Development of Multimodal Tool to Support Second Language Classroom
- Case of Japanese -

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The rise of CALL (Computer Assisted Language Learning) has given opportunity to apply creative and effective multimedia for both teaching and learning language, but the efficient use of those in conventional classroom context for Japanese as second language is still a challenging area, due to technological, pedagogical and economic constraints. While many tools exist for teaching vocabulary and grammar, fewer tools focus on the speech and communication development. Moreover, it is not proposed in most of the cases how to embed them in conventional classroom.

Therefore, this study aims to focus on the acquisition of Japanese as second language where the goal is to design and develop a multimodal interface that will aid the teaching and learning process in classroom environment at elementary level, and to propose possible implementation methods of such multimedia tool in second language classroom. While the language learning process of kids can be different from adults, this study explores the appropriateness and efficiency of using such multimodal interface at elementary level.

This study follows User Centered Design (UCD) as a method to investigate real life classroom challenges. To find out the needs of assistance of such tool in conventional classroom, the teachers were interviewed and based on the outcome the functionalities of interface have been proposed.

As found from the user research, appropriate tools are necessary to aid teacher for guiding pronunciation. From the analysis of user needs, the key functions of interface are set as lesson customization by teachers to provide flexibility for creating lesson for wide range of students and personalization of the tool to guide individual students. Also consideration is given on the usability of interface design so that beginners can use it without prior technical knowledge.

The tool was developed for iOS platform, which was then used and evaluated by one of the teachers and her three students of Japanese class, where the customization of lesson according to student's need and guiding individual student's pronunciation was found to be useful. Also the users could use the tool easily to create and practice lessons without any previous technical knowledge and was evaluated by teacher as flexible enough to fit classroom pedagogy.

Currently not suited for fragmental practice within one long continuous paragraph, this tool can be further extended with suitable functions for practicing lessons of different lengths and by providing collaborative practice environment. Furthermore, Text to Speech function can be used for easier lesson creation by omitting the recording part by teachers. Future longitudinal studies are needed to explore the affect of this tool on student's learning experience.

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