FACE-TO-FACE AND ONLINE INTERACTIONS – IS A TASK A TASK?

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Abstract
This study contrasts two different ways of analysing interaction and participation in language learning tutorials: Social network analysis of frequency and QSR analysis of type of interaction. One task from three German beginners' language tutorials (one delivered face-to-face, the other two online) is analysed. A description of the background and method of the study is provided together with some examples of the findings. As this is work in progress, only tentative conclusions can be provided at this stage.

Introduction

Social interaction, that is the active and productive communication between different speakers, is beneficial to language learners. This assumption underlies our study investigating the differences and similarities between interaction patterns in online and face-to-face classrooms. One particular task (a semi-structured role-play) is scrutinised for the amount of oral involvement from both students and tutors, for the use of target language and unstructured talk, and also for the use of instructions as opposed to actual language practice in the respective environments. It is hoped such close analysis of tutorials will benefit future learning design of tasks as well as tutor training materials.

First the role of interaction for the successful learning of communicative competence is presented. This is followed by an introduction of language courses at the Open University, UK, and a description of the wider framework of the Interaction Study. Then the two analytical approaches used to investigate the qualitative data gathered are reviewed and the results of the different analyses are presented and evaluated. This is rounded off by a presentation of conclusions drawn from the two different strands of analysis and an outlook of further research needed.

The Role of Interaction in Language Teaching

Online teaching and learning is increasing in universities worldwide. What needs establishing is whether this new mode of delivery can provide for the same quality of social interaction, an element long accepted as central to the language learning process (e.g. van Lier, 1996; Gass, 2003; White, 2003).

In language teaching there is an abundance of online target language material available in the form of exercises, drills, grammar rules and authentic texts. Assuming that any necessary adaptation to the new medium has taken place, these materials can still only offer interaction between learner and machine, which is inevitably of an individual nature. For language learning to take place there

also has to be 'interaction as a social activity' which Wang (2004, p.91) defines as: "a socially reciprocal action involving two or more people". Hampel and Hauck (2004, p. 67) summarise the necessity for social interaction in communicative language teaching as satisfying the demands of both second language acquisition theories and socio-cultural learning. This suggests that learners need not only to be exposed to comprehensible input and to produce comprehensible output, but also that they need to also interact to negotiate meaning as implied by Wang's definition above. For Warschauer (1997, p. 487) a further qualification is that students must be encouraged to "conduct actively meaningful tasks and solve meaningful problems in an environment that reflects their own personal interest as well as the multiple purpose to which their knowledge will be put in the future", and thus be prepared for their future independent use of the target language in the real world. This presupposes learner-oriented task set-up which according to Rüschoff (1999) must also be collaborative in nature in order to allow for knowledge construction.

Hampel and Hauck (2004, p. 66) suggest that "the increased robustness of Internet audio technology allows … to use voice conferencing in a genuinely interactive and synchronous way." The emphasis here is on voice (i.e. oral) and synchronous, which so far mirrors best the most frequent form of negotiation of meaning in real life situations (while it is understood that written negotiations also play an important part in life). Synchronous communication online is different in principle from human-machine interaction and more similar to unmediated human-human, i.e. face-to-face interaction. It is – for the time being - our best chance to offer distance learners online interactivity equivalent to that of classroom language learners.

Whether the online medium can really offer the same opportunity for language learning through oral interaction as face-to-face classrooms can be established only through detailed research and comparison. In order for a high level of interactivity to be attained, the online classroom environment would need to allow students to engage actively, collaboratively and at times independently in negotiation of meaning whilst participating in meaningful tasks in real time. Albeit on a small scale, this paper provides some results from a detailed investigation into the nature of interaction in both online and face-to-face tutorials.

Languages at the Open University

As the largest provider of open and distance learning (ODL) courses in the UK, the Open University, has been offering languages since 1995. At present the Department of Languages has a range of courses in German, French and Spanish with language levels from beginners' to final year studied by over 7000 students. Learners study via specially designed ODL materials consisting of course books, audio-visual materials on CDs and videos, assessment booklets and a course website. A tutor supports the students throughout via email or telephone and there is a chance to meet other students regularly at tutorials. Most of these courses now offer students the choice of either face-to-face or online tutorials. The Open University uses Lyceum, its own software for synchronous audiographic conferencing.

Lyceum is specially designed for teaching and has been adapted for language tutorials. The multi-point audio-connection allows synchronous discussions between groups of people and pair or group collaboration in break-out rooms. This is similar to teacher-group, teacher-student and student-student talks in face-to-face classrooms. Comparable to a face-to-face classroom are also the online modules 'Document' (similar to a simple word processor) and 'Whiteboard' (where prepared screenshots, images and task sheets can be presented, modified and manipulated). The former can be used like a board or flipchart, while the latter resembles the use of handouts or overhead transparencies. Furthermore, a 'raised hand' symbol indicates the intention to speak.

