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Supporting Chinese speaking skills online

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Abstract

Chinese is considered a difficult language to learn by most Western learners, yet recently more and more people are learning Chinese, and increasingly teaching is delivered online. Due to the nature of Chinese and the complexity of online learning, research has not yet produced sufficient information on students' and teachers' interaction during synchronous online sessions.

This exploratory study investigates interaction in synchronous online Chinese tutorials with a focus on the different elements employed by the teacher and students to support online speaking development. It highlights the gaps between teacher intentions and student perceptions of online interactions and describes how skilful use of online technology and multiple modes can bridge these gaps. The study uses a combination of qualitative methods (observation, stimulated recall and thematic analysis) and multimodal transcription supported by some quantitative methods (comparison of frequency).

The findings are interpreted from a socio-cultural perspective, taking into account the differences between English and Chinese in terms of language and learning culture. Recommendations are made to improve the online teaching strategies and task design, specifically for improving Chinese speaking skills in synchronous online environments.

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Keywords: Chinese language; Synchronous online learning; Multimodal communication; Online language teaching

1. Introduction

In the UK, Mandarin Chinese was identified as a language important for strategic and political reasons by Lord Dearing (Dearing and King, 2007). Responding to this evaluation, an increasing number of Chinese courses is offered across all educational sectors. At the Open University the first Mandarin Chinese course, 第一步 (Dì yī bù: "First Steps"), was introduced in 2009. This paper will report on research undertaken during the first year of the course.

The Open University is a distance teaching institution where language courses are taught through the use of carefully structured materials ("tutorial in print" (see Rowntree, 1997)) with the support of a personal tutor. Over the past few years an increasing number of elements of teaching has been moved online, to virtual learning environments and synchronous online tutorials, offering the opportunity for immediate tailored feedback and spontaneous spoken

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interaction. Students' learning is now supported by Information and Communication Technology (ICT) as well as face-to-face interaction with teachers and peers.

This article focuses on multimodal interaction during online synchronous Mandarin tutorials, on teacher intention and student perception of the teaching taking place, and on the way multiple modes are used to engage students in online interactions. The research was undertaken to identify the skills required for teaching Chinese online.

The resulting pedagogical recommendations about, for example, the combination of different modes in online environments, the engagement of learners in online interaction, task design and instructions, and the focus on cultural elements, are intended to support the training of online language teachers. On a more methodological level, the exploitation of multimodal transcription for the analysis of online interaction will contribute to the growing knowledge of online language learning and teaching as well as inform online teacher training by suggesting the most skilful use of online environments.

2. Background of the research

This study takes a socio-cultural perspective on language learning (Lantolf, 2000; Vygotsky, 1978). Learning takes place when the learner actively engages with new elements and adapts her/his perspective in interaction with peers, advanced peers and, possibly, but not necessarily, teachers. This means that learning is a social and collaborative process. In this perspective, online language learning can be viewed as an activity mediated both through the means of technology and through the foreign language (Wertsch and Tulviste, 1992).

The current study is located on the cusp of two highly current aspects of language teaching: online teaching in multimodal spaces; and the evolving area of teaching Chinese in technology assisted and online environments.

2.1. Language learning in multimodal online contexts

Since the beginning of the 21st century, the use of computers in language teaching and learning has become commonplace (Bax, 2003; Liu et al., 2003). Over the past years, the use of spoken online communication has increased; this has resulted in a noticeable move of online language learning from taking place in predominantly written environments to multimodal environments (see e.g. Stockwell, 2007). Desktop audio- or video-conferencing or audio-graphic environments with a focus on visual input to support language learning are now easily available (e.g. Skype, Elluminate, FlashMeeting, WebCT, NetMeeting, DimDim, etc.). That the combination of different modes can aid learning has been shown by Kress and Jewitt amongst other researchers (Jewitt et al., 2001). In the pre-internet era, texts investigated by researchers encompassed mainly spoken and written modes, and to some extent in multimodal discourse also images as an element of text that contributed to making meaning in context. In online environments, modes are more complex and sometimes more difficult to distinguish (Hampel, 2003). New media communication skills expand modes to incorporate up to five distinct elements, including verbal, visual, musical, cinematic and procedural (Pinkard and Austin, 2010). These new media and new modes of communication also require the ability on part of the students to decipher and use them effectively and critically, i.e. digital literacies (Goodfellow, 2011). In this article we are referring to the most apparent modes in the synchronous audio-graphic environment *Elluminate*, i.e.: speaking, pre-loaded written text, synchronous writing (textchat), pre-loaded images, synchronously drawn images and potentially a video image. The modes also include procedural elements, such as yes and no indicators (tick and cross), emoticons (smiley face, confused face, clapping hands, thumbs down) and a hand raising symbol, which can be used as substitutes for gesture, facial expression, and body language, and interaction with the screens (Illustration 1).

The multimodal learning environment allows users to choose the mode or combination of modes most suited to his or her learning preferences (Stickler and Hampel, 2010), and demands that the teacher be skilled in the multimodal support of online language learning (Hampel and Stickler, 2005).

Although this is still an under-researched area, direct comparison of teaching sessions online and in a face-to-face setting has shown the influence of technological affordances on the patterns of communication (Heins et al., 2007; Stickler et al., 2004, 2007), and consequently, the differing needs of teacher skills and training (e.g. Wang et al., 2010).

As Hampel and Stickler (2012) have shown, there is still a paucity of research which examines the impact on interaction of using video, audio and text in an online language classroom and analyses such multimodal communication. In our specific case, the usual limitations of second language (L2) learners in constructing or co-constructing meaningful dialogues are exacerbated in two ways: firstly, by the relatively low level of language competence of beginner learners,

