Promoting Grammatical Development Through Textually Enhanced Captions: An Eye-Tracking Study

What this research was about and why it is important

Given the important role that attention plays in second language (L2) acquisition, the potential of textual enhancement (i.e., making features of a text more salient through techniques such as highlighting, coloring and underlining) to capture learner attention has been the subject of much research. The majority of previous textual enhancement studies have been conducted in the context of reading, where learners receive input through a single modality. So far, however, few studies have examined the effectiveness of textual enhancement when it is included in multimodal activities combining aural, textual and visual input. This study aimed to fill this gap by assessing the extent to which textually enhanced captions (enhanced texts that match the spoken audio signal) rendered the target linguistic constructions more salient to learners and, as a result, succeeded in drawing attention to and promoting development in L2 grammar. The findings, overall, demonstrate that textually enhanced captioning is a useful pedagogical tool to facilitate development in L2 grammatical knowledge.

What the researchers did

- A pretest–immediate posttest design was employed with 48 Korean learners of L2 English. They were randomly assigned into two groups. One group received non-enhanced captions \( (n = 24) \), whereas the other group received enhanced captions \( (n = 24) \), that is, the target linguistic construction was enhanced using bold font in the captions.
- Both groups performed a series of multimodal input-based tasks in which they had to listen to a recording and answer a question by choosing a picture based on the information provided in the recording.
- The target linguistic construction was one type of pronominal anaphoric reference, where a third-person pronoun (he, she, and they) is used to refer back to a previously mentioned noun (e.g., boy, girl, children).
- Learner attention to the target linguistic constructions was assessed with eye-movement data, that is, it was measured how long and how often participants viewed the target construction in the captions. A written and an oral grammaticality judgment test (GJT) were used to measure learning gains.

What the researchers found

- Textual enhancement was successful in directing learners' attention to the referential antecedents (i.e., the nouns that the third-person pronouns referred to) highlighted in the captions.
- Participants exposed to textually enhanced captions demonstrated greater gains on both written and oral grammatical judgment test than participants who viewed captions without enhanced input.
- A number of significant medium to large relationships were found between the gain scores and the eye-movement measures for the captions group, while no significant links were observed for the enhanced captions group. In the captions group, participants who paid more attention to anaphora antecedents exhibited less development on the written GJT, whereas participants who looked at the pronouns more frequently and devoted more time to reading them overall achieved greater gains on the oral GJT.

Things to consider

- The eye-tracking measure was not triangulated with verbal protocol comments. The combination of eye-movement data and verbal protocol data (e.g., stimulated recall) would have allowed us to investigate not only the amount of attention learners paid to the enhanced features but also how deeply they processed them.
- A delayed posttest was not included in this study. Administering a delayed posttest would have made it possible to determine the long-term effect of textual enhancement on development in L2 grammatical knowledge.
- Individual differences among the participants such as working memory, which may moderate the impact of textually enhanced captions on attentional allocation, were not taken into consideration.

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