A module specific to Lyceum is the 'Concept map', which is suited to brainstorming and the collection of ideas as it allows typing in boxes, connecting boxes and the use of different colours. All different modules can be saved by users onto their own computers for later revision. To counter-balance the danger of audio-problems, a textchat facility is included, providing a backchannel for parallel discussions, clarifications, feedback and corrections. Compared to most other multi-point audio-graphic software applications and even to face-to-face classrooms,

Lyceum is a democratic medium as it allows students as well as tutors to be actively involved in manipulating and working with all modules.
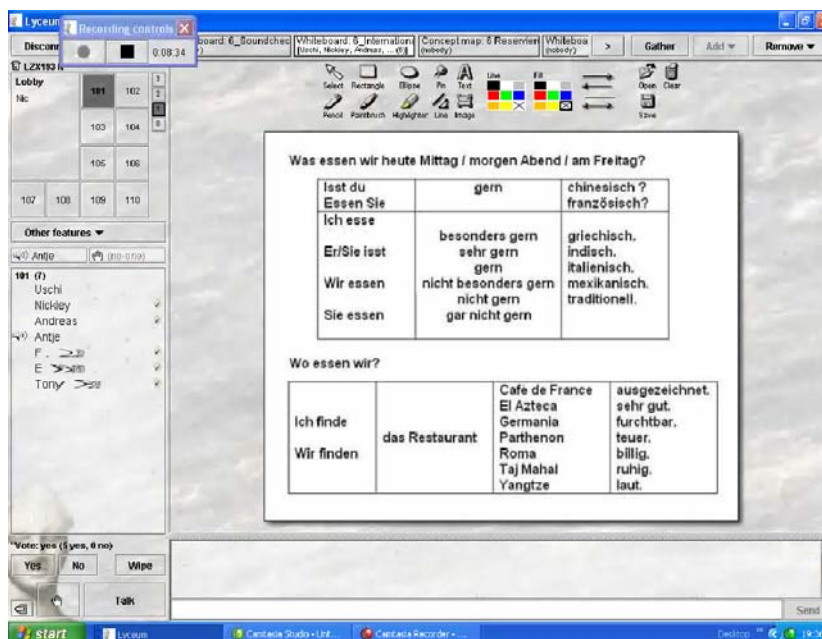

Figure *1*: Audiographic conferencing using Lyceum showing student list, rooms, break-out rooms, and a working Whiteboard

The Interaction Study

A choice of tutorial mode was first offered to learners with the introduction of new beginners' courses. This offered a unique opportunity to study online and face-to-face tutorials in comparison. There is already research referring to experimental set-ups or post-hoc evaluations, both from the Open University and elsewhere (many summarised by White, 2003). As a deliberate contrast we opted for the close observation of our students' real-life learning situations. Studies of this kind according to White (2003, p.xv) are rare and badly needed. Using real-life learning situations prevented us from running a genuine comparative study accounting for all extraneous factors. Instead we had to restrict ourselves to comparing tutorials run by different tutors with different students in the two modes. Nevertheless, the two course versions are based on the same materials. They, attract similar students, and are taught by tutors with similar qualifications and teaching background. Students and tutors are free to choose the mode of delivery for their tutorials. There were 11 online and 21 face-to-face tutors on Rundblick, and one tutor chose to teach both versions.

While the Interaction Study group was formed to research patterns of participation and interaction in the actual language tutorials, we also have the practical goal of improving the tutorial provision and student learning experience in our courses. From 2003 to 2005 (the first two years of running the course) the group recorded three face-to-face and nine online tutorials. This is continuing in an endeavour to collect a broad base of data. With a recording length of approximately one or two hours for each tutorial the resulting material is extensive and a selection of data had to be made here. The paper presents the analysis of one specific language-learning task, which is considered in both the face-to-face and online environment. It uses results from three of the recorded tutorials, one face-to-face and two online, all recorded about two months after the start of the course.

Quantitative methods are useful for the study of large numbers of learners or to establish the normal or usual progress patterns in language acquisition. Our study, however, is focused on a

close observation of small numbers of students in small groups. Thus qualitative analysis methods seemed preferable (Davis, 1995). With these we are seeking to establish

- how the opportunity to interact verbally is taken up by our students,
- how the tutors can support or hinder the active engagement of learners, and
- how the use of particular task types can support or hinder the active engagement of learners.

