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Online Formative Assessment Tool for Foreign Language Development

Online Formative Assessment Tool for Foreign Language Development

Kirchmeyer, Branden

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This research contributed to a greater understanding of the accuracy of student-generated second language self-transcriptions and the impact that frequent formative self-assessment has on setting specific and attainable goals for the development of English speaking skills.

This research project produced an award-winning open-access software for capturing and tracking quantitative performance data of individual contributions to English-language conversations. The software is currently used by educators at universities across Japan, and has contributed to the development of learner-centered curriculum targeting English language proficiency. Research findings have been presented at numerous academic conferences, which have contributed to uptake of the software around the nation.

The project was significantly impacted by the COVID 19 pandemic, which delayed data collection and is the main reason why the original research article has not yet been published. In addition, findings based on the initial dataset indicate that student-generated self-transcriptions are not reliably accurate representations of spoken language.

formative assessment　English language　group oral test　L2 assessment　self-transcription　SCLE　CALL　EFL

In the field of language assessment, researchers and practitioners alike continue to press for the development of tools that are not only able to provide reliable measurements of language development but are progressive in the methods by which such measurements are garnered. Although group oral tests had been proposed as a means to efficiently assess spoken language, prior to the beginning of this research project very little research had been reported on the accuracy of learner-generated self-transcriptions. In addition, there was no technology that could efficiently capture and track quantitative representations of spoken language.

In the field of computer-assisted language learning (CALL), there had been an increasing interest in automatic speech recognition (ASR) engines and their feasibility as language learning tools (Daniels & Iwago, 2018). This research project aimed to provide a unique perspective in this discussion, as it offered an opportunity to weigh the developmental and pedagogical impact of student-generated self-transcriptions against those produced by ASRs.

This research project aimed to create new educational technology that could serve as both as a pedagogical tool aiding learners in the development of spoken language skills, and as a tool for collecting data that could serve a variety of research agendas surrounding English language learning. It also aimed to discover how frequent, formative self-assessment tasks would impact actual and perceived improvement of English speaking skills.

The research project called for the development of a research instrument and subsequent data collection using students enrolled in a compulsory English Communication course. While the development of the instrument proceeded on schedule, the COVID-19 pandemic delayed data collection for a period of two years as students were no longer meeting under conditions in which the instrument could be effectively utilized. As the pandemic subsided and students returned to classes, the instrument was used over the course of one semester to collect quantitative and qualitative data, though the original research agenda needed to be changed to suit the new timeline. Teachers who used the research instrument were also interviewed about their impressions and perspectives of the tool and the sequence of tasks it facilitated.

The findings of this research are summarized below.

- Teachers who used the research instrument in their classes were positive in their reviews of the software as a pedagogical tool, specifically for features that allow students to quantify different metrics of their output, track progress over time, and set tangible behavior-based goals for targeted improvement.
- Teachers who used the research instrument were wary of the potential overreliance or overgeneralization on quantitative descriptions of students' spoken output. They commented that for students, too much focus on increasing a single metric might lead to disadvantageous behavior (for example, students speaking over each other in order to increase their total word count). There was also concern that the reduction of spoken output to simple descriptive statistics might entice teachers to implement grading strategies that do not reflect actual skill. Teachers were in agreement that in order to make effective use of the tool, both students and teachers need to be trained on how to use it (procedural knowledge) and instructed on its purpose (conceptual knowledge).
- An analysis of 186 learner-generated self-transcriptions were discovered to contain on average, a 20% word error rate, indicating that learner-generated self-

transcriptions may have little value as sources of data for research agendas requiring accurate textual representations (transcriptions) of speech.

The results of this research have been disseminated through 10 presentations and workshops at academic conferences throughout Japan. The research instrument was recognized as the "Best Moodle Innovation of 2020" by the Moodle Association of Japan and is currently in use at universities around Japan. An original research article is expected to be published in an academic journal in 2024.

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