

Designed and emerging CALL affordances in videoconferencing for language learning and teaching

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Abstract. This study aims to identify a few perception-action relations or affordances enacted in an asymmetrical (tutor-tutee) videoconferencing environment for L2 learning. Following Engeström's (2014) Cultural Historical Activity Theory (CHAT) and an ecological Computer-Assisted Language Learning (CALL) perspective, the study focusses on the interactions between language use, technology use, and the enactment of designed language learning tasks. Master's students of French as a foreign language from a French university interacted online via videoconferencing with undergraduate students of business learning French at an Irish university over a six-week period. The online interactions between tutors and tutees generated a multimodal corpus (ISMAEL). The fifth session plan prepared by the tutors and their online conversations were investigated for four tutor-tutee systems. The findings reveal that the designed and emerging technological and linguistic affordances influence the online interactions at the micro level and the educational affordances at the macro level.

Keywords: CALL affordances, activity theory, asymmetrical, videoconferencing.

1. Introduction

“The affordances of the environment are what it offers the animal, what it provides or furnishes, either for good or ill” (Gibson, 1977, p. 68). Affordance is a relational property that depends not only on the inherent characteristics of the environment

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but also on the action capabilities of the organism. CALL affordances manifest themselves as technological, linguistic, social, and educational affordances and the relation between these needs to be further developed.

In the context of videoconferencing between tutors and language learners, numerous studies have looked into micro level (moment-to-moment) interactions (Guichon & Tellier, 2017). This paper proposes to study the emergence of CALL affordances and the relation between them at the macro, meso, and micro levels of the learning ecology by investigating the following research questions:

- What are the designed affordances in the videoconferencing environment?
- What are the emerging affordances at the macro, meso, and micro levels of the interacting activity systems?
- What are the implications for curriculum design and online synchronous interaction?

2. Method

2.1. Context

French as a foreign language master's students from University of Lyon 2 tutored online undergraduate business students learning French (target level B2) at Dublin City University via a videoconferencing platform VISU. Weekly conversations took place with one or two students for a period of six weeks. These sessions were recorded and incorporated into a multimodal corpus: ISMAEL (Guichon, Blin, Wigham, & Thouésny, 2014).

The module's project-based learning activity was subdivided into three contiguous sub-activities:

- group work proposing services to a company,
- an individual CV and cover letter writing activity, and
- videoconference conversations to hone learners' interactional skills. The fifth session analysed here proposed a 'food truck for French hipsters'

project-pitching role play and negotiation task. Students formulated questions regarding a client's business plan and proposed a marketing strategy.

2.2. Theoretical framework

Within Engeström's (2014) CHAT, individuals or groups of individuals share an 'object' that becomes an 'outcome' through the mediation of the 'tool/instrument'. That mediation is regulated by implicit or explicit 'rules', 'community', and 'division of labour'. So, the context of the activity system and the interdependence between a network of interacting activity systems is taken into account for a detailed analysis.

2.3. Unit of analysis

The macro level is the videoconference project that encompasses the six weekly sessions. Each weekly session comprised meso level interactions. Finally, the moment-to-moment interactions within each session compose the micro level interactions. The unit of analysis for this study is the macro level systemic interactions, focussing on the fifth session (meso) for a micro analysis.

3. Data sets and analysis

3.1. Macro analysis

Students' reflections and evaluations of their learning experience in the post session phase via oral presentations and an anonymous questionnaire respectively were analysed to get a macro picture of the tensions and contradictions in the online interactions. The tutors' post session reflections were also taken into account to interpret the learning ecosystem's interactional dynamics.

In Dublin's learning ecology, the 'object' of the group work became the 'tools' for the individual activity (see Figure 1 in supplementary materials²). The combined 'objects' of these two sub-activities supported the 'object' for the videoconferencing (the last session was a mock job interview). Videoconferencing was integrated in

2. <https://research-publishing.box.com/s/f6yv6kqyspmgv442qsb6e2os8q87xihh>

the learning ecology with the intention of developing students' L2 interactional skills and intercultural competences.

In Lyon, the first sub-activity's 'object' (L2 pedagogy and task design) became the 'tools' for the videoconference sub-activity. The 'object' of the videoconference (develop online pedagogical competence) became the tool for their following activity, i.e. reflection on teaching practice. The contradictions that arose between the interacting Dublin and Lyon activity systems are graphically represented using the CHAT framework (Figure 2 in supplementary materials³).

