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A web-based talking dictionary with visual corrective feedback on learner's spoken Mandarin 視覺判斷自學者普通話語音正誤的網上工具性有聲字典

Project Number: 6000126

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Grant Type: TDG

Abstract:

本「網上可視音波圖有聲字典」的特點是將聲音的音高、音強、音長變化，用線條的高低、粗細、長短構成一幅聲音波形圖顯示出來（簡稱「音波圖」）。運作程序是：先由自學者自行輸入所需要的中文字、詞、短句，然後本「字典」在播出該文檔正確讀音的同時，電腦熒屏的上半部會顯示出這些字詞標準範讀的音波圖；當學員輸入仿讀的聲音後，電腦熒屏的下部會顯示學員仿讀的音波圖，並對學員語音的誤讀處進行標示，以及對仿讀的正確度給予評分。自學者可憑藉視覺判斷兩幅音波圖的差異，了解自身發音的偏誤，從而不斷地進行練習。

本項目是為了發展 CLU 的普通話課程；發展「城大」非學分普通話選修課程。同時也可以幫助全校的自學普通話者進行正音練習(據了解，目前在其他主要華人社區中，還沒有同類的軟件)。

The merit of the web-based talking dictionary is that it can display the intonation, loudness and duration of an input utterance as a curve (hereafter called tonal-graph) with varying level, width and length. The software runs as follows. First, a learner inputs any Chinese characters, words or sentences in written form. The system then plays back the correct pronunciation of the input. At the same time, a reference tonal-graph of the input is displayed in the upper half of the computer screen. When the learner imitates the system's audio output, the tonal-graph of the learner's utterance is displayed in the lower half of the screen. In addition, the system points out the positions of the learner's pronunciation faults, and scores the learner's utterance. By comparing the differences between the two tonal-graphs, the learner can realize his/her pronunciation faults and make more practice to correct the faults.

This project aims at developing CLU Putonghua course, which is a non-credited Putonghua elective course at City University. At the same time, outcome of the project can help all the Putonghua learners of City University to correct their Putonghua pronunciation. (To our knowledge, there is no such kind of software in the other Mandarin Society)