



Universiteit
Leiden
The Netherlands

Storybook apps as a tool for early literacy development

Smeets, D.J.H.

Citation

Smeets, D. J. H. (2012, December 20). *Storybook apps as a tool for early literacy development*. Retrieved from <https://hdl.handle.net/1887/20363>

Version: Not Applicable (or Unknown)

License: [Licence agreement concerning inclusion of doctoral thesis in the Institutional Repository of the University of Leiden](#)

Downloaded from: <https://hdl.handle.net/1887/20363>

Note: To cite this publication please use the final published version (if applicable).

Cover Page



Universiteit Leiden



The handle <http://hdl.handle.net/1887/20363> holds various files of this Leiden University dissertation.

Author: Smeets, Daisy Johanna Hendrika

Title: Storybook apps as a tool for early literacy development

Issue Date: 2012-12-20

References

B

- Baddeley, A. (1998). *Human memory*. Boston: Allyn & Bacon.
- Baddeley, A. D., Gathercole, S. E., & Papagno, C. (1998). The phonological loop as a language learning device. *Psychological Review*, *105*, 158-173. doi: 10.1037/0033-295X.105.1.158
- Barr, R. Shuck, L., Salerno, K., Atkinson, E., & Linebarger, D. L., (2010). Music interferes with learning from television during infancy. *Infant and Child Development*, *19*, 313-331. doi: 10.1002/icd.666
- Barr, R., Zack, E., Garcia, A., & Muentener, P. (2008). Infants' attention and responsiveness to television increases with prior exposure and parental interaction. *Infancy*, *30*, 30-56. doi: 10.1080/15250000701779378
- Bernstein, L. E., & Stark, R. E. (1985). Speech perception development in language-impaired children: A 4-year follow-up study. *Journal of Speech & Hearing Disorders*, *50*, 21-30.
- Biemiller, A., & Boote C. (2006). An effective method for building meaning vocabulary in primary grades. *Journal of Educational Psychology*, *98*, 44-62. doi:10.1037/0022-0663.98.1.44
- Bishop, D. V. M. (1997). *Uncommon understanding*. Hove, England: Psychology Press.
- Blewitt, P., Rump, K. M., Shealy, S. E., & Cook, S. A. (2009). Shared book reading: When and how questions affect young children's word learning. *Journal of Educational Psychology*, *101*, 294-304. doi:10.1037/a0013844
- Boonen, S. (2004). *Met opa op de fiets*. Amsterdam: Clavis.
- Brabham, E. G., & Lynch-Brown, C. (2002). Effects of teacher's reading-aloud styles on vocabulary acquisition and comprehension of students in the early elementary grades. *Journal of Educational Psychology*, *94*, 465-473. doi: 10.1037//0022-0663.94.3.465
- Bull, R., Espy, K. A., & Wiebe, S. A. (2008). Short-term memory, working memory, and executive functioning in preschoolers: Longitudinal predictors of mathematical achievement at age 7 years. *Developmental Neuropsychology*, *33*, 205-228. doi:10.1080/87565640801982312
- Bus, A. G., van IJzendoorn, M. H., & Pellegrini, A. D. (1995). Joint book reading makes for success in learning to read: A meta-analysis on intergenerational transmission of literacy. *Review of Educational Research*, *65*, 1-21. doi:10.3102/00346543065001001
- Bus, A.G., & de Jong, M.T. (2006). Book sharing: A developmentally appropriate way to foster pre-academic growth. In S. Rosenkoetter & J. Knapp-Philo (Eds.), *Learning to read the world: Language and literacy in the first 3 years* (pp.123-144). Washington: Zero-to-three Press.
- Bus, A.G., & Neuman, S. B. (2010). Afterword. In A.G. Bus & S.B. Neuman (Eds.), *Multimedia and literacy development. Improving achievement for young learners* (pp.273-278). New York: Routledge.

