reasoning is recounted. Optionally this may lead to a personal assertion i.e. a proposition which is based on personal experience. See example in Extract 4 below. Key linguistic features: 1st person + past tense and/or usuality (e.g. <i>always, would</i>), causal conjunction and/or causal Processes, APPRAISAL.</p>
Reasoned Expansion of Observation	<p>A previous observation is expanded through reasoning and (optionally) a related event is recounted. e.g. <i>I agree with what Margaret says about the wrong language popping out. I had a similar experience when I first learnt Romanian... I think it has a lot to do with how fluent you are. I now rarely muddle French and Romanian as I speak them well, but tend to attempt to speak them instead of German when I want to speak that, as I am not so familiar with it.</i> Key linguistic features: comparative reference, lexical cohesion with previous posting, APPRAISAL.</p>

Table 3: Argument stages in a CMC discussion

Genre/ Genre stage	Recognition features
Request for Technical Help	e.g. <i>One of the difficulties in computer conferencing is certainly keeping all the messages and their authors straight. It doesn't seem very feasible to print out all the messages passed back and forth, or is it? Some kind of indexing would be nice!</i> Key linguistic features: interrogative, tags, speech role pronouns, cmc related lexis.
Response to Request for Technical Help	e.g. <i>All the messages are still there, but the browser only displays fifteen at a time. You have to scroll through them using the arrows at the bottom.</i> Key linguistic features: imperative, modulation, modality.
Personal Report <ul style="list-style-type: none"> • (Self identification) • Work history • Current work context 	A personal profile is provided. e.g. <i>My name's E H. I have been working as an ESOL tutor in adult and community education in L---- for over 10 years. My present duties include coordinating and training on the C & G programme.</i> Key linguistic features: 1st person, present and present perfect tenses; vocabulary related to working life; Role, Location and Extent circumstances.
Observation	An event or state of affairs is related but no general argument or claim is inferred. e.g. <i>During the same year, but in a German lesson however, I experienced a whole different learning concept. The teacher would use word association to help us remember and apply the right spellings. She would also use onomatopoeia; for example the german for butterfly sounds like their flying action!</i> Key linguistic features: 1 st person, past tense, usuality (e.g. <i>always, would</i>); APPRAISAL.
Procedure <ul style="list-style-type: none"> • (Goal) • Method 	A set of instructions or guidelines (in this data largely concerning the use of technology or the pedagogic task). e.g. <i>Just to let you know that OUSA have now set up a students' common room for you to chat with your fellow students around the country and beyond. The path from your desktop is OU...</i> Key linguistic features: material Processes (often bullet points and font), command speech function, sequential organisation to Method section.
Solidarity Building	Participants motivate and encourage each other e.g. <i>Well, due to circumstances beyond my control, I'm starting into the course quite late. Nevertheless, I'm excited and full of anticipation! You all sound like such an interesting lot of people!</i> Key linguistic features: APPRAISAL (ATTITUDE and GRADUATION), speech role pronouns.

Table 4: Non argument stages in a CMC discussion

	Group A	Group C
Argument	2	19
Claim	9	1
Confirmation of Argument or Claim	7	13
Expansion of Argument or Claim	17	26
Challenge	1	14
Counter Argument	3	13
Overall Position	1	9
Reasoned Observation	22	0
Reasoned Expansion of Observation	9	0

Table 5: Argument stages in Conference A and C

	Group A	Group C
Request for Technical Help	4	11
Response to Request for Technical Help	2	14
Personal Report	27	0
Observation	11	2
Procedure	4	2
Solidarity building	37	10

Table 6: Non argument stages in Conference A and C