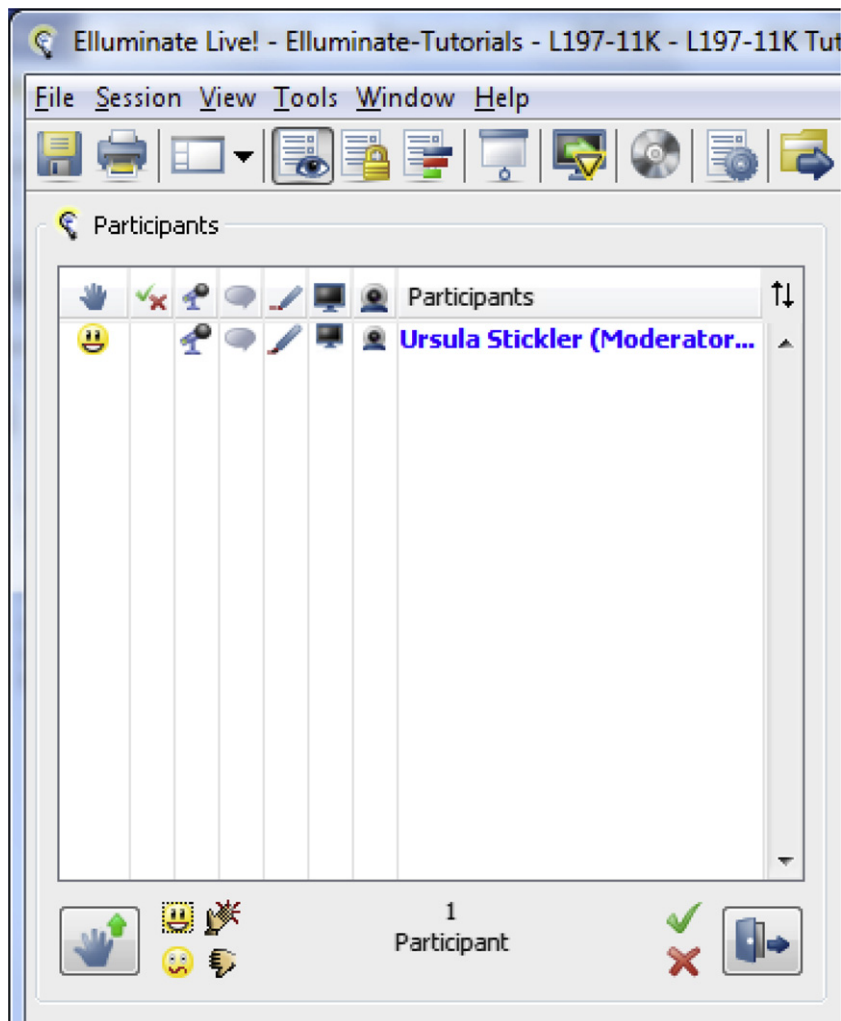


Illustration 1. Procedural elements of Elluminate: hand raise button, emoticons, tick, cross, absence indicator.

and secondly, by the lack of certain compensation strategies in an online environment. In online language tutorials, communication is mediated by the language and by technology, and to be able to participate at all, learners need to have a minimum level of computer and language competency. Some of the compensation and communication strategies available in a face-to-face classroom are not present in computer mediated communication, for example, facial expression, body language, gesture and interpretation of position. However, strategies, such as the use of textchat and emoticons to support or supplement vocal communication, are at the disposal of participants in synchronous online video or audio-conferences and can be used in a complementary or compensatory way (Hampel and Stickler, 2012).

Rather than focusing on technical skills of the teacher (see e.g. Wang, 2004) or affordances of the medium, this study will investigate the pedagogical skills needed to teach beginners' language courses online and to maintain an atmosphere that can encourage learning and support the development of language. How a meaningful learning experience can be supported under such restricted circumstances, and which – if any – compensatory strategies can be employed by the teacher, will be investigated in this paper.

2.2. Technology-assisted Chinese teaching

The challenges for learning Chinese as a foreign language (CFL) have been described in various books, reports and articles (see Chen et al., 2010; Hu, 2010; Orton, 2008; Wang and Kirkpatrick, 2012). As in any other language,

learners have to cope with unfamiliar vocabulary, sounds and structures. Learners of Chinese also have to acquire knowledge of Chinese characters, as well as the Western transcription system of Pinyin, and they have to cope with significant cultural differences. Despite the clear recognition that reading and writing are particularly challenging for the Chinese learner (Lee and Kalyuga, 2011), for the distance language student of whatever language the most difficult skill to acquire is spontaneous speaking (White, 2003). This is also true for learners of Chinese. Preparatory tasks for spontaneous speaking are made more difficult in Chinese by the use of characters (no immediate transfer of image to sound for Western learners), and the need to use accurate tones (an additional challenge in pronunciation).

To a certain extent, modern technology has reduced the difficulty of learning CFL. Instead of writing Chinese characters stroke by stroke, learners can use a Word processor to input text. Ample visual and audio materials can be easily obtained via the internet. Users can practise writing Chinese characters on touch screens. An increasing number of applications assist character learning, reading skills, writing skills, and listening comprehension (Kan, 2011; Sun, 2011; Tsai and Xu, 2008; Wang, 2004; Wang et al., 2010). Attempts have also been made at creating speech recognition tools sophisticated enough to recognize Chinese tones (Chan, 2003). Automatic feedback should provide sufficient information for learners to adapt their own sound production to the implicit model speaker; however, technology-supported interactive speaking practice is still in its infancy.

A different – and more communicative – route is chosen by teachers and researchers who use the computer simply as a means for establishing online communication links between speakers and learners of the L2 (Stickler and Emke, 2011). The conventional method in distance teaching is the “stimulus – response – record – model – compare” sequence that should encourage learners to improve their pronunciation and fluency independently (Stickler et al., 2007). It is generally accepted that a supportive online learning community may enrich distance learners’ experience (Anderson, 2004). At the same time, the complexity of such communities yields debates on the role of learner and teacher: some scholars (e.g. Salmon, 2004) believe that teachers play a key role in moderating online collaboration and learning communities (Ernest et al., 2012).

Disproportionate to the fast growing number of CFL learners and applications in this digital world, the research into the use of technology to assist CFL learning and teaching has been mainly about designing and evaluating CALL applications (Chang, 2007; Zhang, 2002, 1998). Researchers’ experiments seem to suggest that CALL has positive effects on CFL (Chang, 2007), but the process of such language learning is under-investigated. The question of what support is most needed for online CFL learners remains equally under-discussed (So et al., 2008).

Since 2004, Wang and her colleagues (Wang, 2004; Wang and Chen, 2007, 2009; Wang et al., 2010) have been pioneering the use of synchronous CMC tools for CFL teaching and teacher training. Wang and Chen (2009) established criteria for evaluating synchronous CMC tools based on second language learning and distance learning theories. The centre of their argument is that synchronous interaction is a crucial component in online language learning, and fostering such interaction is an important principle in distance language teaching. Wang and colleagues (2010) characterized the online learning process of trainee language teachers as progressing through four stages – “the ‘wow’ stage, the ‘oh–oh’ stage, the anxious stage, and the internalizing stage” (p. 277). While this study unveiled the intricate process of online learning, the findings were drawn from trainees’ reflection journals which means it was a ‘re-call’ or ‘re-construction’ of the online learning process. In the current study, we are using stimulated recall as well as examining synchronous online speaking interaction from both learner’s and teacher’s points of view, and using multimodal methods to examine the ‘real-time’ learners’ interaction with teacher, peers, and online tools.

Drawing on previous research undertaken in the areas of online multimodal language teaching and technology-assisted teaching of Chinese, this study focuses on the following questions:

- What specific challenges does teaching Chinese online present (linguistic, technical, cultural)?
- How and why do teaching intentions match student perceptions or fail to do so in online multimodal tutorials?
- What multimodal coping strategies are used by the teacher and by students during online Chinese tutorials?

3. Project description

3.1. 第一步: the Chinese course

The Chinese beginners’ course 第一步 was introduced at the Open University in 2009. It was the first time the university’s Department of Languages had offered a course in a language using non-Western script. Although the

Department has ample experience in designing and delivering distance teaching of languages, this posed an additional challenge to the course team. The first iteration of 第一步 started in November 2009 and had its final examination in September 2010. Students had a learning time of approximately 300 h spread over 44 weeks, with short breaks for Christmas, Easter and the summer. Six assignments spread over the length of the course tested reading, listening, writing and speaking skills. Two final exam tasks completed the course.