These questions are not unique to this study, but our perspective should allow us to make comparisons between the same tasks, similar learners etc. in the two different tutorial delivery modes.

The analysis of data from the tutorial recordings has been undertaken from different angles using different methods in an attempt to triangulate our qualitative research (see Müller-Hartmann 2001, p. 208). The work for this paper follows on from the findings of two earlier studies, looking at larger chunks of the tutorials, each using a different method of analysis: Social Network analysis (Stickler, Batstone, Duensing & Heins, 2005) and analysis of discourse using QSR (Heins, Duensing, Stickler & Batstone,, 2005). Social Network Analysis was chosen for its compatibility with online learning settings (Reffay & Chanier, 2002) and QSR analysis for the information it can provide on content of verbal interactions and for the possibility of analysing large sets of data coherently.

To date, the use of two different methods to analyse the same tutorial extracts highlights the limitations on the one hand and the benefits on the other, of focussing on social and linguistic aspects respectively. The question of whether our online and face-to-face tutorials can serve as a basis for a collaborative construction of knowledge, and understanding of the target language for the beginner language learner has been divided into smaller, manageable questions covering the following aspects :

- How much interaction is actually taking place?
  - ➢ Which participants contribute?
  - ➢ Which participants react verbally to a previous contribution?
  - ➢ Who is included, and who is excluded?

- What kind of interaction is taking place?
  - ➢ What are the relative amounts of different topics / types of interaction?
  - ➢ What language is used (by whom? for what? how often?)?
  - ➢ Are contributions structured or unstructured talk?

Social network analysis

Social Network Analysis (SNA) is a tool developed in social sciences to describe accurately the patterns of interaction between people making up a group or organisation. SNA developed out of an attempt to describe and interpret findings of a major qualitative study (Bott, quoted in Savage 2005) and has since become a leading social science method (Savage 2005, p. 6). It has been used to describe interaction in asynchronous CMC (computer mediated communication) in language learning contexts (Reffay & Chanier 2002; 2003). In its full form, SNA relies heavily on statistical and computer supported analysis. By using nodes and matrices, e.g. it helps to visualise basic patterns of interaction in groups (Wortham, 1999), e.g. how many turns are involved in a particular exchange, which participants are included and how often. While it does not contain linguistic data or purport to explain complex processes like the learning of languages, it can be used to generate graphic representations about interaction in language classrooms ("show what is going on") without any pre-determined theory of language learning. A simplified version (sna) has indeed been applied to interaction in language classes (Nardi, 2004). We are using small letters here in order to distinguish our simplified version from the more complex approach described previously.

Our first analysis using sna showed who is contributing and how often, the language used in contributions and the respondent. The method helps to represent visually patterns of participation and social interaction in the tutorials. This first analysis allowed us to draw the conclusion that the tuition medium is by no means the only aspect defining interaction patterns: task design and tutor style play an important role as well (Stickler et al., 2005).

The initial study, however, does not take into account linguistic details beyond the most basic distinction between the language studied in class (L2) and the first language used by students (L1). Features, such as type of interaction, quality, length, purpose of interactional exchanges cannot be analysed by this method.

Analysis of discourse using QSR N6

In order to allow us to investigate further form and functions of interaction in the three tutorials, we converted the transcripts of the recordings into a QSR N6 (Non-numerical unstructured Data Indexing Searching and Theorising) database. Using a sample of the transcribed data, we defined categories for content and linguistic analysis each with a number of subcategories (see Table 1), taking into account types of pedagogical interaction as distinguished by van Lier (1996, p. 178-194). The transcripts were than tagged at sentence level according to these categories.

Table *1:* QSR Node Tree for tagging tutorial interaction

• Language
 o English
 o German
 o German/English
• Interactors
 o Tutor
  ▪ Tutor to one student
  ▪ Tutor to students
 o Student
  ▪ Student to tutor
  ▪ Student to student
  ▪ Student to students and tutor
	• Interaction
	 o Classroom Management
	  ▪ ICT-related
	  ▪ Not ICT-related (Other)
	 o General Talk
	  ▪ Subject-related
	  ▪ Not subject-related (Other)
	 o Teaching and Learning
	  ▪ Instruction
	  ▪ Teaching point
		▪ Clarification
		▪ Feedback
		▪ Practice
		 • IRF*
		 • Drill
		 • Role play
		 • Modelling
		 • Repetition
		 • Presentation
		 • Free

*(IRF represents a triadic classroom exchange as described by van Lier (1996) consisting of a turn initiated by the author (I), the student response (R) and teacher feedback (F). For coding reasons it is here subsumed under "practice".)