C

- Cain, K., Oakhill, J., Lemmon, K. (2004). Individual differences in the inference of word meanings from context: The influence of reading comprehension, vocabulary knowledge, and memory capacity. *Journal of Educational Psychology*, 96, 671–681. doi:10.1037/0022-0663.96.4.671
- Calvert, S. L., & Scott, M. C. (1989). Sound effects for children's temporal integration of fast-paced television content. *Journal of Broadcasting and Electronic Media*, 33, 233-246. (EJ401106)
- Carver, R. P (1994). Percentage of unknown vocabulary words in text as a function of the relative difficulty of the text: Implications for instruction. *Journal of Literacy Research*, 26, 413-437. doi: 10.1080/10862969409547861
- Catts, H. W., Fey, M. E., Tomblin, J. B., & Zhang, X. (2002). A longitudinal investigation of reading outcomes in children with language impairments. *Journal of Speech, Language, and Hearing Research*, 45, 1142–1157. doi:10.1044/1092-4388(2002/093)
- Cennamo, K. S. (1993). Learning from video: factors influencing learners' preconceptions and invested mental effort. *Educational Technology Research and Design*, 41, 33-45. doi:10.1007/BF02297356
- Chan, A., Cheung, M.-c., Sze, S., Leung, W., & Cheung, R. W. Y. (2008). Measuring vocabulary by free expression and recognition tasks: Implications for assessing children, adolescents, and young adults. *Journal of Clinical and Experimental Neuropsychology*, 30, 892-902.
- Chiong, C., Ree, J., Takeuchi, L., & Erickson, I. (2012). *Print books versus e-books*. The Joan Ganz Cooney Center.
- Christakis, D. A., Ebel, B., Rivara, F. P., & Zimmerman, F. J. (2004). Television, video, and computer game usage in children under 11 years of age. *The Journal of Pediatrics*, 145, 652-656. doi: 10.1016/j.jpeds.2004.06.078
- Coady, J. A., Kluender, K. R., & Evans, J. L. (2005). Categorical perception of speech by children with specific language impairments. *Journal of Speech, Language, and Hearing Research*, 48, 944–959. doi:10.1044/1092-4388(2005/065)
- Cohen, J. (1992). A power primer. *Psychological Bulletin*, 112, 155–159. doi:10.1037//0033-2909.112.1.155
- Cohen, J., Cohen, P., Stephen G. W., & Aiken, L. S. (2003). *Applied Multiple Regression/Correlation Analysis for the Behavioral Sciences (3rd ed)*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Collins, M. F. (2010). ELL preschoolers' English vocabulary acquisition from storybook reading. *Early Childhood Research Quarterly*, 25, 84–97. doi:10.1016/j.ecresq.2009.07.009
- Corbett, A. T., & Anderson, J. R. (2001). Locus of feedback control in computer-based tutoring: Impact on learning rate, achievement and attitudes. In Jacko, J., Sears, A., Beaudouin-Lafon, M. & Jacob, R. (Eds.), *Proceedings of ACM CHI'2001 Conference on Human Factors in Computing Systems* (pp.245-252). New York: ACM Press.

- Coyne, M. D., McCoach, D. B., Loftus, S., Zipoli, R., Jr., & Kapp, S. (2009). Direct vocabulary instruction in kindergarten: Teaching for breadth versus depth. *Elementary School Journal*, *110*, 1–18. doi: 10.1086/598840
- Crain-Thoreson, C., & Dale, P. S. (1999). Enhancing linguistic performance: Parents and teachers as book reading partners for children with language delays. *Topics in Early Childhood Special Education*, *19*, 28–39. doi:10.1177/027112149901900103
- Crawley, A. M., Anderson, D. R., Wilder, A., Williams, M., & Santomero, A. (1999). Effects of repeated exposures to a single episode of the television program “Blue’s Clues” on the viewing behaviors and comprehension of preschool children. *Journal of Educational Psychology*, *91*, 630–637.
- D**
- Dale, P. S., Crain-Thoreson, C., Notari-Syverson, A., & Cole, K. (1996). Parent-child book reading as an intervention technique for young children with language delays. *Topics in Early Childhood Special Education*, *16*, 213–235. doi:10.1177/027112149601600206
- Davis, L. (1996). *P.B. is jarig* [P.B. Bear’s birthday] [CD-ROM]. The Netherlands: Bombilla/VNU Interactive Media.
- De Bree, E., Rispens, J., & Gerrits, E. (2007). Non-word repetition in Dutch children with (a risk of) dyslexia and SLI. *Clinical Linguistics & Phonetics*, *21*, 935–944. doi:10.1080/02699200701576892
- De Jong, M. T., & Bus, A. G. (2012). *AVI gaat digitaal: oefenboekjes voor beginnende lezers op tablet*. Universiteit Leiden/ Stichting Lezen.
- De Jong, M.T., & Bus, A.G. (2002). Quality of book-reading matters for emergent readers: An experiment with the same book in a regular or electronic format. *Journal of Educational Psychology*, *94*, 145-155. doi:10.1037//0022-0663.94.1.145
- De Jong, M.T., & Bus, A.G. (2003). How well suited are electronic books to supporting literacy? *Journal of Early Childhood Literacy*, *3*, 147-164. doi: 10.1177/14687984030032002
- De Jong, M.T., & Bus, A.G. (2004). The efficacy of electronic books in fostering kindergarten children’s emergent story understanding. *Reading Research Quarterly*, *39*, 378–393. doi: 10.1598/RRQ.39.4.2
- De Temple, J., & Snow, C.E. (2003). Learning words from books. In van Kleeck, A., Stahl, S.A., & Bauer, E.B. (Eds.), *On reading books to children: Teachers and parents* (pp. 16-36). Mahwah, NJ: Lawrence Erlbaum Associates.
- De Wijs, I. (2001). *Rokko Krokodil*. Rotterdam: Ziederis.
- DeBell, M., & Chapman, C. (2003). Computer and Internet Use by Children and Adolescents in 2001. *Education Statistics Quarterly*, *5*, 7-11.
- Dickinson, D.K., & Smith, M.W. (1994). Long-term effects of preschool teachers’ book readings on low-income children’s vocabulary and story comprehension. *Reading Research Quarterly*, *29*, 104-122. doi:10.2307/747807

Dollaghan, C., & Campbell, T. (1998). Nonword repetition and child language impairment. *Journal of Speech, Language, and Hearing Research, 41*, 1136–1146. (EJ573593)

E

Edwards, J., & Lahey, M. (1998). Nonword repetitions of children with specific language impairment: Exploration of some explanations for their inaccuracies. *Applied Psycholinguistics, 19*, 279–309. doi:10.1017/S0142716400010079

Elley, W. B. (1989). Vocabulary acquisition from listening to stories. *Reading Research Quarterly, 24*, 174–186. doi: 10.2307/747863

Ellis Weismer, S., & Hesketh, L. (1996). Lexical learning by children with specific language impairment: Effects of linguistic input presented at varying speaking rates. *Journal of Speech and Hearing Research, 39*, 177–190. (EJ518063)

Ellis Weismer, S., Evans, J., & Hesketh, L. (1999). An examination of working memory capacity in children with specific language impairment. *Journal of Speech, Language, and Hearing Research, 42*, 1249–1260.

