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To read or not to read

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Summary

There is a widely held belief that reading (story)books makes us smarter and helps promote success in life. Does scientific evidence support this notion? The three meta-analyses in this thesis comprise 146 studies between 1988 and 2010 (N = 10,308 participants) that addressed the role of book reading in language and reading development from infancy to early adulthood. For the group of pre-conventional readers, the effect of interventions at home and at school that improve the quality of shared book reading such as dialogic reading programs were also examined.

Before formal reading instruction starts, young children already form basic concepts about the connections between spoken and written words, which eventually leads to the ability to read and spell words fluently and accurately. As the ultimate goal of reading is reading for understanding, children's reading proficiency gets increasingly less determined by technical reading skills and gets increasingly more dependent on sophisticated vocabulary, background knowledge, and intelligence. Because books are an important means to get exposed to a variety of word meanings and word forms in relevant contexts, this thesis aimed to quantify how reading narrative texts (e.g., storybooks, novels, magazines) is related to indicators of reading comprehension and technical reading and spelling skills across development. It was hypothesized that reading books is both a consequence of reading proficiency and a contributor to further reading development: Because more skilled readers are more likely to enjoy books, they will choose to read more frequently which, in turn, will improve knowledge of word forms and semantics and enhance vocabulary size and text comprehension abilities.

A meta-analysis is a powerful tool to integrate, standardize, and systematically summarize findings of studies with comparable measures, interventions, and/or outcome domains. Effect sizes, quantitative indexes of relations among variables, are used to compare and communicate the strength of the summarized research findings. The first meta-analysis on shared book reading (Bus, Van IJzendoorn, & Pellegrini, 1995) showed moderate effect sizes for oral language and basic reading skills, which indicates that it certainly can make a tremendous difference in the lives of young children whether or not they are read to by their parent. Because meta-analyses are based on numerous decisions about collecting, coding, and analyzing the research base that far and because new interventions and measures continue to be developed and tested in different groups of children across countries, new meta-analyses are needed to replicate and extend earlier findings and to make up-to-date recommendations to the field.

The first meta-analysis in this thesis indicated that leisure-time reading activities can be considered as a driving force in shaping language and literacy. In preschool and kindergarten, grade 1 to 12, and college and university, the association between leisure-time reading activities and age-appropriate

measures in the domains of reading comprehension and technical reading and spelling skills were moderate to strong. As expected and in line with a model of reciprocal causation, leisure-time reading became increasingly more important for oral language, technical reading, and intelligence with each year of education. Impressively, exposure to books explained 12% of the variance in oral language skills in preschool and kindergarten, 13% in primary school, 19% in middle school, 30% in high school, and 34% in college and university. Furthermore, leisure time reading seemed especially important for low-ability readers: When they have experience with books at home, low-ability readers have more opportunities to practice basic reading skills, and consequently, become more accurate and fluent in text reading than their low(er)-ability peers who read less. Overall, the first meta-analysis suggested that reading routines that are part of children's and students' leisure-time activities offer substantial advantages for the development of reading proficiency and academic success.

For pre-conventional readers, books cannot be a means to stimulate language and basic reading skills as long as children do not receive intensive support from adults to remain attentive, to discover exciting parts of a story, and to understand unfamiliar words or difficult phrases. In a stimulation package called "Dialogic Reading", caregivers are trained to stimulate active involvement by eliciting verbal responses to the story with the help of open-ended questions about pictured materials and by providing informative feedback on child responses. The second meta-analysis demonstrated that enhancing the dialogue between parent and child indeed strengthened the effects of book reading. Parents who read dialogically enlarged their children's vocabularies significantly more than control-group parents who shared books as they were used to. Strikingly, two subgroups did not appear to benefit from the intervention: The oral language skills of 5- to 6-year-old kindergarten children and children at risk for language and literacy impairments hardly improved. On the one hand, expectations and dialogic-reading methods may have been pitched too low for kindergarten children, who may get distracted from the story content when there is too much talking. On the other hand, at-risk children who are most in need of effective language promotion were mostly from low socio-economic status homes. Their relatively low-educated parents might have experienced difficulty with incorporating the trained techniques.

One of the goals of the third meta-analysis was to test whether the literacy environment at school might be more stimulating for children at risk and/or in kindergarten classrooms. Furthermore, the set of studies was large enough to test whether interactive storybook reading affected oral language as well as basic reading skills such as alphabet knowledge and phonological sensitivity. Interestingly, about 7% of the growth in oral language skills of both preschoolers and kindergartners at risk could be explained by an interactive reading intervention in the educational setting. Furthermore, kindergartners seemed to be capable to independently process and learn from printed features in storybooks during interactive reading

sessions as they gained significantly more alphabet knowledge than preschool children. Apparently, at-risk children as well as older children are able to benefit from interactive reading. It does not seem, however, that a wide-scale integration of interactive reading in the regular school curriculum is warranted yet. That is, researchers appeared to be largely and significantly more effective in enhancing children's oral language skills than children's own teachers, who revealed moderate effects only when reading to whole classrooms. To enhance the effectiveness of an interactive book reading style at school, therefore, it may be critical that teachers are coached individually and receive more information about the theory behind the intervention.

In sum, the meta-analyses in this thesis supported that leisure-time reading is vital for school success and that an early start with shared book reading is important for developing the knowledge required for eventual success in reading. In fact, shared book reading may be part of a continuum of out-of-school reading experiences that facilitate children's language, reading, and spelling achievement throughout students' development. It seems, therefore, a logical step to invest in improvement of the quality of book reading to young children. However, the results of two meta-analyses testing the effects of interventions at home and at school revealed disappointing results especially for groups and settings where such an improvement in high-quality interactions with books and literacy is needed most. Dialogic Reading, a program to stimulate interactive book sharing, failed in low-educated families. In schools that were predominantly attended by children at risk, Dialogic Reading and similar interactive reading programs were least successful when they were carried out by children's own teachers. Apart from studying how both the quality and quantity of book reading can be effectively promoted for young children as well as for poor and proficient readers, future research is needed that follows children longitudinally so processes and strategies can be identified that turn sharing books in infancy into choosing to read as a leisure-time activity in adolescence and adulthood.