Developement of EFL Learners' Oral Reading Fluency through Automatic Speech Analysis System

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ABSTRACT

The purpose of the study was to investigate the effects of an Automatic Speech Analysis System (ASAS) on EFL learners' oral reading speed and accuracy. Forty-eight participants were selected with a convenient sampling method from three classes, i.e., English Communication in Cyberspace (Class 1), Foreign Language Learning Strategies (Class 2) and Computer-Assisted Language Learning (Class 3). Class 1 was instructed to read aloud along with an audio player. Class 2 was required to read aloud with the system-paced ASAS. The participants in Class 3 were told to use the learner-paced ASAS. For data analysis, 16 students in each class were included and divided into English high-proficiency and low-proficiency students in terms of oral reading fluency. The training lasted eight weeks. A pretest was conducted before the training. During the training, participants read four articles and each article was divided into two parts and read aloud by participants in two weeks. After the training, a posttest was conducted and a questionnaire was filled. The pretest and posttest contained one-minute recording of reading aloud two articles. One article was in the training and the other one was totally new to students. The scoring included 3 parts: words read in a minute (WPM), words correct in a minute (WCPM) and multidimensional fluency. The data analysed with two-way MANCOVA and simple main effect analysis. Oral reading fluency, learning transfer of oral reading fluency, oral reading speed accuracy rate were analysed and to determine the effect of the ASAS. Students' responses to the questionnaire were investigated with the Goodness of Fit and Chi-square test. The results of data analysis were summarized as follows: 1. An ASAS is more efficient than an audio player in improving EFL learners' oral reading fluency with the analysis of WCPM and only low-proficient students benefited from practicing with ASAS with multidimensional fluency scores. 2. Students had learning transfer as shown by their progress of WCPM. However, they did not have learning transfer when looking at their multi dimensional fluency scores. 3. Students' oral reading speed was enhanced after oral reading training. No matter which training method students received, students did make progress. However, the ASAS seemed to bring about more progress on oral reading speed than oral reading accuracy rate. 4. Students believed that oral reading fluency was important and related to English proficiency no matter which training method they received. Moreover, approximately, half of the students have had the school training or self training on oral reading fluency, but half of them have not. 5. The result reflects that an ASAS has the essential elements to make prominent development of reading speed with production models of skill acquisition. Participants preferred an ASAS to help them improve their oral reading fluency. Some pedagogical implications are provided: (1) teachers may include an ASAS in the program of reading, (2) an ASAS provides an easy and comfortable learning environment, and (3) one learning strategy that has a great deal of theoretical base is repeated reading. It seems that an ASAS is one of the helpful applications for repeated reading.

Keywords: Words Correct Per Minute, Oral Reading Fluency, Automated Speech Analysis System, English as Foreign Language

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