Enhanced second language vocabulary learning by training unfamiliar sound contrasts

What this research was about and why it is important
When introducing new words in a second language, teachers often prioritize word meanings and focus less on other aspects of word knowledge, such as how the words sound. However, knowledge about how to notice and perceive the sounds of words can help. In this study, researchers tested the effectiveness of vocabulary training that targeted the sounds of words as well as their meaning. The researchers found that this type of sound perception training was more effective than training without a sound perception component and training that focused on only one characteristic of word meaning.

What the researchers did
- The researchers tested 86 secondary school learners in The Netherlands, aged 11–13, all native speakers of Dutch.
- The participants were randomly assigned to one of three vocabulary training groups in which they heard unknown English words, such as maze or dice.
  - In the +perception training group (28 learners), the participants heard a new word and then had to choose from four pictures that depicted its meaning. The participants had to listen carefully because the words corresponding with one of the pictures differed in only one sound which was known to be difficult for learners who have Dutch as their first language (e.g., s versus z at the ends of words are confusable). For instance, they heard mace and had to choose between pictures of a maze and a mace and two other, unrelated pictures.
  - In the –perception training group (29 learners), the participants performed the same task, except that the words were not presented in close pairs based on one difference in sound. For example, the participants heard maze and had to choose between images of a maze and a (mountain) peak, in addition to two other, unrelated pictures.
  - In the control group (29 learners), the participants heard the same words but had to indicate whether the word referred to something “living” or “non-living.” For instance, after hearing maze, they would choose “non-living.” Thus, in both the control and –perception training, the participants’ attention was focused on meaning, not sounds.
- None of the groups wrote the words down during the training; they only heard the words.
- All groups received “correct/incorrect” feedback on their response, in addition to the spellings of the novel English words and their Dutch translations.
- To determine the effectiveness of training in the three groups, the researchers tested participants in a vocabulary posttest (immediately after training) and a retention test (4–5 days after training).
  - Participants had to translate written Dutch words into the new English words, in writing.

What the researchers found
- The +perception training group outperformed the control group on the posttest.
- The –perception training only helped learning for participants who already had larger English vocabularies to begin with (as assessed on tests before the study).
- Most importantly, the +perception group scored the highest on the posttest for confusable words—that is, words that differ by only one sound which does not occur in the participants’ native language.

Things to consider
- Vocabulary training that includes a focus on perceiving sounds that are difficult and that change the meaning of words might be beneficial. In essence, learners would find it useful to hear new words (instead of only reading them) and to attach meaning to the words.
- Vocabulary training helped learners write the new words, even though the training mainly focused on listening rather than writing.


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