The teaching materials of 第一步 are based on a course developed by George Zhang and colleagues, “Chinese in Steps” (Zhang et al., 2005), which was re-written for a distance teaching context and with added online elements. The materials comprise three course books, two practice books, three CDs and a Study Guide which form the offline elements of the course. Samples are available in OpenLearn, the Open University’s freely available courses (<http://openlearn.open.ac.uk/course/view.php?id=4390>). A Moodle website with a study calendar, revision activities, and communication tools for student peer support and synchronous learning form the online elements. Additional teaching and support is offered by the tutors in small tutor groups via regularly scheduled synchronous tutorials as well as forum messages and email. As with other language courses at the OU, tuition is blended, i.e. some tutorials are face-to-face, with students travelling to study centres across the UK; some tutorials are provided online via *Elluminate*. Tutorial attendance is not obligatory in any of the language courses.

The course attracted more than 450 students in its first year. A majority of Open University (OU) students are adults in full time or part time employment, studying part time with the OU. For the Chinese course, almost 60% of enrolled students were between the age of 30 and 59, with only 10% over the retirement age (Illustration 2).

Regarding their motivation, learners chose to study Chinese for a variety of reasons, predominantly to do with interest rather than work or career purposes (see Kan and McCormick, 2011). The second ranked reason for learning Chinese was the “intellectual challenge”. Compared to other beginners’ courses at the Open University this reason is mentioned more frequently in the case of Chinese (Table 1), it is given four times as often as for Spanish, for example (Furnborough, 2010).

3.2. Online elements of the Chinese course

The online elements of the course have a number of functions: organising and scheduling students’ work; weekly revising of skills learned; storing course materials in alternative formats and assessment materials; presenting additional materials and study support; and linking to online tutorials held via video conferencing.

The central element of the course website is the study planner; this shows a calendar with weekly slots. Each slot displays the Unit and session title, and lists all the tasks, offline and online, that students are expected to complete that week. Some additional revision materials are linked to the weekly slots (Illustration 3).

The revision is divided into skills: quizzes for reading, listening and grammar cover the main teaching points of the week; speaking activities with model answers and interactive speaking tasks offer supported practice for this skill in addition to the speaking tasks on the CD. The online revision tasks are designed for immediate feedback, allowing students to check their progress independently at regular intervals.

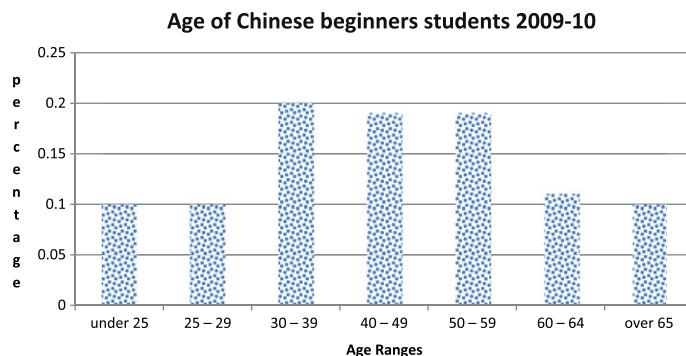


Illustration 2. Age of Chinese beginners students 2009.

Table 1
Reasons for studying Chinese (adapted from Kan and McCormick, 2011).

What is the most important reason for you to study Chinese?	
For pleasure and interest	25.4%
As an intellectual challenge	22.3%
To assist me in my present or future work	18.1%
To be able to communicate with Chinese-speaking friends or family	11.4%
To be able to communicate when visiting a Chinese-speaking country	9.3%
As part of a wider programme (for instance, to obtain a degree)	6.2%

The course website also contains due dates for assignment tasks and links to the online tutorial space. Tutors, students, and the course team can use the website to upload or recommend additional materials. For example, tutors can upload their tutorial materials for preparation or revision.

Overall, the Moodle website acts not only as a structured and organised repository of course materials but also as a communication hub for the entire course cohort, including the course team and all tutors.

3.3. *Elluminate as a teaching and learning tool*

The online tutorials of all language courses at the OU are delivered via *Elluminate*. *Elluminate* is a video conferencing system designed for online teaching and offers a whiteboard as a central screen element, with multi-channel speaking, video for up to 6 users, private and public textchat, shared web-browsing, desktop and application sharing, document transfer, quizzes, notebook and annotation, and other optional elements. The whiteboards can integrate pre-

The screenshot displays a web interface for a Chinese language course. The browser title is 'L197-11K: 第一步: Beginners' Chinese'. The left sidebar contains several sections: 'Online practice' with links for Culture notes, Speaking practice, Study tips, and Vocabulary glossary; 'Working with computers' with links for installing Chinese font, typing characters and pinyin, typing practice, NewPepper software, getting help and support, and finding useful information about a computer; 'Calendars' with options for a personal calendar and a combined planner; and 'Search website resources' with a search box and a link to search the OU library. The main content area is divided into sections for '15 November • Unit 1' and '22 November • Unit 1'. Each section lists various practice activities such as listening, grammar, reading, and speaking practice, along with study tips and cultural notes. The interface is clean and organized, with a purple and white color scheme.

Illustration 3. Screenprint of the online Study Planner for 第一步, selected weeks.

prepared PowerPoint slides or interactive whiteboard screen sequences. Up to 500 people can participate in an *Elluminate* session. For language tutorial purposes, a smaller group size, between 15 and 25 students, ensures that every participant has a chance to communicate and practise in the session.

The teacher or “moderator” in *Elluminate* can present teaching material on the screen and via media upload, can create additional “breakout rooms” for small group work, and can control and manage the classroom interaction through a “participants window” where individual participants’ actions and connection status are indicated. The following illustration shows the elements of an *Elluminate* screen with integrated whiteboard content (Illustration 4).

Particularly for language teaching the use of a synchronous, multimodal online teaching element has proven important to allow students to practise interactive and spontaneous speaking. Depending on the level of the learners, the focus of an online tutorial might lie more on pronunciation practice and feedback, communication, specific tasks or language functions, or the re-use of learned language chunks.

For language courses at the OU the course teams provide teachers with the pre-prepared whiteboard screens for specific tasks in two versions: in an interactive *Elluminate* whiteboard format, and an offline readable PowerPoint version. Tutors can adapt and amend the screens for their own use in tutorials or also create their own materials and share these via LORO, an Open Educational Resource repository (see Comas-Quinn et al., 2011).

3.4. Data collected for this study

For this project, data was collected throughout the first year that 第一步 was taught at the Open University. One of the researchers was a teacher on the course, the other participated as a student. Both collected notes in written and

The screenshot displays the Elluminate interface. On the left, a 'Participants' list shows 'Lijing Shi (Moderator)' and several other users. Below it is a 'Chat' window with a message history. The main area is a 'Whiteboard - Main Room' displaying a lesson slide. The slide title is 'Negating action verbs in past tense - use 没有 méiyǒu'. It includes an 'Affirmative' section with the sentence '昨天我去伦敦了。' (Yesterday I went to London) and a 'Negative' section with '昨天我没(有)去伦敦。' (Yesterday I didn't go to London). A small illustration of Big Ben is on the right. A blue box at the bottom right of the slide lists two points: '1. To negate the verb 有' and '2. Negative form for past tense'. The interface also shows a 'Follow Moderator' checkbox and a 'Talk' button at the bottom.

Illustration 4. Screenshot of *Elluminate* session in July.

audio recorded format throughout the course as participant observers. Two 75-minute long *Elluminate* tutorials were recorded using the inbuilt recording facility of *Elluminate*, and transformed into mpeg format for re-use and detailed transcription using the *Elluminate* “Publish” software.

