

Intonation helps L2 learners of German learn case morphology during training

What this research was about and why it is important

Language learners often have difficulty understanding sentences because they do not use all of the grammatical information in a sentence. For example, in German, they may misinterpret who does what to whom because they do not use case. Processing Instruction (PI) can change how learners understand sentences by directing attention toward a targeted grammatical form. In this study, I investigated how PI affects the acquisition of accusative case markers in German, which help speakers identify who does what to whom. Specifically, I investigated whether PI is more effective if it includes prosody (intonation) or is monotone. On one hand, one might expect intonation to interfere with the acquisition of case because learners could learn to use intonation instead of case; on the other hand, intonation could help learners identify case cues and use them. Two groups were compared after having completed PI with monotone sentences (PI) or PI with sentences that had intonation (PI+P). Sentence-level comprehension and production tasks indicated no differences between the groups. A self-paced reading task showed that learners in both groups learned to recognize and use case markers in real-time. However, only the PI+P group did so in every condition. Results thus suggest that (1) PI is an effective means to improve the acquisition and use of case cues, and (2) intonation helps learners identify and use target forms more readily.

What the researchers did

- **Participants:** The participants were third-semester learners of German split into two training groups: (1) a group that received Processing Instruction with monotone sentences (PI); (2) a group that received PI with intonation (PI+P).
- **Training:** Training consisted of the following components:
 - **Explicit Information:** Participants first received information explaining how to use case markers to understand who does what to whom.
 - **Input Practice:** Both groups completed the same practice component of training. Participants heard 50 subject-first (e.g., *Der Hund hört die Katze* ‘The dog hears the cat), and object-first sentences (e.g., *Den Hund hört die Katze* ‘The cat hears the dog’). They saw two pictures representing possible interpretations of the sentence (e.g., the dog hears the cat, and the cat hears the dog). They selected one of the pictures and then saw the correct answer. The only differences between the PI and PI+P groups is that the PI+P group heard object-first sentences where the first noun (underlined above) was emphasized. The PI group heard monotone sentences.
- **Assessment:** The trainings were assessed using three primary metrics:
 - **Interpretation and Production:** In the interpretation task, participants read 4 subject-first and 4 object-first sentences and answered comprehension questions about them. In the production task, they saw 2 three-picture series and wrote a short story about them. These tasks were given before and after training.
 - **Self-Paced Reading (SPR):** In the SPR task (given before and after training), participants read subject-first and object-first sentences one word at a time. I measured how long each word was read. If participants show higher reading times on object-first sentences, this indicates that they used case markers to understand the sentence.

What the researchers found

- **Interpretation and Production tasks:** The PI and PI+P groups improved in both tasks to the same degree.
- **SPR task:** Both groups had higher reading times on object-first sentences when a masculine noun was the first noun in the sentence. Only the PI+P group had higher reading times when a feminine or neuter noun came first.

Things to consider

- Together, results show that Processing Instruction is an effective means with which to teach learners how to understand and use accusative case markers in German.
- This study suggests that intonation supports the development of grammatical knowledge by helping learners to (1) identify important grammatical information in the sentence, (2) determine the meaning associated with that information, and (3) process those forms in real time.

Material, data, open access article: Materials available from <https://www.iris-database.org/>

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