

# Investigating gender differences in reading

## A summary for teachers

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**Background:** Gender differences in reading achievement are consistently found in national and international assessments (although the way in which results are analysed and presented can inflate or reduce these differences). The present study critically examined and reviewed possible explanations for gender differences in reading skill.

**Aim:** To carry out an in depth examination of gender differences in reading, exploring differences in: 1) reading attitudes, motivation and attention; 2) cognition (intelligence, language, decoding skills); 3) brain activation during reading and reading related tasks; 4) reading strategies.

**Gender as a context (reading attitudes, motivation, attention):** Gender differences in these affective aspects of reading are typically wider than differences in reading skill, with boys consistently reporting lower reading attitudes, lower levels of motivation to read and less attention during reading instruction. Given that these factors contribute to reading acquisition and development, differences in reading attitudes, motivation and attention may explain, to some extent, gender differences in reading skill.

**Cognitive differences between boys and girls:** There is good evidence of a consistent relationship between children's intelligence, cognitive abilities and their reading achievement. However, evidence of consistent and robust gender differences in intelligence and cognition is lacking. Of those cognitive abilities most closely linked to reading (e.g., language), gender differences are much smaller than typically perceived. It is unlikely that gender differences in reading skill reflect cognitive differences.

**Gender differences in brain activation:** Sex differences in brain activation during reading and reading related tasks would provide a neurological basis for examining gender differences in reading. Most reviewed studies had been carried out among adults and some sex differences were found (with supporting behavioural evidence). However, those studies reporting statistically significant sex differences in brain activation were typically smaller studies. More research, particularly with children and adolescents, is necessary.

**Gender differences in reading strategies:** There is some research to suggest that boys, in general, are naturally more inclined to adopt a more phonological approach to reading (i.e., use letter-sound correspondences). It may be that boys have a preference for learning via a rule based approach (where phonics rules are learnt and executed) as opposed to a mixed method approach, where children learn to use a range of strategies to read unfamiliar words. Further research is needed to explore this.



**Implications for education:** It is important to understand potential reasons for the small, but consistent, gender differences in reading skill, so that supports aimed at redressing these differences are targeted most effectively. However, understanding group differences (i.e., gender differences) should not overrule the importance of appreciating the needs of individual students within the classroom.

**Academic paper:** Logan, S. & Johnston, R. (2010). Investigating gender differences in reading. *Educational Review*, 62, 175-187.