A Plurisemiotic Study of Multimodal Interactive Teaching Through Videoconferencing

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Abstract. The aim of the study is to describe and analyze webcam pedagogical communication between a French Foreign Language tutor and two students during seven online classes. It tries to answer the following question: how does the tutor in a multimodal learning environment change her semio-discursive behavior from the first to the last session? We analyze the tutor's discourse and gestures and the tools that support her communication. Our hypothesis is that the tutor should improve her semio-discursive competencies intuitively, taking into account her interlocutors and the affordance of different interaction tools. We will emphasize the pedagogical, socio-affective and multimodal competencies of the tutor.

Keywords: computer-mediated discourse analysis, desktop videoconferencing, interaction analysis, multimodality, online tutoring.

1. Introduction

The potential for computer-supported learning in educational contexts has opened up the possibilities for students to interact with tutors outside the classroom. Previous research highlighted the potential of the webcam for language instruction (Develotte, Guichon, & Vincent, 2010). The project is based on a desktop videoconferencing platform (DVC), *VISU,* designed for delivering online courses. *VISU* combines videoconferencing features in addition to writing and interaction tools.

The aim of the study is to describe and analyze pedagogical communication by means of webcam between one French foreign language tutor and two students during seven online classes. It addresses the following question: how does the tutor in a multimodal learning environment change her semio-discursive behavior from the first to the last session? We analyze the tutor's discourse and gestures and the tools that support her communication.

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Our hypothesis is that tutors should improve their semio-discursive skills intuitively, taking into account the learners and the affordance (Hutchby, 2001) of different interaction tools. The paper presents the study based on an empirical method of collecting ecological data. We combine both computer mediated communication analysis and plurisemiotic analysis. The qualitative data analysis method is based on the description of online conversation (Develotte, Kern, & Lamy, 2011) in addition to interaction analysis (Kerbrat-Orecchioni, 2005) and plurisemiotic analysis (Cosnier, 2008).

A total of eleven tutors (8 trainees and 3 experienced teachers) and twenty-two UC Berkeley BA students (5th semester of learning French) participated in this experience, from where this current study is derived. Seventy sessions of instruction were documented. For the purpose of this research we have chosen a corpus of study which describes the multimodal pedagogical communication between one online trainee teacher (second year student of the Master of Arts in Teaching French as a foreign language at the university Lumière-Lyon 2, France) and two students of French as a foreign language from UC Berkeley, during the 2010 academic year.

2. Method

2.1. Methodological framework

A corpus of study is proposed to describe the tutoring practices on multimodal synchronous computer mediated communication.

The qualitative data analysis method is based on (1) computer-mediated discourse analysis (Herring, 2004) in addition to recent French research on discourse and interaction analysis (Cosnier, 2008; Kerbrat-Orecchioni, 2005), (2) the degree of the tutor's involvement through the webcam (Develotte, Guichon, & Vincent, 2010), and (3) the study of the framing which refers to the interactants position in the field of view of the webcam (Codreanu & Combe Celik, in press a, in press b). We conducted our analysis based on Cosnier's (2008) concept of "totext" described as a complex phenomenon of communication including symbols, coordinators, co-verbal and extra-communicative gestures. We studied two key concepts, the polyfocality and multimodality in the DVC environment. We discuss the qualitative findings of the research in order to highlight whether the tutor adjusts her behavior when interacting with the two students using the different tools via webcam over the seven online sessions.

2.1.1. Participants

Teachers: the teacher sample for this study consisted of 1 trainee teacher ($N = 1$ female). Before the interactions commenced the trainee tutor claimed that she was comfortable using VISU.

Students: the student sample consisted of 2 UC Berkeley BA students ($N = 2$ females, 5th semester of learning French) working in a pair.

2.1.2. Procedure

Participation was voluntary. The trainee teacher received 20 hours of training on how to use *VISU* in Lyon before the online interactions commenced.

She participated, along with the other trainee teachers, on the design of the online tasks which were based on UC Berkeley's curriculum. The instructional information was entered into the platform two days before the interactions started. The online sessions took place from January to March every Tuesday at 6 PM CET/ 9 AM PST.