3.2. Meso and micro analyses

The linguistic affordances designed by the tutors for the fifth session were coded in order to review how and when they were enacted in the course of the online videoconference conversations. The designed technological affordances for synchronous videoconferencing for Visu were also coded as "Information & Communication affordances", "Navigation & Spatial affordances", and "Traceability & Temporal affordances" (Dey-Plissonneau, 2017, pp. 95-96).

The recorded videoconference conversations were annotated on ELAN (transcription and annotation tool for multimodal data) for four tutor-tutee triads (one tutor and two students). It was noted that these online instantiations did not necessarily follow the scripted session design. New linguistic affordances emerged in the course of videoconferencing. The coded transcription was then uploaded on the qualitative analysis tool Atlas.ti to get a network view of the tutor-tutee micro interactions at the meso/session level.

4. Findings and discussions

At the macro level, the interacting tutor-tutee activity systems had the same tools but different individual 'objects' (Figure 2 in supplementary materials⁴). This triggered a mismatch between the students' business module-oriented expectations and the tutor-designed session plans that differed from the students' module 'objects'. However, the exchanges were largely seen as highly beneficial by students, mostly improving their confidence in speaking. 'Pronunciation' was ranked second, followed by 'understanding/oral comprehension'. 'Overall oral

3. <https://research-publishing.box.com/s/f6yv6kqyspmgv442qsb6e2os8q87xihh>

4. <https://research-publishing.box.com/s/f6yv6kqyspmgv442qsb6e2os8q87xihh>

fluency’, ‘vocabulary knowledge’, and ‘cultural knowledge’ were ranked low in the list of knowledge/skills developed during these online interactions.

Indeed, six sessions are not enough to develop ‘overall oral fluency’. Student reflections expressed their desire to memorise lexical units or expressions. Videoconferencing following the dictates of oral speech and speed has an ephemeral quality. Additionally, the tutor’s or peer’s constant gaze added to the pressure. It was difficult to think and speak in L2 simultaneously as students constantly translated from L1 to L2 while conversing.

At a B2 level, students found the project-pitching tasks difficult. Most students were unfamiliar with the concepts of a food truck and French hipsters and were unable to deepen their reflection or formulate probing questions. Two students with higher linguistic abilities and agency adapted themselves well to the teaching design while the others seemed blocked. In order to help students overcome the stress of deciphering unfamiliar interaction themes, cultural contexts, new expressions, and vocabulary under pressure, a flip approach could be used to familiarise students with the theme, expressions, and vocabulary before the online session. Tutors used ‘Information & Communication affordances’ to help students understand the cultural concepts via images, but this did not necessarily trigger deep reflective expression. ‘Traceability & Temporal affordances’ (Figure 3 in supplementary materials⁵) were enacted by the tutors at the micro level in order to overcome this communication breakdown.

At the micro level, the linguistic affordances (Figure 4 in supplementary materials⁶) that co-occurred with the traceability and temporal affordances reveal that the tutors frequently use text chat to repeat or add on student production to verify student responses and for corrective feedback. This is because very often tutors tried to guess what students would say in their B1 interlanguage with an anglicised pronunciation. Recasts and repetitions were common corrective feedback forms because tutors corrected diplomatically without sounding threatening (emergence of a social affordance).

Furthermore, tutors often ‘initiate linguistic help’ for negotiation of meaning to overcome communication breakdown. Additionally, tutors reformulate questions from lesson plans because students have problems in understanding the instructions or encourage complexification of responses through hedging or

5. <https://research-publishing.box.com/s/f6yv6kqyspmgv442qsb6e2os8q87xihh>

6. <https://research-publishing.box.com/s/f6yv6kqyspmgv442qsb6e2os8q87xihh>

questioning strategies to encourage well-reflected responses rather than simple yes/no responses, typical of this environment.

5. Conclusion

In this videoconferencing specific environment, the designed educational (task) and technological affordances (chat) at the macro and meso levels give rise to emerging networks of linguistic affordances at the micro level which influence the upper levels. Interactional skills such as negotiation of meaning etc. are predominant yet students seem to be inclined towards accretion of linguistic knowledge with module (probably assessment) objectives in mind. Contradictions at the educational affordance level (macro) of the interacting activity systems could be resolved at the tool level by adapting the session design's interaction tasks (meso) to the 'objects' of the students' learning ecology. Further investigations could look into how the designed technological affordances are linked with emerging linguistic and social affordances.

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