The focus of this paper is on the *Elluminate* tutorials, specifically the multimodal elements used in teaching (and learning) of Chinese online.

4. Methodology

The aim of this study is to identify good practices in the online teaching of Chinese, through observation and analysis of online behaviour of teachers and students, identifying the teacher’s intentions in teaching and instruction and matching this to the students’ perceptions of their own learning. To achieve this, a mixed method approach was employed.

The two principal researchers involved in the analysis process were: the teacher of the course and second author of this paper; one student in the group and first author of the paper. In addition, a research assistant was employed to help in the multimodal transcription and to support the stimulated recall phase. As a first step, recordings of online tutorials were transcribed using the multimodal transcription conventions outlined in *Illustration 5*. Following this, themes and contradictions were identified from the data; these were ordered according to focused thematic analysis. An additional step involved the two researchers and research assistant in stimulated recall sessions, viewing and discussing the recordings of pertinent events.

Although this study takes a predominantly qualitative approach and is exploratory, some quantitative data is used to support the arguments, in particular about the frequency of tool use, and the ratio of L1/L2 used in online tutorials. The method of participant observation of classroom discourse from two perspectives (teacher and learner) has helped to explore under-researched aspects of teaching and learning languages in multimodal contexts.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	time	task	technical issues	new turn	pause length	Speaker	audio English	audio PinYin	audio Chinese	whiteboard	text chat	ticks	emoti cons	lesson plan	teach er's intent ion	student's perception	teacher's reflection	Researcher notes
783	49:18:00		S2E mic off		2						S5C / S4U							
784	49:20:00			NT		T1L		Duo1	多		S5C / S4U							
785	49:22:00					T1L	means, many, much				S5C / S4U							
786	49:24:00					T1L		Shao3	少		S5C / S4U							
787	49:25:00					T1L	means, little. So, few.				S5C / S4U							
788	49:27:00					T1L	So in this case you should use				S5C / S4U							
789	49:30:00					T1L		Duo1	多		S5C: I'll turn down my mic volume							peer support straight away to try and sort S2E's problem.
											S4U: sorry, my fault							
											S5C: you can turn the volume down again							
790	49:31:00					T1L	Let's more . More.				S4U: sorry, my fault							
791	49:32:00					T1L	A little bit more. Okay? A little bit more water. So,				S5C: you can turn the volume down again							
792	49:36:00					T1L		duo1 he1 shui4	多喝水		S5C: you can turn the volume down again							
793	49:38:00					T1L	Now can you say it using				S5C: you can turn the volume down again							
794	49:40:00					T1L		Ying1 gai1?	应该		S5C: you can turn the volume down again							
795	49:40:00		T1L mic off		5						S5C: you can turn the volume down again							
796	49:45:00			NT		S2E	Sorry.				S5C: you can turn the volume down again							
797	49:46:00		S2E mic off		4		Okay, Can you				S5C: you can turn the volume down again							

Illustration 5. Excerpt from multimodal data analysis.

4.1. Multimodal transcription of online tutorials

The recordings of *Illuminate* tutorials were transcribed, first for content, and then with a multimodal transcription focus. The transcription conventions for multimodal elements were based on tutorial transcriptions developed previously for German tutorials (Heins et al., 2007; Stickler et al., 2004) and extended to multimodal transcription conventions for video-conferencing (Hampel and Stickler, 2012) used at the department of languages at the Open University. They have been adapted for the Chinese tutorials.

The transcriptions include the following elements: time; length of pause, task; technical issues; new turn; speaker; audio English; audio Pinyin¹; audio Chinese; whiteboard actions; text chat; ticks; emoticons. For the transcription of Chinese it was decided to transcribe in Pinyin as well as Chinese characters (simplified) for ease of access for non-Chinese speakers. Multimodal elements were determined by the affordances of the software.

4.2. Focused thematic analysis

Our analysis of the data followed a qualitative approach based on the thematic analysis method (Aronson, 1994; Boyatzis, 1998). We focused on specific areas of the tutorials that showed common themes that accumulated more instances over the process of the research. Analysis of the tutorial data started with thematic analysis conducted in parallel by both researchers, a comparison and discussion of findings leading to further refinement of the themes. The thematic analysis helped, on the one hand, to structure the multimodal transcription, and on the other hand was influenced by the selection of categories chosen for the transcription. In this way, our analysis process was circular and spiral: moving from a reviewing of recordings to focussing in on certain critical incidents.

At the same time, our approach through the literature and our reading of online pedagogy, multimodal analysis and Chinese teaching literature provided us with some categories for transcription and analysis. So the themes for analysis of data were partly derived from the literature (“top-down”) and partly evolved from the data itself (“bottom up”) (Atkinson, 2005).

The process of working from three different perspectives, that of researcher, teacher and learner, combined into themes that reflect the multi-aspect approach, e.g. focusing on “mismatches” between teacher intention and student expectation. Comparisons between the two researchers allowed for a merging and concentration of themes across the whole data set.

In traditional observation, the researcher would observe teacher and student in a classroom where they are both engaged in the tutorial. Additional research might include interviews with the students and reading teaching plans. As participant observers, both, teacher and student, have dual roles: they are engaged in teaching and learning at the same time as observing each other and themselves in their actions. Post-tutorial research would include reflection, discussion, and possibly stimulated recall.

In our set-up, the teacher and the student are both researchers. However, the student is also an experienced online language teacher, and thus has a triple role (see *Illustration 6a* below). In addition to live observation, the tutorials were also recorded. Post-tutorial research included stimulated recall (observing and commenting on the tutorial recordings), discussions and transcription (see *Illustration 6b* below).

Themes derived from the data analysis are:

- The use of emoticons and other multimodal features by teacher and students during online tutorials;
- Coping with anxiety and technical problems online: support from teacher and from peers;
- Using L1 and L2 in online interaction – language choice;
- Planning a tutorial and implementing the plans;
- Match and mismatch of teacher’s intentions and students’ perceptions of activities and language practice online.

4.3. Stimulated recall: three steps in understanding tutorial interaction

An additional step in the data analysis involved both researchers engaging in stimulated recall sessions (Calderhead, 1981) with the recordings, one focussing on the teacher perspective, the other on the student perspective.

¹ Our transcriptions use numbers for tone markers in Pinyin due to the limitations of Excel, conventional Pinyin presents tone markers above vowels.