This method enabled us to quantify the amount of various types of contributions by either students or tutor and the direction of these contributions. It was also possible to compare the amounts of the different languages used (L1, L2 or a mixture of these).

A first analysis considering one-hour chunks of the three tutorials (Heins et al., 2005) backed up the findings of Stickler et al. (2005). In addition, the observations made indicated that the two Lyceum tutors seem to be far more concerned than the face-to-face tutor to keep control of the tutorial, resulting in more tutor-led sessions. This disparity might be dependent on the different tutorial focus chosen by the three tutors. Therefore, the current investigation focuses on a contrastive analysis of one particular task type, a semi-structured role play, in the two learning environments applying both sna and QSR analyses in turn. Role plays are frequently used in language teaching for learners to act out tasks they might perform in real life using the foreign language, e.g. book a hotel room. When they are semi-structured, some dialogue is pre-written to support beginners or weaker learners.

Social network analysis of a role-play task

Our first sna indicated that tutor style and tuition medium influence the set-up of the tutorial interaction. Figures 2 and 3 show the interaction patterns during one particular role-play task observed in the three tutorials. The circles represent the different participants of the session: numbered circles are students; "T" is the tutor and "O" an observer; squares are cameras used for recording the face-to-face tutorial and a rectangular node represents the whole group. The lines between circles show verbal exchanges drawn from the person who speaks to the next person to speak regardless of whether the next statement was a direct response or not. Different colours of lines show the languages used: blue for L1 (English), red for L2 (German) and purple for a mixture of the two.
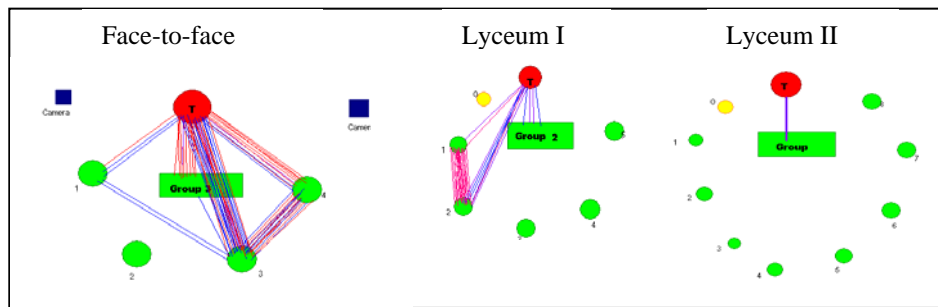

Figure *2*: Interaction pattern of introduction to task

The difference in tutor style is clearly evident in the analysis of the introductions (Figure 2). Lyceum Tutor I uses two students to model the dialogue for the rest of the class; at the end of the model dialogue she gives feedback (in German and English) to the participants. Lyceum Tutor II chooses to talk the students as a whole group through the dialogue once. He keeps tight control of what happens, thus prevents student-to-student dialogue. The Face-to-face Tutor gives a brief introduction in German to the whole group, then asks students 3 and 4 to model the dialogue. From this arise feedback and a discussion in English initiated by student interest on cultural issues (e.g. the use of credit cards in Germany).

The task itself is also managed differently by the three tutors (Figure 3). Lyceum Tutor II sends the students into a breakout room, where they practise the dialogue alone without being overheard by him or other students, while Lyceum Tutor I keeps the group together and pairs take it in turns to act out the dialogue. Lyceum Group I shows relatively strong tutor involvement including feedback and classroom management in English and German. However, students are passive, when they are not presenting the task. One student, who presented in the modelling phase, for example, is totally left out during the actual role play task. In Lyceum Group II, on the other hand, all students are fully involved and have ample opportunity to speak German, although some English is used. The absence of a tutor means no immediate teacher feedback is possible, but also that student-student interaction is not interrupted.
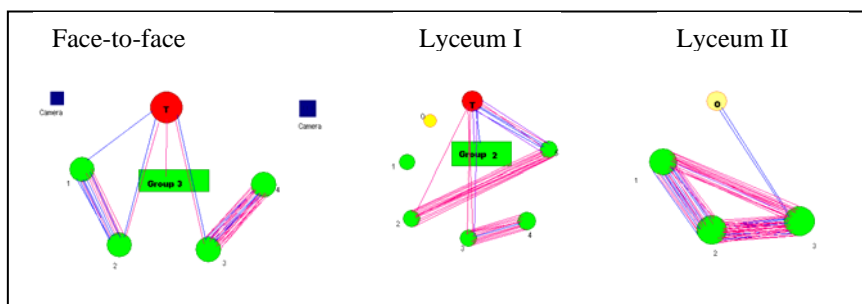

Figure *3*: Interaction pattern of task

In the face-to-face group, the students can remain in the same room and work simultaneously in pairs. Therefore, everybody can get dialogue practice at the same time without missing out on

tutor feedback either. Similar to the unobserved task in Lyceum Group II, students use some English when speaking to each other in pairs and the tutor is not listening.

