World Academy of Science, Engineering and Technology International Journal of Educational and Pedagogical Sciences Vol:14, No:04, 2020

An Early Attempt of Artificial Intelligence-Assisted Language Oral Practice and Assessment

Authors: Paul Lam, Kevin Wong, Chi Him Chan

Abstract: Constant practicing and accurate, immediate feedback are the keys to improving students' speaking skills. However, traditional oral examination often fails to provide such opportunities to students. The traditional, face-to-face oral assessment is often time consuming - attending the oral needs of one student often leads to the negligence of others. Hence, teachers can only provide limited opportunities and feedback to students. Moreover, students' incentive to practice is also reduced by their anxiety and shyness in speaking the new language. A mobile app was developed to use artificial intelligence (AI) to provide immediate feedback to students' speaking performance as an attempt to solve the above-mentioned problems. Firstly, it was thought that online exercises would greatly increase the learning opportunities of students as they can now practice more without the needs of teachers' presence. Secondly, the automatic feedback provided by the AI would enhance students' motivation to practice as there is an instant evaluation of their performance. Lastly, students should feel less anxious and shy compared to directly practicing oral in front of teachers. Technically, the program made use of speech-to-text functions to generate feedback to students. To be specific, the software analyzes students' oral input through certain speech-to-text AI engine and then cleans up the results further to the point that can be compared with the targeted text. The mobile app has invited English teachers for the pilot use and asked for their feedback. Preliminary trials indicated that the approach has limitations. Many of the users' pronunciation were automatically corrected by the speech recognition function as wise guessing is already integrated into many of such systems. Nevertheless, teachers have confidence that the app can be further improved for accuracy. It has the potential to significantly improve oral drilling by giving students more chances to practice. Moreover, they believe that the success of this mobile app confirms the potential to extend the AI-assisted assessment to other language skills, such as writing, reading, and listening.

Keywords: artificial Intelligence, mobile learning, oral assessment, oral practice, speech-to-text function

Conference Title: ICLFLHE 2020: International Conference on Language Futures: Languages in Higher Education

Conference Location: Tokyo, Japan Conference Dates: April 23-24, 2020