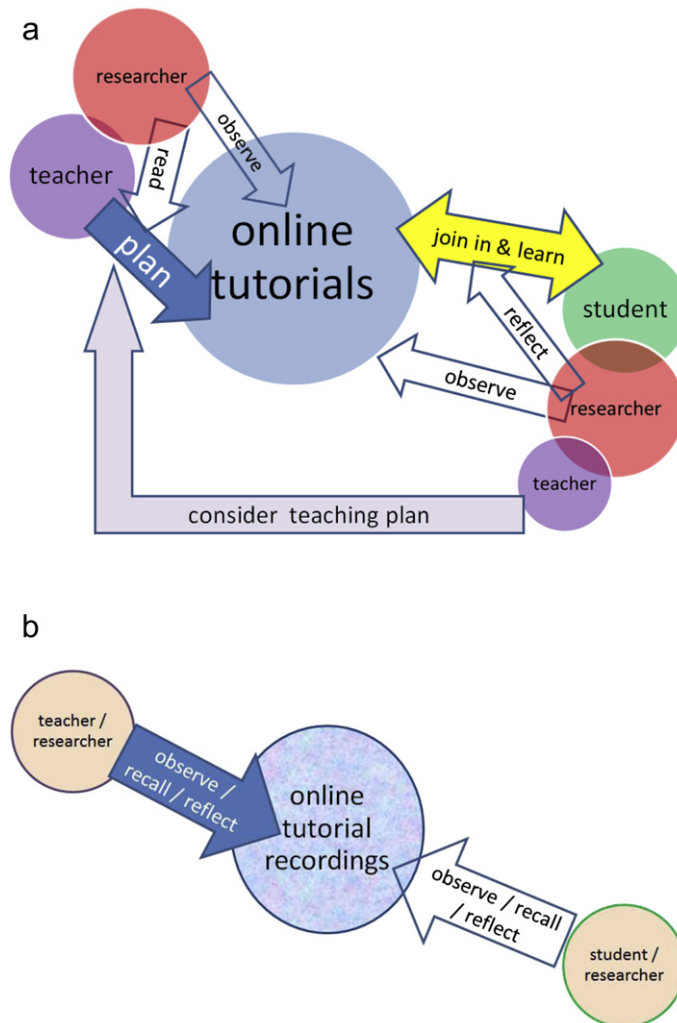


Illustration 6. a: Roles in participant research: live observation. b: Roles in participant research – post-tutorial observation.

For this phase, the following categories were added to the multimodal transcription grids: lesson plan; teacher's intentions; student's perceptions; teacher's reflections; researchers' reflections. The lesson plan was used to evidence the teacher's original intentions, supplemented with the teacher's recall of her reasons for selecting certain tasks and structures. The student's perception was added, based on diary entries made during the course and concurrent recall during and after the transcription phase.

For the teacher's and researcher's reflection, notes were taken during the stimulated recall, and the thoughts were condensed and entered into additional columns in the multimodal analysis. This phase was aided by the research assistant.

As both researchers were engaged with the teaching and learning process, the data collection, and the data transcription, focus on the material was kept up for a substantial time. The switching of perspectives between researcher and teacher or student proved challenging as well as stimulating.

This third phase (using the stimulated recall) focused attention specifically on the contradictions, tensions and mismatches.

5. Findings

As we see the learning of Chinese happening mainly through social interaction with peers and teachers, mediated through the use of technology as well as through languages, we focus our attention mainly on the various elements

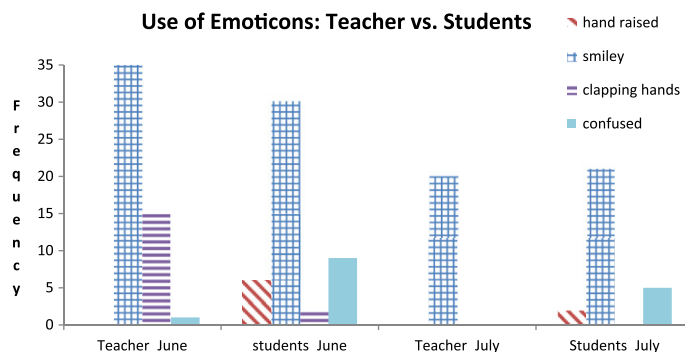


Illustration 7. Use of emoticons (teacher and all students combined).

supporting or hindering this learning process. We look at two full 75-minute tutorial recordings in detail. The first one was recorded in June, the second one four weeks later in July. Five students attended the tutorials in June and five in July; however, only two students attended both tutorials (S4 and S5).

The research process brought the following themes of the online sessions to the fore: the use of multimodal elements; the support offered by coursemates; the use of Chinese or the use of English; the intentions of the teacher; the match or mismatch between what the teacher intended to achieve vs. what the students perceived.

5.1. Multimodal elements used by teacher and students

The teacher uses a number of features of the multimodal online environment: apart from audio and textchat for input, she frequently uses emoticons (“smileys”) to provide feedback and to encourage students (Illustration 7).

Students also employ a number of additional modes online, textchat is used mainly for greetings and peer-conversations. The use of emoticons is different between individuals: although most students employ some emoticon at least once during the tutorial, only two students employ them very frequently and use a number of different types (Illustrations 8 and 9).

In addition to emoticons, students also use textchat (in English), draw lines on the whiteboard to link text elements, and drag and drop text boxes in the whiteboard area. The main interaction takes place via the synchronous, multi-point audio channel.

5.2. Peer support to cope with online anxiety

One of the students in the June tutorial announces her intention of leaving the class half-way through the lesson, as she writes in the textchat:

S2: *Sorry but I am going to leave as Lijing is very quiet but S5 makes my computer jump* (time: 48:45)

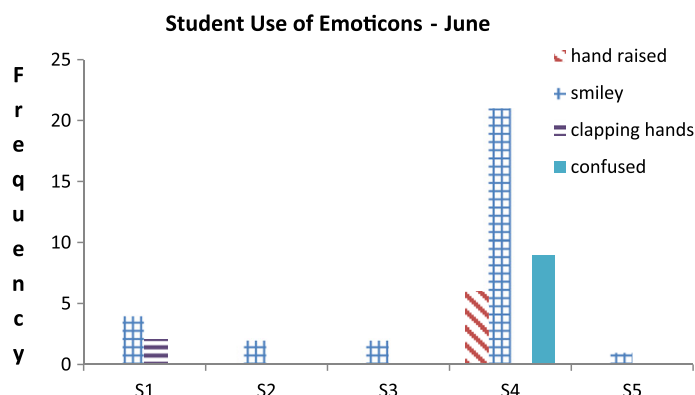


Illustration 8. Student use of emoticons — June (individual students).

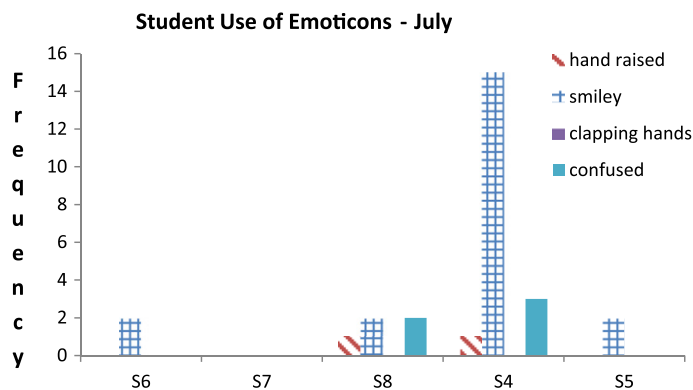


Illustration 9. Student use of emoticons – July (individual students).

It is notable that S2 started typing her message 25 s earlier (48:20).

Her peers' reaction to this announcement is quick: S5 and S4 respond via the textchat:

S5: I'll turn down my mic volume

S4: sorry, my fault. S5, you can turn the volume down again <wink>

At the same time, the teacher, Lijing, tries to engage S2 in the language task by asking her a question.

S2's reaction is not positive, a simple verbal: "Sorry." in the audio channel.