This comparison shows that the nature of verbal interactions in the tutorials is influenced by tutor style, e.g. the introduction is similar in one of the Lyceum tutorials and the face-to-face one. However, the influence of the tuition medium is evident when one compares the tasks themselves. The face-to-face students benefited from dialogue practice in pairs without having to wait for another pair to finish. At the same time they did not miss out on immediate feedback and could ask for help when needed. Due to the medium, the Lyceum tutors could not use this option. One, therefore, opted for unobserved dialogue practice, the other chose to keep students together.

QSR N6 analysis of a role play task

The same tasks were analysed using the equivalent transcript sections in QSR N6 with the node tree designed for our study. Results are juxtaposed with the help of bar charts showing selected node reports (i.e. representing the occurrence of one tagged feature in the transcript) and intersection searches (i.e. representing those sections of the transcript where two features occur together) for the three tutorials (Figures 4-9). In the following diagrams percentages refer to the amount of sentences in the section of the transcript that refers to the whole role play task including the introduction.
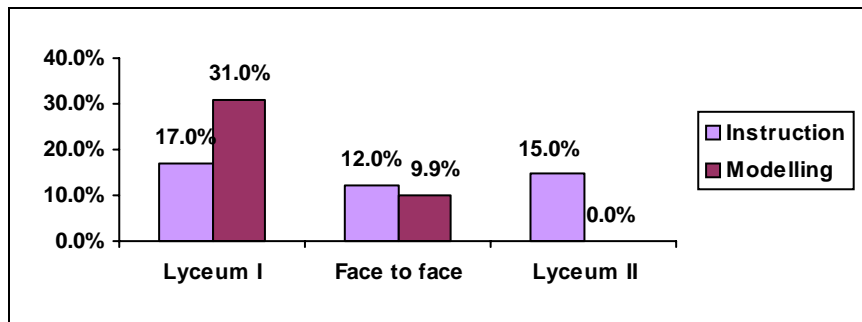
Figure *4*: 'Instruction' and 'Modelling' in introduction to task

The tutors' choice of introduction is shown clearly not only in the sna but also in the QSR analysis (Figure 4). The latter confirms that 'Modelling' was only used by Lyceum Group I and the Face-to-face Group. The amount of 'Instruction' in all three groups is roughly similar. 'Instruction' for this purpose is defined as explanations how tasks are to be performed.
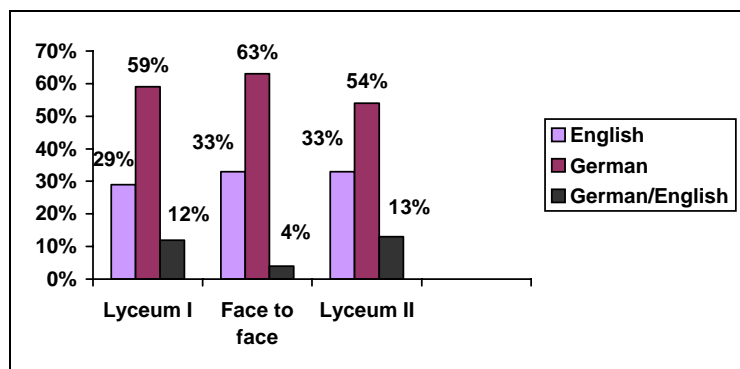
Figure *5*: Amount of different languages spoken during task

Considering that the purpose of a role play task is to practise German, it is important that the language is spoken as much as possible. The tasks are designed for "active learning", maximising learner involvement. However, because this is a beginners' group students or tutors might still

revert to English at times to clarify an issue quickly or mix the two languages in one sentence for the translation of a particularly difficult word. All three tutorials show a similar distribution of languages during the task (Figure 5). The use of German is clearly dominant, all groups use some English. The amount of sentences where the languages are mixed is markedly lower for the face-to-face tutorial.

