Feedback methods to improve phonetic and phonological skills in foreign language acquisition

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Pronunciation, the articulation of sounds as well as the realization of prosody, especially the use of intonation, has been left out to a great extent in second language teaching (Hirschfeld and Trouvain, 2007:172). Though, within the last decade the attitude towards pronunciation seems to have changed step by step. The development of computer-based language learning (CALL) and especially computer-based pronunciation training (CAPT) systems obtained a special interest over the years (e.g. Euronounce (Demenko et al., 2009); Dutch-CAPT (Neri et al., 2008)). Many of these systems include an automated speech recognizer that aligns the input of a learner with the pre-recorded speech of a native speaker of a given language. On the basis of this comparison, feedback regarding any specific phonetic or prosodic error can be given. It has been proposed by researchers that feedback helps to improve learning the pronunciation of a foreign language (e.g. Precoda et al., 2000) and argued that the lack of good feedback in CAPT systems constitutes the negative facets of current implementations (Engwall et al., 2004:1693).

Therefore, the aim of this work is 1) to deal with the general concept of feedback, to describe effects of different types of feedback, not only in relation to pronunciation learning but the complete learning process, 2) to analyze and evaluate different feedback methods which have already been used in existing CALL/CAPT systems, and 3) to discuss further methods to improve phonetic and phonological skills in the foreign language. These methods will be tested and might later be implemented in a new CAPT system currently developed within a project called "Individualized Feedback in Computer-Assisted Spoken Language Learning" by researchers of Saarland University and LORIA, France. This system takes into account the German-French language pair, keeping in mind speaker-specific behavior. That is, that the included automated speech recognizer needs to deal with the factor of speaker individuality and non-native speech input. Further on, people show different learning behavior in respect to foreign language learning. Therefore, a system has to be developed which comprises a high standard of individualization, not only regarding task types and interface usage preferences but also the way feedback will be applied. One possibility of feedback integration presents the inclusion of an animated vocal tract in order to provide a better articulatory illustration of difficult sounds. This might constitute a beneficial effect in comparison the mere presentation of an oscillogram contrasting the learner's and native speaker's output, plain text explanation or a numbered scale which might be very difficult for the learner to interpret and to execute phonetic or prosodic alterations.

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