It is obvious to the researchers that S2 is starting to give up. The research notes show: "get's a bit irritated at this point > her voice becomes stressed – aloof." The teacher then tries to encourage the student actively.

To summarise, these attempts in different modes to stop the student from leaving early or giving up can be described as:

- Teacher attempting to engage student (audio)
- Teacher encouraging (audio)
- Teacher asking direct question (audio: "S2, do you really want to go? Or, I can practise this with you if you don't mind.")
- Student/peer reacting with technical help (reducing sound)
- Student/peer reacting with text acknowledgement and emoticon (textchat, emoticon)

This leads to the student not leaving the class for some time. She stays active in the textchat but contributes little verbally. Eventually, the student leaves more than 13 minutes later, towards the end of the session when pairwork starts again and her active verbal engagement would have become unavoidable.

Student S2 is of mature age and a true beginner learner of Chinese. She is not very confident in her ICT skills, and linguistically she is quite challenged by the course. However, she attends tutorials regularly and manages to complete the course successfully.

Both technical and linguistic difficulties play together to increase her anxiety and stress level during this tutorial. Teacher, peer support, technical and linguistic accommodation all delay the withdrawal of the student from this online tutorial. Indeed, she continues to participate, although she chooses not to speak in Chinese any more.

This short example shows how crucial peer support and technical accommodation can be for maintaining a positive learning experience. This is no different from face-to-face tutorials but it demands different skills on the part of fellow students as well as on the part of the teacher.

5.3. The development of language choice over time

It is always of interest to language teachers and researchers to find out how much target language is produced in tutorials, whether face-to-face or online. Comparing the two online tutorials studied here in detail, an increase in the

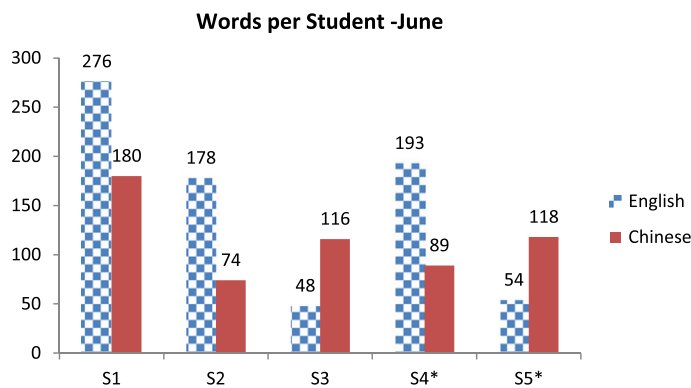


Illustration 10. Words per student – June.

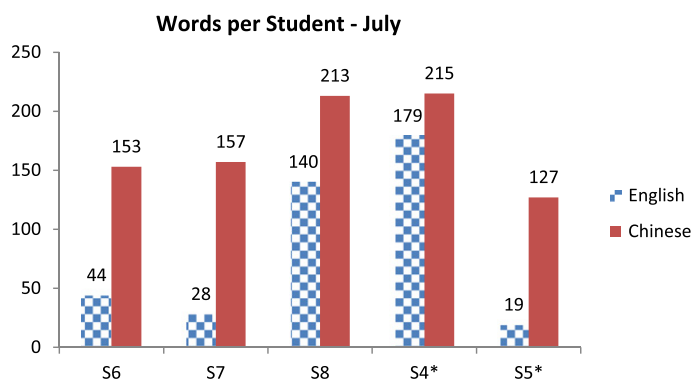


Illustration 11. Words per student – July.

use of target language words in spoken contributions compared to English could be observed over time (see Illustrations 10 and 11).

Although only two students were present in both tutorials and can be compared directly (S4 and S5), the general trend of using more Chinese than English in the later tutorial is very obvious. Comparing the ratio of Chinese to English makes the change even more obvious as can be seen in Illustrations 12 and 13.

Whereas in June only two students use more Chinese expressions than English, in July all the students are using predominantly Chinese. The lowest ratio of 1.2:1 still shows considerable more Chinese use than the same student's 0.46 ratio in June; and the best student uses six and a half times more Chinese words than English in this session. The only participant still using predominantly English is the teacher, giving all grammatical explanations and most task instructions in English rather than Chinese.

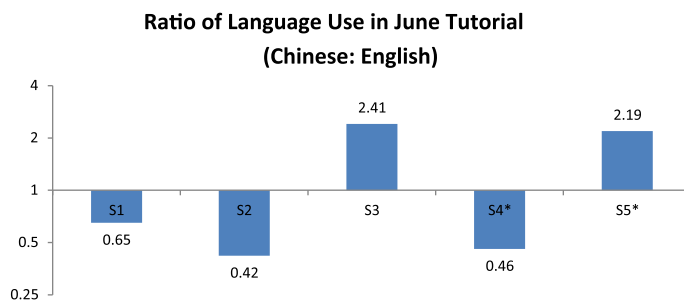


Illustration 12. Ratio of language use: Chinese to English in June.

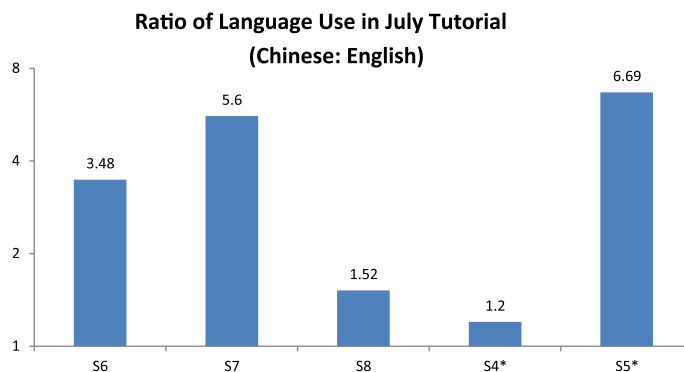


Illustration 13. Ratio of language use: Chinese to English in July.

The wordcounts for online tutorials are slightly skewed, as during pairwork only the discussions of one pair can be recorded. Although this limits the usefulness of absolute numbers, a change over time can still be observed by comparing two tutorials recorded, transcribed and analysed using exactly the same methods (Illustration 14).

In terms of content analysis regarding language use, some of the English is used by peers to explain language to each other, as well as for technical issues and peer support. This can be compared to the teacher's use of the L1 for grammatical or language structure explanations (see below).

5.4. Teacher intention

Most of the students' utterances are in some way non-standard, mostly mispronounced or using wrong tones. The teacher regularly recasts the utterance in her feedback, while at the same time praising the student's effort.

Here is one example for the transcript:

“Very good. 一直走。一直走。(Yi4 zhi2 zuo3. Yi4 zhi2 zuo3.) just means walking. 一直走。(Yi4 zhi2 zuo3) That's very good. Okay, S5? I'm going to ask you the same question.”

The high percentage of English used by the teacher can also be explained by her intention to make students understand grammar points taught in the lesson.

From a pedagogic point of view the use of stock phrases for instructions, e.g. “read the text”, “work with a partner”, in the target language can increase the use of Chinese. However, these phrases have to be developed for online tuition by the individual tutors, matching the online environment. E.g. 去分组讨论室 (go to the breakout room), 连线 (match) or 打勾 (tick). Developing online classroom language for Chinese seems a valid desirable improvement for future tutorials.

