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Krash ‘n’ burn:

Does this study disprove famous language learning theory?

New research taking on the ‘input hypothesis’ finds that speaking in L2 helps improve understanding

Image description

By: Federica Tedeschi

Students who are required to produce speech in L2 appear to improve their language comprehension faster than learners who only practise comprehension, according to a study from the University of Wisconsin-Madison in the US.

Lead researcher Elise Hopman told the Gazette that these findings were in contrast with ‘Krashen’s influential input hypothesis, which focuses on comprehension as the main (and only) way for a learner to really learn the grammar of a language.’

The importance of production in L1 has also recently been highlighted in a study of language ability among toddlers, reported in the March Gazette.

Again, contrary to the input hypothesis, it found that toddlers’ ability was based on the number of interactions between parent and child, not the number of words the child was exposed to.

The authors of the latest study, who have a background in cognitive psychology and neuroscience; rather than second language learning, were influenced by memory theory. This describes the difference between recognition, used in comprehension, and retrieval, which is needed for speech production. Studies have already shown that retrieval is more effective for vocabulary learning.

The authors hypothesised that ‘these same production processes would be especially helpful for language learning beyond the single word level…’

‘Our work is the first to relate production to learning of the grammar of a foreign language,’ Hopman told EL Gazette.

The researchers recruited two groups of around 60 English native-speaker undergraduates. Both groups studied the same artificial language, which was presented to both using the same videos and pictures.

However, while one group was only asked to comprehend the language, by matching a sentence to a picture, the other was required to produce the language by describing the pictures.

Both groups then took a number of comprehension tests.

The production group did better in both accuracy and speed. They were ‘significantly more accurate than participants who got comprehension training,’ the paper stated.

Production-trained participants were up to half a second faster than participants from the other group.

‘To a lay person, half a second might not seem that big, but a word in natural speech is typically shorter than half a second,’ Hopman pointed out.

‘A person who is falling behind when hearing a sentence is at a real disadvantage.’

The artificial language used in the experiment had a strict word order as well as a morphemic system based on suffixes requiring grammatical agreement.

Materials consisted of a cartoon world of monsters situated on alien landscapes, which included both still pictures and short videos. Although there was no explicit grammar teaching, the sentence structures were built up gradually from word to sentence level.

Members of the comprehension group were asked to recognise the right sentence describing a picture, and the accuracy of their response was immediately presented on screen.

Production participants were shown a picture and asked to generate the description in the new language themselves; responses were recorded and participants could listen to the right answer after having produced a phrase. The results showed that ‘production practice wouldn’t just strengthen people’s production performance but could actually yield stronger comprehension performance’, according to the researchers. They attributed the better performance from the production group to the need to recall known grammar, retrieve lexis from long-term memory and plan the utterance.