Ellis Weismer, S., Tomblin, J. B., Zhang, X., Buckwalter, P., Chynoweth, J. G., & Jones, M. (2000). Nonword repetition performance in school-age children with and without language impairment. *Journal of Speech, Language, and Hearing Research, 43*, 865–878.

Evans, M.A., & Saint-Aubin, J. (2005). What children are looking at during shared storybook reading. *Psychological Science, 16*, 913–920. doi: 10.1111/j.1467-9280.2005.01636.x

Ewers, C. A., & Brownson, S. M. (1999). Kindergartners' vocabulary acquisition as a function of active vs. passive storybook reading, prior vocabulary, and working memory. *Journal of Reading Psychology, 20*, 11–20. doi: 10.1080/027027199278484

F

Fadiga L., Craighero L., Buccino G., & Rizzolatti G. (2002). Speech listening specifically modulates the excitability of tongue muscles: a TMS study. *European Journal of Neuroscience, 15*, 399-402. doi: 10.1046/j.0953-816x.2001.01874.x

G

Gathercole, S. E., & Baddeley, A. D. (1990a). The role of phonological memory in vocabulary acquisition: A study of young children learning arbitrary names of toys. *British Journal of Psychology, 81*, 439–454.

Gathercole, S. E., & Baddeley, A. D. (1990b). Phonological memory deficits in language disordered children: Is there a causal connection? *Journal of Memory and Language, 29*, 336–360. doi:10.1016/0749-596X(90)90004-J

- Gathercole, S. E., Service, E., Hitch, G. J., Adams, A. M., & Martin, A. J. (1999). Phonological short-term memory and vocabulary development: Further evidence on the nature of the relationship. *Applied Cognitive Psychology, 13*, 65–77. doi: 10.1002/(SICI)1099-0720(199902)13:1<65::AID-ACP548>3.0.CO;2-O
- Gathercole, S. E., Willis, C. S., Emslie, H., & Baddeley, A. D. (1992). Phonological memory and vocabulary development during the early school years: A longitudinal study. *Developmental Psychology, 28*, 887–898. doi:10.1037//0012-1649.28.5.887
- Gibbons, J., Anderson, D. R., Smith, R., Field, D. E., & Fischer, C. (1986). Young children's recall and reconstruction of audio and audiovisual narratives. *Child Development, 57*, 1014–1023. doi:10.2307/1130375
- Gillam, R.B., Loeb, D.F., Hoffman, L.M., Bohman, T., Champlin, C.A., Thibodeau, L., Widen, J., Brandel, J., Friel-Patti, S. (2008). The efficacy of Fast ForWord Language intervention in school-age children with language impairment: a randomized controlled trial. *Journal of Speech, Language, and Hearing Research, 51*, 97–119. doi:10.1044/1092-4388(2008/007)
- Gong, Z., & Levy, B. A. (2009). Four year old children's acquisition of print knowledge during electronic storybook reading. *Reading and Writing, 22*, 889-905. doi: 10.1007/s11145-008-9130-1.
- Gray, S. (2003). Word learning by preschoolers with specific language impairment: What predicts success? *Journal of Speech, Language, and Hearing Research, 47*, 56–67. doi:10.1044/1092-4388(2003/005)
- Gray, S. (2004). Word learning by preschoolers with specific language impairment: Predictors and poor learners. *Journal of Speech, Language, and Hearing Research, 47*, 1117–1132. doi:10.1044/1092-4388(2004/083)
- Greenfield, P., & Beagles-Roos, J. (1988). Radio vs. television: their cognitive impact on children of different socioeconomic and ethnic groups. *Journal of Communication, 38*, 71-92. doi:10.1111/j.1460-2466.1988.tb02048.x
- H**
- Hatcher, P. J., Hulme, C., Miles, J. N. V., Carroll, J. M., Hatcher, J., Gibbs, S., Smith, G., Bowyer-Crane, C., & Snowling, M. J. (2006). Efficacy of small group reading intervention for beginning readers with reading-delay: A randomized controlled trial. *Journal of Child Psychology and Psychiatry, 47*, 820-827. doi:10.1111/j.1469-7610.2005.01559.x
- Hayes, D. P. (1988). Speaking and writing: distinct patterns of word choice. *Journal of Memory and Language, 27*, 572-585. doi: 10.1016/0749-596X(88)90027-7
- Hayes, D. P., & Ahrens, M. G. (1988). Vocabulary simplification for children: A special case of “motherese”? *Journal of Child Language, 15*, 395–410. doi:10.1017/S0305000900012411
- Hayes, D. S., & Birnbaum, D. W. (1980). Preschoolers' retention of televised events: Is a picture worth a thousand words? *Developmental Psychology, 16*, 410-416. doi:10.1037//0012-1649.16.5.410

