
Effects of domain knowledge and discourse cues on comprehension of discourse relations across narrative and expository texts

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We ask whether domain knowledge affects readers comprehension of discourse relations. As shown by Marchal et al. (2022), domain experts are better in interpreting discourse relations in domain-specific texts than non-experts. Also, experts can better deal with texts with low cohesion marking than non-experts (McNamara et al. 1996, Kamalski et al. 2008). Focusing on the impact of register on comprehension, we investigate how experts and non-experts perform across narrative vs. expository texts. For narrative texts, word knowledge is sufficient for comprehension, while for expository texts domain knowledge is crucial (cf. Mar et al. 2021). We extract narrative texts from fiction corpora and expository texts from textbooks of the mechanical engineering domain (each N=27 with 2-3 sentences) for Elaboration, Concession and Causality (top-occurring connectors used for item extraction for both registers and each relation; narrative items: pre-tests run for unambiguous usage of connectors; expository items: judgments of a mechanical engineer expert). A prescreening study (Prolific) served recruitment of mechanical engineers. Non-experts are from the medical domain (min. BA degree). In the insertion task, both groups saw narrative and expository stimuli with no discourse connector. Participants had to insert a connector from a list of options. Preliminary results show a similar performance for narrative texts by experts (N=13) and non-experts (N=17). For the expository texts, experts performed better than non-experts. Accuracy was higher for narrative than expository texts (experts outperforming non-experts in the latter). For Concession, we considered high vs. low cohesion marking (i.e. negation, modality or none). Negation facilitated both groups, especially non-experts with expository texts. In absence of any cues, experts were more accurate than non-experts with both types of registers. Thus, domain knowledge seems to be crucial to infer coherence relations in domain-specific texts, but specific cues facilitate comprehension for non-experts.

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