

Cognitive processing of verbal texts and infographics: Different or the same?

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The role illustrations play in cognitive processing of texts remains unclear. On the one hand, illustrations help to build up mental images (Glenberg, Langston, 2005); on the other, they make reading a more complicated process as they require high attention control (Mayer, 2005). The present study aimed to investigate the cognitive behavior manifested during processing of verbal texts and infographics. Hypothesis: the levels of comprehension of texts of various formats are different from one another.

Stimuli: three pairs of texts of different formats (verbal and infographics). Procedure: 40 respondents (aged 18–37, $M=22$; 77.5% female) were asked to read two texts of various formats. Then, they had to perform tests based on these texts and answer the questions of semi-structured interviews. The interview protocols were scored by two experts according to the texts' comprehension criteria. The data was analyzed with comparative methods (Mann–Whitney U-test, chi-squared test). No differences were found between the tests' scores and the levels of comprehension of texts of various formats, except for the most complicated one. The test scores for this text were higher when working with verbal format ($U=21.5$; $p<0.01$).

Presumably, these results are due to the difficulties in parallel cognitive processing of graphic and verbal elements of infographics. To conclude, the comprehension of a text depends on its content more than on its format. However, the qualitative specificity of cognitive behavior manifested during reading of infographics was described.

Poster session 1 (December 16, 12:20-14:05), poster 4