- Hayes, D. S., Chemelski, B. E., & Birnbaum, D. W. (1981). Young children's incidental and intentional retention of televised events. *Developmental Psychology, 17*, 230-232. doi:10.1037//0012-1649.17.2.230
- Hayes, D. S., Kelly, S. B., Mandel, M. (1986). Media differences in children's story synopses: radio and television contrasted. *Journal of Educational Psychology, 78*, 341-346. doi:10.1037/0022-0663.78.5.341
- Hick, R., Joseph, K., Conti-Ramsden, G., Serratrice, L., & Faragher, B. (2002). Vocabulary profiles of children with specific language impairment. *Child Language Teaching and Therapy, 18*, 165-180. doi:10.1191/0265659002ct233oa
- Higgins, N. & Hess, L. (1999). Using electronic books to promote vocabulary development. *Journal of Research on Computing in Education, 31*, 425-430. [http://www.eric.ed.gov \(ED418687\)](http://www.eric.ed.gov (ED418687)).
- Higgins, N.C., & Cocks, P. (1999). The effects of animation cues on vocabulary development. *Journal of Reading Psychology, 20*, 1-10. doi: 10.1080/027027199278475
- Hoogstad, A. (2005). *Bolder en de boot*. Amsterdam: Pimento.
- Hu, M., & Nation, I.S.P. (2000). Vocabulary density and reading comprehension. *Reading in a Foreign Language, 13*, 403-430. (EJ626518)
- Huston, A. C., & Wright, J. C. (1983). Children's processing of television: The informative functions of formal features. In J. Bryant & D. R. Anderson (Eds.), *Children's understanding of television: Research on attention and comprehension* (pp. 35-68). New York: Academic Press.

J

- Janosch (1998a). *Groot feest voor Tijger* [Big party for Tiger] [CDROM CDROM]. Baarn, the Netherlands: Het Spectrum Electronic Publishing.
- Janosch (1998b). *Ik maak je weer beter, zei Beer* [I'll make you well again, said the Bear] [CD-ROM]. Baarn, the Netherlands: Het Spectrum Electronic Publishing.
- Joanisse, M. F., & Seidenberg, M.S. (1998). Specific language impairment: A deficit in grammar or processing? *Trends in Cognitive Sciences, 2*, 240-247. doi:10.1016/S1364-6613(98)01186-3
- Judge, S., Puckett, K., & Bell, S. M. (2006). Closing the digital divide: Update from the early childhood longitudinal study. *Journal of Educational Research, 100*, 52-60. doi: 10.3200/JOER.100.1.52-60
- Justice, L. M. (2002). Word exposure conditions and preschoolers' novel word learning during shared storybook reading. *Reading Psychology, 23*, 87-106. doi: 10.1080/027027102760351016
- Justice, L. M., & Ezell, H. K. (2000). Enhancing children's print and word awareness through home-based parent intervention. *American Journal of Speech-Language Pathology, 9*, 257-269.

K

- Kaderavek, J. N., & Justice, L. M. (2002). Shared storybook reading as an intervention context: Practices and potential pitfalls. *American Journal of Speech-Language Pathology, 11*, 395–406. doi:10.1044/1058-0360(2002/043)
- Kaderavek, J. N., & Sulzby, E. (2000). Narrative production by children with and without specific language impairment: oral narratives and emergent readings. *Journal of Speech Language and Hearing Research, 43*, 34–49. (EJ609692)
- Kamil, M. L., Intrator, S. M., & Kim, H. S. (2000). The effects of other technologies on literacy and literacy learning. In M. L. Kamil, P. B. Mosenthal, P. D. Pearson, & R. Barr (Eds.), *Handbook of reading research, Volume 3* (pp. 771–778). Mahwah, NJ: Erlbaum.
- Kan, P. F., & Windsor, J. (2010). Word learning in children with primary language impairment: A meta-analysis. *Journal of Speech, Language, and Hearing Research, 53*, 739-756. doi:10.1044/1092-4388(2009/08-0248)
- Kegel, A. T., & Bus, A. G. (2011). Online tutoring as a pivotal quality of web-based early literacy learning. *Journal of Educational Psychology, 104*, 182-192. doi: 10.1037/a0025849.
- Kegel, A. T., Bus, A. G., & van IJzendoorn, M. H. (2011). Differential susceptibility in early literacy instruction through computer games: The role of the Dopamine D4 receptor gene (DRD4). *Mind, Brain and Education, 5*, 71-78. doi:10.1111/j.1751-228X.2011.01112.x
- Keppel, G. & Wickens, T. D. (2004). *Design and Analysis: A Researcher's Handbook*. London: Prentice Hall.
- Kiernan, B., & Gray, S. (1998). Word learning in a supported learning context by preschool children with SLI. *Journal of Speech and Hearing Research, 41*, 161–171.
- Korat, O. & Shamir, A. (2004). Do Hebrew electronic books differ from Dutch electronic books? A replication of a Dutch content analysis. *Journal of Computer Assisted Learning, 20*, 257–268. doi: 10.1111/j.1365-2729.2004.00078.x
- Korat, O. & Shamir, A. (2008). The educational electronic book as a tool for supporting children's emergent literacy in low versus middle SES groups. *Computers and Education, 50*, 110-124. doi:10.1016/j.compedu.2006.04.002
- Korat, O. (2010). Reading electronic books as a support for vocabulary, story comprehension and word reading in kindergarten and first grade. *Computers & Education, 55*, 24-31. doi:10.1016/j.compedu.2009.11.014
- Kort, W., Schittekatte, M., Van den Bos, K. P., Vermeir, G., Iutje Spelberg, H. C., Verhaeghe, P., & Van der Wild, S. (2005). *Dyslexie Screening Test*. London: Harcourt Assessment.

