

## Summary

In today's classrooms, children increasingly read online to gain information. While they usually learn reading skills appropriate for offline reading, research has shown that online reading requires additional skills. This is because the Internet comprises both multiple documents and hypertexts, causing a complex reading environment. The present study was set out to extend existing understandings of children's online reading comprehension by taking into account the Internet's multiple document structure and focussing on the role of different hyperlink types in comprehension. Three central questions were (1) how type of hyperlinks influence children's hypertext comprehension, (2) how clicks on different hyperlink types influence comprehension, and (3) how prior knowledge, lexical quality and working memory capacity influence the role of hyperlink type in comprehension. Seventh grade children ( $N = 108$ ) following pre-university education were assigned to one of three text conditions differing in hyperlink type (no hyperlinks vs. intra-textual hyperlinks vs. extra-textual hyperlinks), read three texts on the cardiovascular system and were measured on comprehension, navigation and individual characteristics. A small negative effect of extra-textual hyperlinks was found for comprehension during reading, when compared to intra-textual hyperlinks. However, the navigation data revealed that children hardly clicked on those hyperlinks. Perhaps, the effect of hyperlink type on text comprehension was caused by the signalling function of hyperlinks that either supports or hinders comprehension, rather than the hyperlinks' navigation function. Moderation effects of decoding efficiency and verbal working memory capacity were found, but were small in effect. The study provided insight in the complexity of hypertext design and emphasizes the need for thoughtful considerations when developing future research instrumentation.

*Keywords:* online reading, hypertexts, hyperlinks, comprehension, multiple documents