The QSR analysis shows even more clearly than the sna that students are more likely to speak English when they are not observed by a tutor (Figure 6), i.e. in those tutorials which include unobserved work on the task. However, in these situations students still get a fair amount of German practice as they do not have to wait for the other group to finish. Instead students have a chance to speak to each other about personal issues, get some important 'bonding time', which is impossible when they are closely monitored by the tutor.
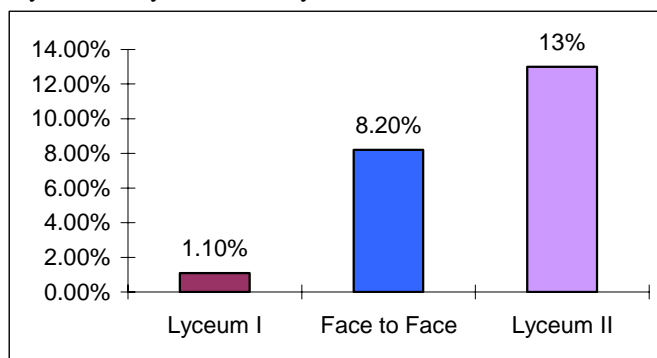

Figure *6*: English spoken by one student to another (student-student) during task

In a semi-structured role play task it is interesting to observe whether students stick strictly to the prepared script, i.e. use mainly structured talk or are willing to be more creative in their use of the language. Again this will be limited as these students are beginners and have less original language at their disposal. It is therefore promising that all three tutorials contain a fair amount of 'Unstructured Talk' (Figure 7). However, this will include as well the personal chat in English referred to above. 'Unstructured talk in German' is therefore a more noteworthy indicator of language learning. The influence of tutor style is also visible, as Lyceum Group II where the tutor models and translates the role play has the lowest occurrence of 'Unstructured Talk in German' (Figure 7).
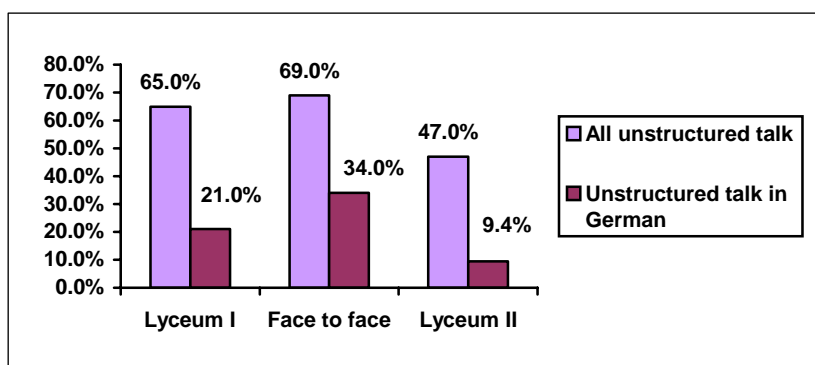

Figure *7*: Amount of 'Unstructured Talk' during task

However, in all environments the students rarely seem to want to stray off the subject which can be seen in the analysis of 'General Talk' (Figure 8). Only the partly unobserved Lyceum II group has a little 'Non-subject-related general talk' ("I wasn't paying attention, sorry, Howard."). Apart from this, the highly controlled context of the Lyceum I Group did not lead to any 'General Talk', while the subject-related cultural discussion during the introduction of the Face-to-face Group (see above) is also reflected in Figure 9.
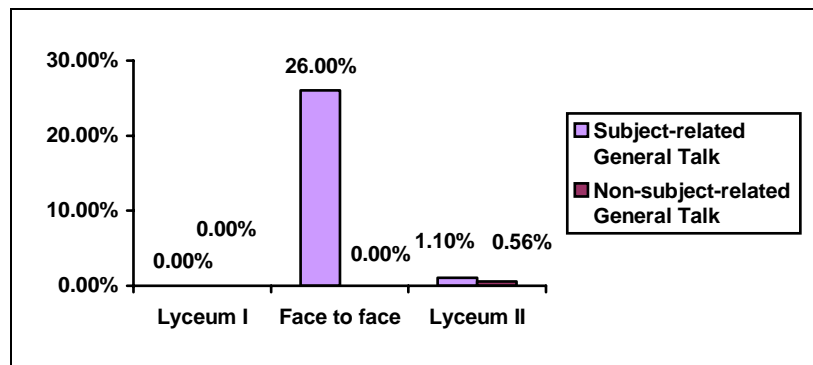
Figure *8*: Amount of 'General Talk' during task