L

- Labbo, L.D., & Kuhn, M.R. (2000). Weaving chains of affect and cognition: A young child's understanding of CD-ROM talking books. *Journal of Literacy Research, 32*, 187–210.

- Landis, J. R., & Koch, G. C. (1977). The measurement of observer agreement for categorical data. *Biometrics*, 33, 159-174. doi: 10.2307/2529310
- Laufer, B. & Paribakht., T. S. (1998). Relationship between passive and active vocabularies: effects of language learning context. *Language Learning*, 48, 365-391. doi: 10.1111/0023-8333.00046
- Leonard, L. B. (2000). Specific language impairment across languages. In D. V. M. Bishop & L. B. Leonard (Eds.), *Speech and language impairments in children. Causes, characteristics, intervention and outcome* (pp. 115–129). Hove, UK: Psychology Press.
- Liberman A., & Mattingly I., G. (1985). The motor theory of speech perception - revised. *Cognition*, 21, 1–36. doi:10.1016/0010-0277(85)90021-6
- Lynch, J. S., van den Broek, P., Kremer, K. E., Kendeou, P., White, M. J., & Korch, E. P. (2008). The development of narrative comprehension and its relation to other early reading skills. *Reading Psychology*, 29, 327-365. doi: 10.1080/02702710802165416

M

- Marsh, J. (2009). Digital beginnings: Young children's use of popular culture, media and new technologies in homes and early years settings. In A. G. Bus & S. B. Neuman (Eds.), *Multimedia and literacy development* (pp. 28-43). New York: Routledge.
- Marslen-Wilson, W., & Warren, P. (1994). Levels of perceptual representation and process in lexical access: words, phonemes, and features. *Psychological Review*, 101, 653-675. doi:10.1037//0033-295X.101.4.653
- Mayer, R. E. (2001). *Multimedia learning*. Cambridge, UK: Cambridge University Press.
- Mayer, R. E., Moreno, R. (2003). Nine ways to reduce cognitive load in multimedia learning. *Educational Psychologist*, 38,43-52. doi:10.1207/S15326985SEP3801_6
- McKeown, M., Beck, I., & Aphthorp, H. S. (2011). Examining depth of processing in vocabulary lessons. Presented at the meeting of the American Educational Research Association, New Orleans.
- Mol, S. E., & Bus, A. G. (2011). To read or not to read: A meta-analysis of print exposure from infancy to early adulthood. *Psychological Bulletin*, 137, 267–296. doi:10.1037/a0021890
- Mol, S. E., Bus, A. G., & de Jong, M. T. (2009). Interactive book reading in early education: A tool to stimulate print knowledge as well as oral language. *Review of Educational Research*, 79, 979–1007. doi:10.3102/0034654309332561
- Mol, S. E., Bus, A. G., de Jong, M. T., & Smeets, D. J. H. (2008). Added value of dialogic parent–child book readings: A meta-analysis. *Early Education and Development*, 19, 7–26. doi:10.1080/10409280701838603
- Montgomery, J. (1995). Sentence comprehension in children with specific language impairment: The role of phonological working memory. *Journal of Speech and Hearing Research*, 38, 187–199. (EJ499298)

Montgomery, J. W. (2003). Working memory and comprehension in children with specific language impairment: what we know so far. *Journal of Communication Disorders*, 36, 221-231. doi:10.1016/S0021-9924(03)00021-2

Moreno, R., & Valdez, F. (2005). Cognitive load and learning effects of having students organize pictures and words in multimedia environments: The role of student interactivity and feedback. *Educational Technology Research and Development*, 53, 35-45. doi:10.1007/BF02504796

N

Nagy, W. E., & Scott, J. A. (2000). Vocabulary processes. In M. L. Kamil, P. B. Mosenthal, P. D. Pearson, & R. Barr (Eds.), *Handbook of reading research, Volume 3* (pp. 269–284). Mahwah, NJ: Erlbaum.

Nation, K., & Snowling, M. J., (2004). Beyond phonological skills: broader language skills contribute to the development of reading. *Journal of Research in Reading*, 27, 342-356. doi:10.1111/j.1467-9817.2004.00238.x

Neuman, S.B. (1997). Television as a learning environment: A theory of synergy. In J. Flood, S. Brice Heath & D. Lapp (Eds.), *Handbook of research on teaching literacy through the communicative and visual arts* (pp. 15-30). New York: Simon & Schuster.