2.1.3. Corpus of study

The main corpus consists of a total of 7 sessions of instruction. We studied the tutoring practices and the use of different communication tools for a total of 4 hours, 5 minutes and 39 seconds of online interaction. Our analysis of the data, collected through the ecological method, is descriptive. Moreover, a semi-directed interview was held with the tutor and the two learners. This added another 1 hour and 25 minutes of interviews to our corpus of study.

2.1.4. Data analysis

We focused on multimodal interaction and the polyfocality of attention while taking into account the socio-affective, pedagogical and multimedia competencies of online tutoring as defined by Guichon (2009):

- *The competency of socio-affective regulation refers to the capacity to establish a relationship with a learner or a group of learners* (p. 169).
- *The competency of pedagogical regulation [...] consists of proposing clear and concise instructions, providing positive and negative feedback and deploying an array of strategies to facilitate second-language learning* (p. 169).
- *The competency of multimedia regulation relates to the interfacing role of the online tutor who has to learn to use the communication tools (forums, blogs, videoconferencing facilities, etc.) that are the most appropriate to the learning scenarios, and to manage the ensuing interactions with the most adequate modalities* (p. 170).

We studied the following aspects:

- **Pedagogical instruction.** We focused on the mediated oral analysis (Codreanu & Develotte, 2012) and the following two aspects: *the instructional script* (the written form of the instruction entered on *VISU*) and *the oral instruction* (verbal instructions close to the original text) following a script. We studied the variations in oral instruction, hesitation marks, self-talk and intrusions in the tutor's speech, the prosody, the transitions between the tasks and the feedback given to learners.
- **Multimodal analysis.** We studied the framing, the degree of use of the webcam, the spatial context, the disturbances and the use of the written tools (chat, tutor's personal notes, multimedia links).

- **Socio-affective analysis.** We studied the opening and ending speech acts (greetings and leave-taking), empathic exchanges, encouragement marks and humor.

3. Results

The mediated discourse analysis shows that the trainee tutor used a form of oral instruction similar to the instructional script during the seven sessions of pedagogical instruction. Her discourse displays intrusive overlaps in speech, self-talk and intrusions which are likely to contribute to the learner`s miscomprehension. The prosody analysis shows marks of direct command and the quick pronunciation of spontaneous French speech. There are no transitions between the tasks during the seven sessions. The closing sequence is longer than the opening exchanges and follows a ritual almost identical to the following: long congratulations with intensifiers, an extended prosody, greetings for the week to come, thanks and goodbyes (with or without gesture).

The webcam's potential is less integrated into the trainee-teachers pedagogical practices. The analysis shows a shifting close-up framing for six out of seven sessions. The tutor moves restlessly in her chair while delivering the pedagogical instruction, while talking to students or reading the lesson plan. When interviewed about her use of the webcam the tutor acknowledged that she was often focused on her own image. During the seven sessions, the degree of use of the webcam is 2 or 3 (we noted an involuntary degree 4 during a centred close-up framing). It was observed that the chat is used to write words already pronounced either by the tutor or the learners and not to communicate new vocabulary. We noted the following ritual: the tutor sends multimedia links (on average 4 per activity within less than one minute), asks a question and starts writing personal notes on student's grammatical and phonetic errors (in average 4-5 per activity). We also observed that the tutor decreases use of the chat tool and increases use of the marker tool (used to take a personal note). However, at the end of the session she only gives a single phonetic correction.

The tutor shares her knowledge of American society. Her ethos is relaxed and casual from the beginning of the session. She shows empathy in regard to students' life and work. Prosody and lexicon used are characteristic of young people. We did not notice any marks of humour.

4. Discussion

In DVC, oral discourse, intonation and knowing how to effectively use the webcam are part of the tutoring ethos. Also, mimogestuality and framing are important in influencing the image that tutors want to give of themselves to students. The study shows that the teacher has an intuitive approach to online tutoring. Her teaching is not based on any pre-determined pedagogical rule. It shows the ethos of a young woman

who is still a student, developing an ethos similar to that of the American students by marks of generational empathy.

5. Conclusions

It appears that in order to effectively use the various tools offered in *VISU*, tutors require training. As the study highlights, the trainee tutor did not perceive the full potential of the webcam. Overall, as acknowledged by the teacher herself, she was focused on her own image. As a result, this could have impacted the pedagogical interactions between her and the students. Awareness of one's image and its potential to communicate more effectively is one of the essential abilities tutors should display in order to maximize the learners experience through DVC.

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