

Learner Behaviour in a Collaborative Task-Based CALL Activity

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Abstract. This paper reports on the findings of a case study that set out to discover student behaviour in the computer room while the participants were engaged in a collaborative computer-assisted language learning (CALL) task in form of an electronic role-play which was designed for advanced learners of business German. The task mainly utilized information and communication technologies (ICTs). Data was collected using screen-capturing software that also recorded the oral interactions between students while they were completing the task. For the analysis two methods were applied: First, grounded theory methods facilitated capturing categories that can describe student behaviour. Second, a case study approach facilitated emerging vignettes to become visible which could be reported on separately. The study showed strategies students employed when dealing with problems, manifestations of collaboration, different working modes and steps in text production, as well as student focus on form. This project's findings contribute to the interest in study of student behaviour in computer-room learning tasks (Levy & Michael, 2011) as well as to the discussion about students' expression of their agency (Van Lier, 2008). Furthermore, they contribute to the discussion about useful methodologies and methods involving screen-capturing software.

Keywords: behaviour in the computer room, collaborative CALL task, task-based learning, electronic role-play, screen-capturing software, advanced L2 learners, grounded theory methods.

1. Introduction

CALL task design considers the medium's affordances and presumes that the learners make use of them when completing the given task. However, the number of detailed studies into student behaviour in the computer room which could support this assumption is still limited. Which computer tools are utilized in tasks, how students compose text, how much they focus on linguistic forms, is not always clear.

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The engagement with the computer's affordances is only in part a matter of skill and familiarity. In reference to Bakhtin, Lund (2003) referred to the appropriation of information and communication technologies (ICTs) as more than just the development towards mastering the technology, but to "relate to and interact with concepts, tools, and knowledge" (p. 1). Bakhtin (1981) saw appropriation of words as an act of "transformation into private property" and a form of "seizure" (p. 293). Following this argument, similarly, the student would size the technology's affordances, would make the technology their own to be used to express their volition. This project looks at the ways the participants in the study made use of technology in order to fulfill the CALL task.

The electronic role-play utilizes principles of task-based learning which, according to Motteram and Thomas (2010), is still an under-researched area within CALL. Besides task-based learning in CALL settings, collaborative approaches in class need to be understood in more detail (Hampel, 2009) in order to learn more about the general processes taking place while students are engaged in CALL tasks. However, one of the reasons why task-based learning and collaborative approaches are researched less, especially in the context of advanced learners and the use of multimedia, lies in the complexity of authentic settings with natural communication (Plass & Jones, 2005) which can create methodological problems.

This project addresses the research question of what students do when they are involved in a collaborative CALL task like the electronic role-play. It addresses a general interest in student behaviour and the resulting interactional patterns while engaged in such a task. The exploration of the computer room setting and its influence on the language learning process is of interest in order to inform future CALL task design. If the computer is used as a tool for and as a locus of language learning processes, it is helpful to explore the type of behaviour students engage in, how they make use of the computer's affordances. It is of interest whether and how the computer can support learning. Specific questions that emerge are:

- Do students take advantage of support tools, for example, electronic dictionaries?
- How do they use them?
- Do students just copy and paste information from the internet or do they alter, synthesise, and summarise text?
- How do they compose text?
- What kind of information do they seek out and how do they appropriate it for their purposes?
- How do they cope with problems they encounter?
- How do they communicate with their partners and between groups?

This project set out to find answers to these questions.

2. Method

2.1. Method of data collection

Data was collected using screen-capturing software (Camtasia). This software records all on-screen activities visually, not based on text or code. Playing back the recordings enables the viewer to follow the on-screen activities as if they were sitting next to the student, observing their actions. Camtasia also records sound in the vicinity of the computer. These recordings could then be transcribed and be used in conjunction with the on-screen activities. Therefore, the software offers different types of multimodal data, including visual and text-based, which can be viewed and listened to an infinite number of times.

The collected data was coded using grounded theory methods (Glaser & Strauss, 2006) that provide useful strategies to synthesize data and to make “analytical sense of them” (Charmaz, 2004, p. 496).

2.1.1. Method of data analysis

Grounded theory (GT) is a useful approach to complex data as was collected here with the aid of the recording software. GT can “help in structuring and organizing data [...] analysis” (Charmaz, 2004, p. 497). In particular, GT aids “creation of analytic codes and categories developed from the data, not from pre-conceived hypothesis, [...] the development of middle-range theories to explain behaviour and processes [...] and] memo-making, i.e., writing analytic notes to explicate and fill out categories” (*ibid.*).

Through a process of data interrogation with questions like “What is going on? What is actually happening in the data? What is the main concern faced by the participants?”, data could be organized. These questions facilitated open coding of the primary data which, in turn, generated initial categories. GT suggests two procedures for the generation process of categories: The first step generates categories through constant comparison of incident to incident and then incident to concept. In the second step, the same coding questions are applied to all incidents, namely “what category or property of a category does this incident indicate?” (Glaser, 1992, p. 39).

GT is fundamentally different from a hypothesis-based approach, it attempts to let the data speak for itself, requests from the researcher to empty their minds (as much as this may be possible) from pre-conceived ideas. GT as applied here is attempting to find meaning through the data without being guided by a specific hypothesis which could be verified or falsified.

3. Discussion

Through this study, student behaviour in the computer room became more visible, e.g., their strategies in dealing with encountered problems and other manifestations of their collaboration with each other and their working modes. Several categories emerged

which can highlight the behaviour the subjects exhibited while they were engaged in the task. The electronic role-play took place during a period of 4 weeks, with 2 hour in-class activities per week in the computer room. The initial emerging categories were those of procedural discussions and how to deal with encountered problems in the target language (L2). Closely related was another category, that of the role of the 'expert'. The emerging role of the expert can be characterised by fluidity and could relate to different areas of expertise, e.g., an expert in the target language, technology or the subject-specific area. However, the spontaneously emerging role of experts is inherently problematic when some peers are elevated to it above others.

Students focused on form, often as a self-directed process but also with guidance from the tutor present. Common language-related areas students focused on included lexis, formal and informal way to address one another, and grammar, e.g., adjective endings and cases.

Different manifestations of collaboration emerged, forms of teamwork and the accompanying comfort and reassurance teamwork could provide for some. Off-task and private communication did not feature prominently.

Working modes varied and were in part directly influenced by the task requirements of each particular week. However, some noteworthy habits transpired, e.g., the way internet searches were conducted, the way online reading could be accompanied by cursor movements, the way some participants could multi-task and others were restricted by a single-tasking approach.

Other findings can be represented in mini-vignettes, e.g., forms of text production in technology-rich environments and navigation issues.

4. Conclusions

Applying screen-capturing software for data collection and accessing the recordings repeatedly during the period of data analysis made complex student behaviour visible during an in-class CALL task. Some unexpected expressions of student volition came to the fore.

This project reflects how research methodology and methods have an impact on research results in general and specific findings in particular. The research methods applied, in this case the involvement of technologies, shaped what was discovered.

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