When considering 'Classroom management' (Figure 9), a possible influence of tutorial mode can be observed. This classification concerns physical and virtual management of classroom and administrative matters, e.g. 'Please, go and sit over there.' 'Click on the hand if you want to speak.' Its occurrence is substantially higher for the online sessions than it is for the face-to-face one, even when ICT related exchanges are disregarded. It gives the impression that Lyceum groups need more explicit guidance or possibly more verbal expression of this feature than are necessary in the face-to-face environment.
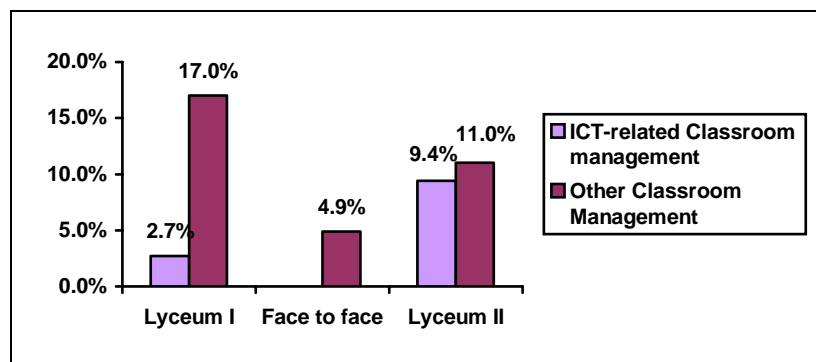

Figure *9*: Amount of 'Classroom Management' during task

These observations substantiate that the Lyceum tutors still feel the need to keep a tighter hold verbally on what goes on in their sessions, than the face-to-face tutor, either through using large amounts of structured talk or through avoiding letting students go into unobserved situations. This might, however, be dependent on tutor style. It could lead, as van Lier (1996, p. 185) warns, to "reduced student participation, less extensive language use, a loss of contingency and severe limitations on the students' employment of initiative and self-determination." However, for reliable conclusions further aspects of the social interaction in these situations will have to be analysed more closely, in particular the actual content of verbal exchanges and non-verbal communication.

Conclusion

This analysis has shown that the tutorial mode does indeed have an influence on the interaction taking place, especially in respect to the type and frequency of the interaction. However, the differences between the two Lyceum groups, and their parallels with the face-to-face group, indicate that a number of factors other than tutorial mode have an influence on tutorial interaction. Independent of the medium chosen, it can be observed that certain features of interaction are linked to the specific circumstances of each teaching situation, for example the amount of advice a particular group of students needs is due to the constituency and interest of the group, as well as

the classroom conditions (face-to-face) or the robustness of the conferencing software and internet connection (Lyceum) on a particular day.

The task also has a considerable influence on the interaction taking place. Interactions as part of a task tend to be more similar across media and tutors, regardless of their personal styles. Interactions surrounding the task, e.g. introductions, display a greater diversity. This confirms observations of other researchers (e.g. Rosell-Aguilar, 2005) that careful task design is important for the success of communicative language tutorials.

Our analysis confirms our previous findings that one of the most influential factors is the individual tutor style. Although all the tasks are designed for maximum interactivity and communicative learning situations, and tutors are chosen for their commitment to communicative language teaching, this analysis still exhibits considerable variations in the approaches adopted by the tutors, and the quality and amount of student interaction these approaches generate (e.g. use of target language, amount of independence given to students).

However, our study also seems to confirm the Lyceum tutors' preference for tighter group control (higher incidence of 'Classroom management, Figure 9), which we had observed previously. Whether this is necessitated by the medium or simply perceived thus by the tutors remains to be established. In this context, it is important to remember that face-to-face teaching has a longer tradition, thus a more established pedagogic rationale to which the tutors can refer. Lyceum tutors are working in an environment that is fairly new and still evolving.

Due to the limited amount of data analysed to date, these can only be tentative conclusions which will have to be confirmed through further analysis. Our observations suggest that it may be possible to maximise student interaction through careful task design and further tutor training while the online teaching medium becomes more established.

Further analyses of our data and the use of different tools are needed to consider additional aspects such as non-verbal interactions in online and face-to-face environments, students' social presence in the sessions, compensatory strategies and coping strategies for online teaching, content of unstructured talk, purpose of conversations in English and the quality of target language production.

References

Buckingham Shum S., Brier, J., & Evans, T. (2001). *Lyceum: Internet Voice Groupware for Distance Learning.* Paper presented at the Euro-CSCL:1st European Conference on Computer-Supported Collaborative Learning, Maastricht, NL. [Online] Available at: http://kmi.open.ac.uk/publications/pdf/kmi-01-3.pdf Retrieved 28/01/06

Coleman, J. (2003). *Tutor beliefs - German tutors (informal report of preliminary findings).* Milton Keynes: The Open University.

Davis, K.A. (1995). Qualitative Theory and Methods in Applied Linguistics Research. *TESOL Quarterly* 29(3), 427-453.

Gass, S. M. (2003). Input and interaction. In C. J. Doughty & M. H. Long (Eds.), *The handbook of second language acquisition* (pp. 224-255). Malden, MA: Blackwell Publishing Ltd.

