

Flipgrid Organizer: A digital solution for assessing pronunciation

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Abstract: A software application designed to interface with the *Flipgrid* website was produced as both a means of pronunciation practice for students and assessment for teachers. The current study outlines the need for such a tool in EFL/ESL settings, as well as the stages of its development.

Background

At Kyushu Sanyo University (KSU), a large portion of the English language curriculum is devoted to the study of vocabulary. Specifically the most frequent 1600 words in the English language. Unfortunately much of this vocabulary instruction is devoted to passive practices of writing and memorization of meaning-form pairs, rather than focusing on productive aspects of speech and fluency. The literature suggests that this is part of a national trend where current forms of pronunciation instruction and assessment are either non-existent or reliant on subjective, time-consuming practices such as Oral Proficiency Interviews (OPI) and/or Paired Format Tests (PFT) that require individual administration rendering them impractical in large classes (Uchida & Sugimoto, 2016; Sugimoto & Uchida, 2015).

Research Question

In order to address these issues, CALL-based solutions were considered in the belief that they might be: 1) easier to implement, 2) more uniform in their instruction, 3) less subjective in terms of assessment and 4) more time-efficient in their approach. The current research set about examining existing systems with speech recognition functionality that could potentially provide both a standardized means of pronunciation practice for students as well as a streamlined method of assessment for instructors. In this pursuit the Flipgrid platform stood out. However in order to maximize objectivity in assessment and time-efficiency, additional software had to be developed. What follows is the method in which that was carried out.



Figure 1: Flipgrid user interface with filters



Figure 2: Flipgrid user interface with captions

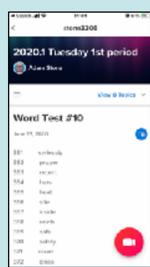


Figure 3: Example vocabulary test list

Figure 4: Formatted data with converted scores in spreadsheet

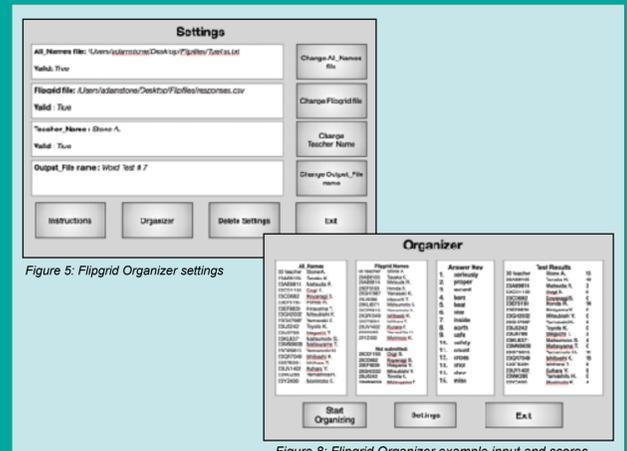


Figure 5: Flipgrid Organizer settings

Figure 8: Flipgrid Organizer example input and scores

Proof of Concept

STAGE 1: Videos of the teacher uttering each of the fifteen words contained within weekly assigned lists of vocabulary were recorded using the Flipgrid app (Fig 2). These videos were then made available to students for them to learn and practice their own pronunciation of the weekly words through comparison (Fig 3). At the end of each week the teacher video was removed and students were asked to submit clips of themselves reciting that week's list of words for assessment (Fig 1). After submission, the teacher watched each students' video to see how many of the fifteen words were pronounced correctly as compared to a previously determined answer key. The approach proved successful in terms of ease of implementation and elimination of subjectivity in assessment, but the time required to watch each individual video, collate the data and calculate grades was highly impractical for use in multiple classes.

STAGE 2: Students' and teacher transcripts were downloaded from Flipgrid as a CSV batch file and prepared for import into a spreadsheet (Fig. 4). Making use of the spreadsheet to format

the resulting data, helped reduce the amount of time required for assessment to some degree. However, a great deal of manual manipulation of the data was still required, making this approach prone to human error at each step along the way.

STAGE 3: A software application called *Flipgrid Organizer* was developed to automate the formatting and manipulation of the Flipgrid data. Essentially, the application allows its user to select, delete and change the parameters for manipulation before organizing the data into meaningful scores for assessment (Fig. 5). Once the 'Start Organizing' button is clicked, the instructor's transcript is compared to each student transcript, and if the words match a point is awarded until all points have been tallied and the total scores for each student appears in the fourth column next to their name and student number on a final list of results (Fig 6). This data is then saved to a text file in the same folder, using the filename confirmed on the 'settings' page. The instructor can then use the saved text file for grading as they see fit.

Results

Although the current state of *Flipgrid Organizer* is still somewhat unwieldy with some bugs yet remaining in its code, as a proof of concept this method of assessing pronunciation of vocabulary holds promise. With further improvements to the user interface, coding and design, it is believed a minimum viable product may warrant the allocation of further resources. As it is however, instructors interested in using the application still need a great deal of specific instruction regarding its use as a significant degree of familiarity with both the application and the Flipgrid platform is necessary.

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