Learning spoken English with a new web-based CALL system using speech recognition and popular video clips
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1. A new web-based CALL system
A new web-based CALL system for learning spoken English has been developed by English Central (http://www.englishcentral.com), which combines two key elements: speech recognition technology and a video bank system. The proprietary speech recognition technology not only recognizes learners’ productions, but also gives them a score based on their pronunciation and syntax. Using its YouTube-like interface, learners can select a short video clip from a wide variety of content categories and difficulty levels (Fig.1).

The system presents the learner's chosen video either without a break or line by line, with or without English and/or Japanese subtitles, and at normal or slowed-down speeds. It also provides context-related definitions of words and word/phoneme-level playback. Assessments of learners' verbal productions are given immediately after they record them, line by line, with even word and phoneme levels of assessment available. Learners can listen to their own recordings, and compare them to the models. Once they have recorded their own versions, the English video subtitles then appear color-coded, green for words recorded correctly and yellow (with an information icon above them) for problematic ones. By clicking on a problematic word, they can see which part of the word they had mispronounced, highlighted in red (Fig.2).

2. Students’ reaction to the system
The author introduced the system to 78 Japanese university freshmen in two classes as one of ten useful self-study sites, and invited them to try it, both in and outside class, for about five weeks in the second semester of 2009. At the end of the semester, they answered the following three questions about the ten sites according
to a five-point scale (5: strongly agree, 4: agree, 3: no opinion, 2: disagree, 1: strongly disagree): 1) Do you think you can continue studying English with the site? 2) Did you enjoy studying English at the site? 3) Do you think the site is helpful for your study?

English Central (EC) scored highest for all three questions. For question #1, only EC received a mean positive score. The mean differences between EC and all the other sites were statistically significant (p<0.01) for questions #1 and #3. Question #2 also revealed significant (p<0.01) differences between EC and the other sites as well, except when compared with FM and TT (Fig.3).

![Students' Reactions](image)

Fig.3 Student reactions to the ten useful self-study sites

3. The benefits for teachers and limitations of the system

There are many benefits for teachers using EC. First, it provides teachers with an interface to analyze their students' learning progress. For example, the amount of each student's practice is displayed in bar graphs, and their study records can be downloaded in CSV format. Second, teachers can make subgroups and set goals for each group. Third, teachers can select video clips from the database and make their own channels for their classes. Finally, the most important benefit in this writer's opinion is that it motivates students to practice speaking English, even in larger classes.

The speech recognition system used on the site is very advanced but not yet flawless, and the scoring system is still under development and needs to be much improved. However, EC has great potential for English learning and teaching – it holds great promise of becoming the most popular web-based CALL system.

The ten sites introduced to the students are as follows:
- **FM**: Flatmates (http://www.bbc.co.uk/worldservice/learningenglish/flatmates/)
- **TT**: The Teacher (http://www.bbc.co.uk/worldservice/learningenglish/language/theteacher/)
- **EC**: English Central (http://www.englishcentral.com/)
- **SF**: smart.fm (http://smart.fm/)
- **LM**: Live mocha (http://www.livemocha.com/)
WM: Word Master (http://www.berlitz.co.jp/wm/)
(http://www.eslpod.com/)
CS: CNN Student News (http://edition.cnn.com/studentnews/)
ST: Shukan ST Online (http://www.japantimes.co.jp/shukan-st/)