Hampel, R. (2003). Theoretical perspectives and new practices in audio-graphic conferencing for language learning. *ReCALL, 13*(1), 21-36.

Hampel, R. & Hauck, M. (2004). Towards an effective use of audio-conferencing in distance language courses. *Language Learning and Technology (LLT)* 8(1), 66-82.

Heins, B., Duensing, A., Stickler, U. & Batstone, C. (2005). *A comparison of interaction and participation in face-to-face and online language learning tutorials.* Paper presented at CAL'05 Virtual Learning?, April 2005, Bristol, UK.

Müller-Hartmann, A. (2001). Fichtenschonung oder Urwald? Der forschende Blick ins vernetzte fremdsprachliche Klassenzimmer – Wie Triangulation und Interaktionsanalyse der Komplexität gerecht werden können. (Plantation or a Jungle? Researching networked foreign language classrooms. The benefits of triangulation and analysis of interaction for complex

systems.) A. Müller-Hartmann & M. Schocker-v.Ditfurth (eds.), *Qualitative Forschung im Bereich Fremdsprachen lehren und lernen* (206-237). Tübingen: Gunther Narr Verlag.

Nardi, A. (2004). Interaktion und soziale Fertigkeiten im DaF-Unterricht. (Interaction and social skills in German-as-a-foreign language classrooms) Paper presented at 8. Grazer Tagung: Deutsch als Fremdsprache und Deutsch als Zweitsprache - "Sprachpraxis im Unterricht"; June 2004, Graz, Austria.

The Open University Institute for Educational Technology (2005), Department of Languages – Courses Survey 2004, internal document.

Reffay, C., & Chanier, T. (2002). Social Network Analysis Used for Modelling Collaboration in Distance-Learning Groups. S.A. Cerri, G. Guardéres & F. Paraguaçu (eds.) *Intelligent Tutoring System Conference* (31-40). Biarritz, France.

Reffay, C., & Chanier, T. (2003). How Social Network Analysis Can Help to Measure Cohesion in Collaborative Distance-Learning. *Proceedings of Computer Supported Collabortive Learning confrence (CSCL'2003),* Kluer Academic Publishers: Dordrecht, NL (343-352). Also available online at http://lifc.univ-fcomte.fr/RECHERCHE/P7/pub/CSCL03/reffay_chanier.pdf Retrieved: 28/01/06

Rosell-Aguilar, F. (2005) Task design for audiographic conferencing: Promoting beginner oral interaction in distance language learning. *Computer Assisted Langauge Learning (CALL)* 18(5), 417-442.

Rüschoff, B. (1999) Construction of knowledge as the basis of foreign language learning. Mißler, B. & Multhaup, U. (eds.) *The Construction of Knowledge, Learner Autonomy and Related Issues*. Tübingen: Stauffenberg. (79 – 88). Also available online at http://uni-essen.de/anglistik/bernd/construction.htm. Retrieved: 31/01/06.

Savage, M. (2005) Revisiting Classic Qualitative Studies. Forum Qualitative Sozialforschung 6(1). [Online] Available at: http://www.qualitative-research.net/fqs-texte/1-05/05-1-31-e.htm. Retrieved: 28/01/06.

Stickler, U., Batstone, C., Duensing, A., & Heins, B. (2005). Distance and Virtual Distance: Preliminary results of a study of interaction patterns in synchronous audiographic CMC and face-to-face tutorials in beginners' language tutorials. *Proceedings of the 6th International Symposium of Applied Linguistics and Language Teaching*, Beijing and Shanghai: University of Northern Iowa Press. (740-750)

van Lier, L. (1996). *Interaction in the Language Curriculum: Awareness, Autonomy and Authenticity.* London: Longman.

Wang, Y. (2004). Supporting synchronous distance language learning with desktop video conferencing. *LLT* 8(3), 90-121.

Warschauer, M. (1997). Computer-Mediated Collaborative learning: Theory and Practice. *The Modern Language Journal, 81*(4), 470-481.

White, C. (2003). *Language Learning in Distance Education*. Cambridge: Cambridge University Press.

Wortham, D.W. (1999). *Nodal and Matrix Analysis of Communication Patterns in Small Groups.* Proceedings of the CSCL – (Computer Support for Collaborative Learning) Conference. Designing New Media for a New Millennium: Collaborative Technology for Learning, Education, and Training, Palo Alto, California (681-686). Also available online at: http://sll.stanford.edu/projects/CSCL99/papers/wednesday/Donald_W_Wortham_681.pdf Retrieved: 29/01/06

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