O

Oetting, J. B., Rice, M. L., & Swank, L. K. (1995). Quick incidental-learning (QUIL) of words by school-age-children with and without SLI. *Journal of Speech and Hearing Research*, 38, 434–445. (EJ503028)

Ouellette, G., & Beers, A., (2010). A not-so-simple view of reading: how oral vocabulary and visual-word recognition complicate the story. *Reading and Writing*, 23, 189-208. doi: 10.1007/s11145-008-9159-1

Oullette, G. P. (2006). What's meaning got to do with it: The role of vocabulary in word reading and reading comprehension. *Journal of Educational Psychology*, 98, 554–566. doi:10.1037/0022-0663.98.3.554

P

Paivio, A. (1986). *Mental Representations: A Dual Coding Approach*. Oxford: Oxford University Press.

Pearson, P., Hiebert, E. H., & Kamil, M. L. (2007). Vocabulary assessment: What we know and what we need to learn. *Reading Research Quarterly*, 42, 282–296. doi: 10.1598/RRQ.42.2.4

Penno, J. F., Wilkinson, I. A. G., & Moore, D. W. (2002). Vocabulary acquisition from teacher explanation and repeated listening to stories: Do they overcome the Matthew effect? *Journal of Educational Psychology*, 94, 23–33. doi:10.1037/0022-0663.94.1.23

Praagman, M. (2006). *Lieve Lieve*. Tielt/Arnhem: Lannoo.

Proctor, C. P., Uccelli, P., Dalton, B., & Snow, C. E. (2009). Understanding depth of vocabulary online with bilingual and monolingual children. *Reading and Writing Quarterly*, 25, 311-333. doi:10.1080/10573560903123502

R

- Raikes, H., Pan, B. A., Luze, G., Tamis-LeMonda, S. T., Brooks-Gunn, J., Constantine, J., et al. (2006). Mother-child book reading in low-income families: Correlates and outcomes during the first three years of life. *Child Development*, 77, 803–1128. doi: 10.1111/j.1467-8624.2006.00911.x
- Reed (2006). Cognitive architectures for multimedia learning. *Educational Psychologist*, 42, 87-98. doi:10.1207/s15326985Sep4102_2
- Reese, E., & Cox, A. (1999). Quality of adult book reading affects children's emergent literacy. *Developmental Psychology*, 35, 20–28. doi:10.1037/0012-1649.35.1.20
- Ricci, C.M., & Beal, C.R. (2002). The effect of interactive media on children's story memory. *Journal of Educational Psychology*, 94, 138–144. doi: 10.1037//0022-0663.94.1.138
- Rice, M. L., Buhr, J. C., & Nemeth, M. (1990). Fast mapping word-learning abilities of language-delayed preschoolers. *Journal of Speech and Hearing Disorders*, 55, 33–42. (EJ410239)
- Rice, M. L., Buhr, J., & Oetting, J. B. (1992). Specific-language-impaired children's quick incidental learning of words: The effect of a pause. *Journal of Speech, Language, and Hearing Research*, 35, 1040–1048.
- Rice, M. L., Oetting, J. B., Marquis, J., Bode, J., & Pae, S. (1994). Frequency of input effects on word comprehension of children with specific language impairment. *Journal of Speech, Language, and Hearing Research*, 37, 106–122. (EJ479486)
- Rideout, V.J., Vandewater, E., & Wartella, E.A. (2003). *Zero to six. Electronic media in the lives of infants, toddlers and preschoolers*. A Kaiser Family Foundation Report.
- Rizzolatti G., & Craighero L. (2004). The mirror-neuron system. *Annual Review of Neuroscience*, 27, 169-192. doi: 10.1146/annurev.neuro.27.070203.144230
- Roberts, D. F., & Foehr, U. G. (2008). Trends in media use. *The Future of Children*, 18, 11–37. doi: 10.1353/foc.0.0000
- Robertson, E. K., Joanisse, M. F., Desroches, A. S., & Ng, S. (2009). Categorical speech perception deficits distinguish language and reading impairments in children. *Developmental Science*, 12, 753 – 767. doi: 10.1111/j.1467-7687.2009.00806.x
- Rodd, J. M., Gaskell, M. G., & Marslen-Wilson, W. D. (2004). Modelling the effects of semantic ambiguity in word recognition. *Cognitive Science*, 28, 89-104. doi:10.1016/j.cogsci.2003.08.002
- Roskos, K. (2011). Design Considerations for an Effective E-book Physical Environment. Presented at the meeting of the American Educational Research Association, New Orleans.

Roskos, K., Brueck, J., & Widman, S. (2009). Investigating analytic tools for e-Book design in early literacy learning. *Journal of Interactive Online Learning*, 8, 218-240. [Http://www.ncolr.org/jiol/issues/viewarticle.cfm?volid=8&IssueID=27&ArticleID=138](http://www.ncolr.org/jiol/issues/viewarticle.cfm?volid=8&IssueID=27&ArticleID=138)

S

Salomon, G. (1984). Television is “easy” and print is “tough”: The differential investment of mental effort in learning as a function of perceptions and attributions. *Journal of Educational Psychology*, 76, 647-658. doi: 10.1037/0022-0663.76.4.647

Scarborough, H. S., & Dobrich, W. (1994). On the efficacy of reading to preschoolers. *Developmental Review*, 14, 245–302. doi:10.1006/drev.1994.1010

Schlichting, L. (2005). *Peabody Picture Vocabulary Test-III-NL*. Amsterdam: Harcourt Test Publisher.

