

Evaluating Answers to Reading Comprehension Questions in Context

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Abstract

Reading comprehension activities from foreign language teaching are an authentic task including a rich language-based context and the challenges of processing learner language. Taking the content-assessment approach by Bailey & Meurers (2008) for English as a starting point, we developed a Content Assessment System that automatically evaluates student answers to reading comprehension questions in German with respect to meaning (Meurers, Ziai, Ott & Kopp, 2011).

The empirical basis of our research is the Corpus of Reading Comprehension Exercises in German (CREG) which is currently being collected in collaboration with two large German teaching programs in the US, at Kansas University (Prof. Nina Vyatkina) and The Ohio State University (Prof. Kathryn Corl). It consists of reading texts, questions about these texts and corresponding student and target answers. The student answers are rated by two independent annotators with respect to expressed content.

Based on a snapshot of data from the corpus, we show that our system for Comparing Meaning in Context for German (CoMiC-DE) performs on a competitive level with regard to the state of the art in short answer scoring. We discuss where linguistically informed strategies for comparing meaning are required, which on the one hand includes the nature of the representations being compared and on the other hand benefits from an explicit modeling of context and information structure.

References

Bailey, S. & D. Meurers (2008). Diagnosing meaning errors in short answers to reading comprehension questions. In J. Tetreault, J. Burstein & R. D. Felice (eds.), *Proceedings of the 3rd Workshop on Innovative Use of NLP for Building Educational Applications (BEA-3) at ACL'08*. Columbus, Ohio, pp. 107–115.

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