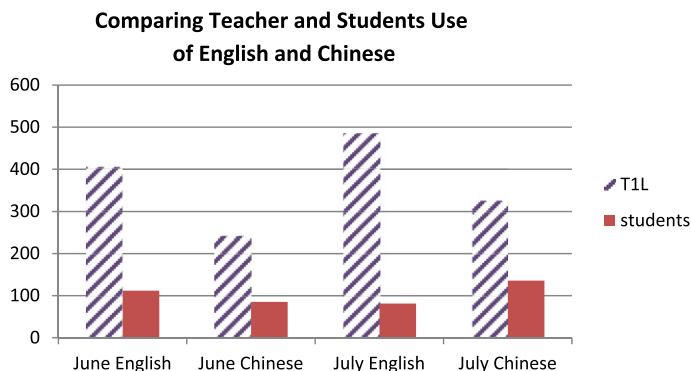


Illustration 14. Comparing teacher and students use of languages in June and July.

5.5. Match of teacher intention and student perception of online activity

As experienced language teachers, we have often observed that our intentions in the language classroom are generally met by student perception: this is evidenced by students' comprehension of instructions, co-operation with tasks, and positive feedback on their learning experience. Even in online language tutorials, there are many specific instances that show how the students pick up on the teacher intentions; for example indicated by the use of emoticons and raising hands, drag-and-drop, and textchat to confirm understanding. The expectation of both parties in an online language tutorial is mostly equivalent, and students have learned through other learning experiences what "being taught" entails and how to react to instructions in a classroom.

In this specific study, the perception of one particular student is compared to teacher intention using student tutorial notes and stimulated recall sessions. This proved easier in some cases based on the fact that the participating student is a language teacher herself and has empathy for teacher intentions and lesson planning. She is also an experienced user of video-conferencing software and – again – was able to guess some of the intentions behind the teacher's instructions. For this reason, student perception might have matched more often to the teacher intention in this study than if the participating student had been a novice language learner and inexperienced ICT user.

For instance, the student obviously empathises with the "loneliness of the online teacher", who will not always get feedback from participants and who cannot use body language or facial expressions to gauge students' comprehension.² She might have to rely on non-verbal cues, e.g. emoticons, from active participants to indicate comprehension or difficulties. One example shows how the student empathises with the teacher's intention: the student-researcher volunteers her contribution to a task after a silence of 18 s. She has developed a level of tolerance for silence in parallel with the teacher, and expects her to get impatient after 15 s, approximately. An excerpt from the multimodal transcript including the research reflections can be found in [Illustration 5](#).

In a face-to-face classroom an 18 s delay might have been compensated by reconfirmation, glances, or body language cues. However, the tolerance for silence seems to be much lower online than in face-to-face teaching where other modes can compensate for the lack of audible response ([Stickler et al., 2007](#)). On reflection, both the teacher and the student agreed that 18 s is not a long time to allow S3G to get ready to deliver her response. The teacher assumed that S3G could not answer because of language problems. However, the explanation could have been different: technical problems, forgetting to press the microphone button before speaking, looking for aid or simply taking a bit longer to prepare the response.

5.6. Mismatch of teacher intention and student perception

Analysing the multimodal transcriptions from both points of view, the teacher's and a student's, helps to pinpoint some mismatches between the teacher's intended outcome and the student's perception. Often, this kind of incident can also be picked out by experienced researchers from an outsider's perspective, particularly if a later recall or discussion element is added to the research methodology.

In our study we came across two apparent incidents of mismatch.

When the teacher asks a student to practise the grammatical form "应该" (ying1 gai1), one of the examples presents a problem through a mismatch of cultural background information: the teacher's intention is to elicit suggestions for dieting acceptable from a Chinese cultural point of view, e.g. eat more vegetables, eat less meat. The student interprets the task correctly and responds with suggestions; however, these are based on more Western ideas of dieting: "Eat lean meat more often." (多吃瘦肉 duo1 chi1 shou4 rou4). Because of this mismatch, teacher and student spend considerable time negotiating an appropriate response, the teacher corrects an utterance that was – in retrospect – deemed grammatically absolutely correct, and the exchange contains a number of lengthy pauses where student and teacher both are unsure about how to proceed. The multimodal analysis shows the teacher employing various means (whiteboard tools, textchat, audio) to guide the student to reach a mutual understanding.

Another mismatch of teacher and student perspective is discovered only when salient sections of the tutorials are replayed and commented upon by the researchers (teacher and student, respectively). As mentioned above, most of the

² Although there is the option to use video for up to nine participants synchronously in *Elluminate*, for connectivity reasons most of our tutorials are audio-conferencing only. Additionally, because of the fairly low refresh-rate of the video stream the teacher would not be able to see the facial expressions of students in real-time.

student utterances contain errors, often related to wrong use of tones. The second tone in Mandarin Chinese closely resembles a questioning intonation in English. Many beginner learners use this questioning intonation to express uncertainty or invite feedback in language classes at this level. Consequently, several of the tone mistakes of learners can be interpreted as a clash between English intonation patterns and Chinese tone patterns, leading to frequent misuse of the second tone.

Only when reflecting on this error pattern from both a student and a teacher perspective does the explanation become obvious.

6. Discussion

The data seem to suggest that teachers and students need to be aware of the full range of challenges that can occur during online Chinese teaching. Only if teachers are fully prepared can they make their intentions clear for all the students, aiding the smooth delivery of an online tutorial. In our observations the emphasis fell on instances of mismatch between intention and perception, on coping strategies and communication failure, from which pedagogical recommendations can be drawn. In particular, we focused on three areas: challenges of Chinese online teaching, mismatch of tutor intention and student perception, and multimodal coping strategies.

- What specific challenges does teaching Chinese online present (linguistic, technical, cultural)?

Starting to speak a foreign language is a challenge for every beginner learner, starting to speak Chinese entails additional challenges. Normally, written input is provided to beginner learners to support speaking tasks. However, the unfamiliar, non-alphabetical characters of Chinese make this scaffolding less reliable. In addition, the overlap in vocabulary is negligible (Orton, 2008). In some forms of communicative language teaching the exclusive use of the target language in the classroom is promoted, but few learners of Chinese could be expected to cope with such a situation. Therefore, use of English in beginners' language classes is commonplace (Wang and Kirkpatrick, 2012), albeit the introduction of more and more communication in the target language is still a valid goal.

Despite the many advantages of multimodal online teaching, e.g. the options to cater for reticent students and for different learner types, give feedback in different modes, and manage the classroom more efficiently, there are also clear dangers in teaching a language to beginners online. The task density can be overwhelming, as can the shifting between different modes and media. Although modes can be complementary, i.e. supportive of each other (e.g. scaffolding for speaking provided through textchat), they can also be contradictory, i.e. a distraction for some students, and lead to cognitive overload. Participating fully in an online classroom can be quite a challenge for less ICT-competent learners, particularly when students see the supportive modes (emojicons, hand raising) not as options but as necessity.

The additional challenge of cultural differences between Chinese and UK culture are not necessarily exacerbated in the online medium. Yet neither is there evidence that the multimodal environment can help to alleviate this challenge.

- How and why do teaching intentions match student perceptions or fail to do so in online multimodal tutorials?

