Questionnaires to Inform a Usability Test Conducted on a CALL Dictionary Prototype

Marie-Josée Hamel, Official Languages and Bilingualism Institute, University of Ottawa, Ottawa, Canada

ABSTRACT

Questionnaires are often considered a suitable instrument to gather data on language learners’ experiences. To test the usability of an online dictionary prototype, a series of questionnaires were distributed to a class of language learners before and after they completed a language task at the computer using the dictionary prototype. Measures of task effectiveness and efficiency were obtained and correlated with the questionnaires’ results. This study shows how the questionnaire results informed the overall measure of usability and, in particular, addressed user satisfaction, a more subjective yet a central component of this measure. Pre-questionnaires prepared learners for the task, whereas post-questionnaires fostered a reflection about the task process and its outcome. Hence, it is argued that combining observation and questionnaire techniques in that context was effective in providing a fuller insight into the learner-task-tool interaction at the computer. In this CALL research and development context, questionnaires served a double function as an evaluative and a pedagogical instrument.

INTRODUCTION

In this paper, I would like to argue that questionnaires are insightful in providing complementary evidence on the quality of the user-task-tool interaction when testing CALL prototypes with learners for their usability (Nielsen, 2000; Preece, 2000). Questionnaires can namely address user satisfaction, a more subjective but yet a core component of the measure of usability (Nielsen, 2000). I will suggest that a blended approach to CALL tool evaluation i.e. an approach combining observed and perceived data about the process and the product of the user-task-tool interaction at the computer can enable CALL researchers to draw meaningful conclusions about the quality of this interaction. I will support this argument by presenting the results of a usability study on a CALL dictionary prototype employed by a group of language learners and then draw conclusions accordingly. First I will present a literature review on the topic of questionnaires and usability tests in CALL. We will see that there is room for more usability tests in CALL as well as a blended approach to CALL tool evaluation.

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QUESTIONNAIRES IN CALL RESEARCH AND EVALUATION

Questionnaires are common instruments in second language research and are typically used for data collection on learner background, preferences, attitudes, beliefs, etc. (Dornyei, 2010; Nunan, 1992). Their versatility is alleged to increase consistency and reliability of anticipated results when triangulating data with regards to undermining biases for drawing conclusions on factual, behavioural, and attitudinal findings (Brown, 2001). Moreover, open-ended items in questionnaires, for instance, can play a significant role in providing real perspective, perhaps countering the aforementioned superficiality of user answers (Dornyei, 2010). Questionnaires are used for similar purposes in CALL research and evaluation (Hémard & Cushion, 2001; Hubbard, 2006; Jamieson, Chapelle & Preiss, 2005; Levy, 1999).

For instance, in Huh and Hu’s (2005) chapter on criteria for effective CALL research, the authors suggest focusing on what happens through, with, or around the CALL tool through valid research design. Quoting Surry and Ensminger (2001), the authors warn against techno-centrism in CALL research, adding that researchers must take into account the instructional method as well as learner characteristics, by “using a variety of experimental, quasi-experimental and qualitative research designs” (Surry & Ensminger, 2001, p. 35) in order to correctly address the question of CALL evaluation. They also point out that statistical results do not suffice in providing the in-depth explanation and solid evidence needed to investigate the impact of computer technology use in language learning. Adding that certain methods result in more accurate answers to research questions, Huh and Hu (2005) call for a balanced quantitative and qualitative method in CALL research.

With regards to CALL evaluation, Raby (2005) states that such a task requires contrasting the evaluated activity with a user-centered model of reference. The model involves reflexive thinking on behalf of the learner through questionnaires, which allow structuring different qualitative and quantitative data into a coherent framework. More specifically, she recommends the use of questionnaires for information on how a user redefines his task and how a user feels about the achieved task, which the author believes to affect the mental processes in progress Questionnaires, hence, should ask for information on the user’s perception of goal achievement, difficulties met while at task, competencies demonstrated, motivation and reasons for motivation, and complimentary conditions needed to accomplish the task at hand successfully.

In Park and Kinginger’s (2010) study on cognitive processes underlying the construction of a text, the authors state that “it is unclear that real-time techniques alone, with or without the support of reflective narrative, are sufficient to provide data from which one can make inferences about the writer’s internal cognitive process” (p. 15). In fact, the triangulation technique the authors employed with regards to data collected through reflective narrative proved to be effective in identifying consistency between the real-time data and that provided within the questionnaires.

Finally, in an article on computer data tracking used for software evaluation and development in CALL, Fischer (2007) compares the relevance of survey versus tracking techniques to determine learner usage. Fischer is quick to warn of the discrepancies between statements of learners’ perceptions and beliefs reported in questionnaires and their actual behaviours. The author also cautions against the sometimes weak relationship between students’ actual use and self-reported use of program components, for example, as well as their perception of the instructional value of these components. He notes the importance of user preparedness with regards to questionnaires which probe into software use: “If students are not consistently aware of how they use software, and if their use of software does not correspond in any substantial way to its perceived instructional value, it becomes very difficult to trust the validity and reliability of the students’ self-reports”
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