Schnotz, W., & Rasch, T. (2005). Enabling, facilitating, and inhibiting effects of animations in multimedia learning: why reduction of cognitive load can have negative results on learning. *Educational Technology Research and Development*, 53, 47-58. doi:10.1007/BF02504797

Schrooten, W., & Vermeer, A. (1994). *Woorden in het basisonderwijs, 15.000 woorden aangeboden aan leerlingen*. Tilburg: Tilburg University Press.

Schwartz, R. G. (2009). Specific language impairment. In R. G. Schwartz (Ed.), *Handbook of child language disorders* (pp. 3–43). New York, NY: Psychological Press.

Segers, E. & Verhoeven, L. (2002). Multimedia support of early literacy learning. *Computers & Education*, 39, 207-221. doi:10.1016/S0360-1315(02)00034-9

Segers, E., & Verhoeven, L. (2003). Effects of vocabulary computer training in kindergarten. *Journal of Computer Assisted Learning*, 19, 559 - 568. doi:10.1046/j.0266-4909.2003.00058.x

Segers, E., Takke, L., & Verhoeven, L. (2004). Teacher-mediated versus computer-mediated storybook reading to children in native and multicultural classrooms. *School Effectiveness and School Improvement*, 15, 215–226. doi:10.1076/sesi.15.2.215.30430

Sénéchal, M. (1997). The differential effect of storybook reading on preschoolers' acquisition of expressive and receptive vocabulary. *Journal of Child Language*, 24, 123–138. doi:10.1017/S0305000996003005

Sénéchal, M., Thomas, E., & Monker, J. A. (1995). Individual differences in 4-year-old children's acquisition of vocabulary during storybook reading. *Journal of Educational Psychology*, 87, 218–229. doi: 10.1037/0022-0663.87.2.218

Shamir, A. & Korat, O. (2009). The educational electronic book as a tool for supporting children's emergent literacy. In A. Bus and S. B. Neuman (Eds.), *Multimedia and literacy development* (pp. 168-181). New York: Routledge.

- Shamir, A. Korat, O. & Barbi, N. (2008). The effects of CD-ROM storybook reading on low SES kindergarteners' emergent literacy as a function of learning context. *Computers & Education*, 51, 354-367. doi:10.1016/j.compedu.2007.05.010
- Shamir, A., Korat, O., & Shlafer, I. (2011). The effect of activity with e-book on vocabulary and story comprehension: A comparison between kindergarteners at risk of learning disabilities and typically developing kindergarteners. *European Journal of Special Needs Education*, 26, 311-322. doi: 10.1080/08856257.2011.593824
- Sheng, L., & McGregor, K. K. (2010). Lexical-semantic organization in children with specific language impairment. *Journal of Speech, Language, and Hearing Research*, 53, 146-159. doi:10.1044/1092-4388(2009/08-0160)
- Silverman, R. & Hines, S. (2009). The effects of multimedia-enhanced instruction on the vocabulary of English-language learners and non-English-language learners in pre-kindergarten through second grade. *Journal of Educational Psychology*, 101, 305-314. doi: 10.1037/a0014217
- Simcock G., & Hayne, H. (2002). Age-related changes in verbal and nonverbal memory during early childhood. *Developmental Psychology*, 29, 805-814. doi:10.1037/0012-1649.39.5.805
- Sipe, L., R. (1998). How picture books work: a semiotically framed theory of text-picture relationships. *Children's Literature in Education*, 29, 97-108. [http://www.eric.ed.gov \(EJ567293\)](http://www.eric.ed.gov (EJ567293)).
- Smeets, D. J. H., & Bus, A. G. (2012a). The interactive video book as a word learning device for kindergartners. Manuscript submitted for publication.
- Smeets, D. J. H., & Bus, A. G. (2012b). Interactive electronic storybooks for kindergartners to promote vocabulary growth. *Journal of Experimental Child Psychology*, 112, 36-55. doi:10.1016/j.jecp.2011.12.003
- Smeets, D. J. H., van Dijken, M. J., & Bus, A. G. (in press). Using electronic storybooks to support word learning in children with severe language impairments. *Journal of Learning Disabilities*.
- Smith, L. B., & Thelen, E. (1993). *Dynamic Systems in Development: Applications*. Cambridge MA: MIT Press.
- Smith, V. (2011). *What makes a great app?* www.kirkusreviews.com/blog/childrens
- Spackman, M. P., Fujiki, M., Brinton, B., Nelson, D., & Allen, J. (2006). The ability of children with language impairment to recognize emotion conveyed by facial expression and music. *Communication Disorders Quarterly*, 26, 131-143. doi: 10.1177/15257401050260030201
- Stahl, S. (1999). *Vocabulary development*. Cambridge, MA: Brookline Books.
- Stahl, S. A. & Fairbanks, M. M. (1986) The effects of vocabulary instruction: A model-based meta-analysis. *Review of Educational Research*, 56, 72-110. doi: 10.3102/00346543056001072
- Stahl, S. A., & Stahl, K. A. (2004). Word wizards all! In J. F. Baumann & E. J. Kameenui (Eds.), *Vocabulary instruction: Research to practice* (pp. 59-78). New York, NY: Guilford Press.