As mentioned above, most language tutorials rely on the prior expectations by learners and teachers of their respective roles. Where mismatches occur, they are often not discovered until they lead to communication failure or L1 interventions by either party. It can be speculated that many miscommunications and mismatches go unnoticed, particularly in the beginners' classroom. This issue is definitely heightened in an online or virtual class where it is more difficult for students to express their puzzlement or lack of comprehension with the use of facial expressions (an exception here is the use of the "confused" emoji in *Illuminate*). As long as this does not lead to total communication breakdown, some uncertainty can be accepted in language teaching and learning as part of the normal process. However, there are some systematic mis-matches that can be remedied with the help of reflective practice and a comparison of perspectives, e.g. the systematic mis-use by L1-English-speaking beginner Chinese learners of the second tone to express uncertainty and invite correction and feedback. Once understood by the native Chinese speaker teacher, this can easily be discussed and worked on.

- What multimodal coping strategies are used by the teacher and by students during online Chinese tutorials?

The multimodal elements used by students and teachers change according to personal preference and previous experiences, but also over time, from one tutorial to the next. The participants have a clear understanding of when and how to use different elements of the online environment. For example, they can use textchat compensatory to the audio channel, they can provide scaffolding to peers with technical accommodation, and re-enforcement with encouraging or positive emoticons (Hampel and Stickler, 2012). However, when misunderstandings arise, these cannot be resolved simply by adding another medium or tool to the communication. In one instance for example, the teacher encourages a student to answer a question using textchat, audio and emoticons. The student does not respond, most probably because of the linguistic difficulty of the question. Contrary to the teacher's intention, the multiple layers of modes might even cause cognitive overload and make it more difficult for the student, who is linguistically struggling, to focus on one element only: speech production.

7. Conclusions


The present study aimed at capturing the process of online Chinese teaching and providing recommendations to improve the online teaching of speaking skills since Chinese language teaching is increasingly delivered in online synchronous, multimodal environments.

7.1. Pedagogic recommendations

Resulting from the findings of this exploratory study, the pedagogic recommendations are basically twofold: both teachers and learners need to be prepared for online interaction to make the most of the opportunities for speaking practice and instruction. On the one hand, it is not a new claim that teachers in online environments need thorough training and preparation (Hampel and Stickler, 2005; Stickler and Hauck, 2006; Wang et al., 2010). The technical side of teacher training is – nowadays – the least challenging element. Much more involved is the task of preparing language teachers to employ multiple modes in combination, as compensation and for scaffolding students at different levels. A related consideration is the careful planning of online tasks, on the part of the teacher or course/materials designer: the cognitive overload of online interaction for students means that tasks need to be presented in even smaller, gradual steps, including continuous comprehension checks (e.g. ticks, emoticons).

What advice will you give?

using 多 *duō*; 少 *shǎo*




If John watches TV too much → John应该 *yīnggāi* 少 *shǎo* 看电视
If Mary has put on too much weight:
If Peter keeps forgetting the Chinese characters:
If Hugh is dehydrated:
If Rose drinks too much beer:

应该 *yīnggāi*

Clues:

看电视 *kàn diàn shì* 吃肉 *chī ròu* 写汉字 *xiě hàn zì* 喝水 *hē shuǐ*

喝啤酒 *hē pí jiǔ* 吃青菜 *chī qīng cài* 吃水果 *chī shuǐ guǒ*



created by L. Shi & J. Williams

Illustration 15. Tutorial material: “What advice will you give? using 多 *duō*; 少 *shǎo*”.

For example, the language task shown in *Illustration 15* was, on reflection, deemed too complex by both the teacher and the student. It has led to misunderstandings due to an expectation that students can at the same time:

- select an appropriate response (in terms of culture and based on common sense knowledge of the world),
- transfer this response into the target language, and
- produce a comprehensible utterance with their limited vocabulary.

Teachers may consider breaking down tasks into smaller sub-tasks, allowing for the extra scaffolding needed due to the challenges of the target language and culture, the cognitive complexity of interacting online in a tutorial group, and the difficulties of giving clear and unambiguous instructions in an environment that does not allow for the non-verbal immediate feedback taken for granted by most face-to-face language teachers to indicate comprehension or acknowledgment of task.

The training of learners for the challenges of online tutorials has recently become a more discussed issue (CALICO special issue 2013). The Open University has long recognized the need for technical training of all students before engaging in online language tutorials (e.g. “*Illuminate for all*” training (Heiser et al., in press; Pulker and Stickler, 2010)). This preparation encourages students to support each other and motivates them to participate in online tutorials and self-help groups. The necessity of preparation that goes beyond the technical issues becomes more and more prevalent: emotional needs (“learner anxiety”, “online anxiety” (de los Arcos et al., 2009)), cognitive and metacognitive challenges (Hauck, 2005; Hauck and Hampel, 2008), social presence (Satar, 2010), and the group dynamics of online synchronous interaction are all valid considerations when preparing students to make the most of their online learning.

Employing multimodal analysis to investigate the multimodal interaction in online Chinese tutorials has allowed us to come to certain recommendations for the training of teachers and students. Furthermore, the multimodal research method enabled us to clearly identify features of online language tutorials that might not be evident to either the teacher or the student on their own.

This study followed the spiral path of exploratory investigations. The qualitative methods employed were participant observation, thematic analysis, stimulated recall, and reflective discussions. It led from numerical data (frequencies) to observational data (multimodal transcriptions) to reflective observations and discussions, thereby leading from an outsider perspective to the participants’ (insider) perspective and on to the reflective practitioner’s considerations of best practice and training.

Methodologically, this study has shown that a combination of perspectives, methods and approaches is necessary to understand online classrooms not simply as a place of instruction, interaction and practice, but also as a room where negotiations around media use, compensation strategies, task simplification and peer support take place and form the learning experience.

7.2. Limitations

This study can inform researchers and practitioners who are interested in teaching Chinese online. However, it does not lay claim to comprehensiveness and has certain limitations. Data for this study was taken from small tutorial groups over a limited time. Although some development is evident, strict measures of linguistic progress were not employed. The group dynamic of larger online tutorial groups would be different and might have changed various factors, e.g. the use of emoticons and textchat, and might have influenced the teacher’s teaching style. The increase in target language use during the July tutorial might also be linked to more productive task types.

A further limitation is the fact that – so far – only tutorials led by one teacher (one of the researchers) have been analysed. As she is a very experienced online teacher with a thorough knowledge of the materials used, the experience, intentions and (mis-)matches might have turned out differently for less confident online teachers. However, this can be employed to advantage for identifying best practices and guiding less experienced teachers away from pitfalls of online language teaching.

7.3. Further research

A comparison of different online tutorials using the same materials might help to widen the claim of generalizability of the findings presented here. Widening the scope to different levels of learners, including more advanced

students of Chinese, would help take the focus away from compensation strategies and towards more extensive online conversations.

A different method that could be employed to validate the claims of multimodal online learning is to observe closely the attention focus of students while engaged in an online tutorial. For example, live eye-tracking during *Illuminate* tutorials could help to show the focal points and concentration patterns of learners, supporting the claims made in this article that emoticons and other multimodal features are consciously employed by students to compensate for their lack of linguistic skill, the paucity of interactional cues and social presence indicators of the medium.

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