Stichting Mijn Kind Online (2012). *Iene miene media - een onderzoek naar mediagebruik door kleine kinderen*. <http://www.mijnkindonline.nl/1695/iene-miene-media-mediagebruik-door.htm>

Sulzby, E. (1985). Children's emergent reading of favorite storybooks: A developmental study. *Reading Research Quarterly*, 20, 458–481. doi: 10.1598/RRQ.20.4.4

T

Tallal, P., and Piercy, M. (1974). Developmental aphasia: Rate of auditory processing and selective impairment of consonant perception. *Neuropsychologia*, 12, 83–94. doi:10.1016/0028-3932(74)90030-X

Tallal, P., Miller, S., Bedi, G., Byma, G., Wang, X., Nagarajan, S., Schreiner, C., Jenkins, W., & Merzenich, M. (1996). Language comprehension in language-learning impaired children improved with acoustically modified speech. *Science*, 27, 81–84. doi:10.1126/science.271.5245.81

Thomas, V., & Gorky, P. (1996). *Heksenspul met Hennie de Heks en de Kat Helmer* [Winnie Witch] [CD-ROM]. Nieuwegein, the Netherlands: Bombilla.

Tomblin, J. B., Records, N. L., Buckwalter, P., Zhang, X., Smith, E., & O'Brien, M. (1997). The prevalence of specific language impairment in kindergarten children. *Journal of Speech, Language, and Hearing Research*, 40, 1245–1260.

Trushell, J., & Maitland, A., (2005). Primary pupils' recall of interactive storybooks on CD-ROM: inconsiderate interactive features and forgetting. *British Journal of Educational Technology*, 36, 57–66. doi: 10.1111/j.1467-8535.2005.00438.x

Trushell, J., Maitland, A., & Burrell, C. (2003). Pupils' recall of an interactive storybook on CD-ROM. *Journal of Computer Assisted Learning*, 19, 80–89. doi: 10.1046/j.0266-4909.2002.00008.x

V

Van Bon, W. H. J. & Hoekstra, J. G. (1982). *Taaltest voor kinderen*. Amsterdam: Pearson Assessment and Information B.V.

Van den Broek, P., Lorch, E. P., Thurlow, R. (1996). Children's and adults' memory for television stories: the role of causal factors, story-grammar categories, and hierarchical level. *Child Development*, 67, 3010–3028. doi: 10.1111/j.1467-8624.1996.tb01900.x

Van Genechten, G. (2009). *Kleine Kangoeroe*. Hasselt: Clavis.

Van Haeringen, A. (2004). *Beer is op vlinder*. Amsterdam: Leopold.

Van Kleeck, A., & Vander Woude, J. (2003). Book sharing with preschoolers with language delays. In A. van Kleeck, S. A. Stahl, & E. Bauer (Eds.), *On reading to children: Parents and teachers* (pp. 58–92). Mahwah, NJ: Lawrence Erlbaum.

Van Kleeck, A., Vander Woude, J., & Hammett, L. A. (2006). Fostering literal and inferential language skills in Head Start preschoolers with language impairment using scripted book-sharing discussions. *American Journal of Speech-Language Pathology*, 15, 85–95. doi:10.1044/1058-0360(2006/009)

- Van Weerdenburg, M., Verhoeven, L., & Van Balkom, H. (2006). Towards a typology of specific language impairment. *Journal of Child Psychology and Psychiatry*, 47, 176–189. doi:10.1111/j.1469-7610.2005.01454.x
- Vance, M. & Martindale, N. (2012) Assessing speech perception in children with language difficulties: Effects of background noise and phonetic contrast. *International Journal of Speech-Language Pathology*, 14, 48-58. doi:10.3109/17549507.2011.616602
- Vandewalle, E., Boets, B., Ghesquière, P., & Zink, I. (2012). Auditory processing and speech perception in children with specific language impairment: Relations with oral language and literacy skills. *Research in Developmental Disabilities*, 33, 635-344. doi:10.1016/j.ridd.2011.11.005
- Vasilyeva, E. (2007). Towards personalized feedback in educational computer games for children: Review of recent research, In Proceedings of IASTED WBE'2007 Conference, pp. 597-602, Chamonix, France. Retrieved from <http://www.iasted.org/>
- Veldkamp, T. (2006). *Na-apers*. Tielt/Arnhem: Lannoo.
- Verhallen, M. J. A. J., & Bus, A. G. (2009). Video storybook reading as a remedy for vocabulary deficits: outcomes and processes. *Journal for Educational Research online*, 1, 117-141.
- Verhallen, M. J. A. J., & Bus, A. G. (2010). Low-income immigrant pupils learning vocabulary through digital picture storybooks. *Journal of Educational Psychology*, 102, 54–61. doi:10.1037/a0017133
- Verhallen, M. J. A. J., & Bus, A. G. (2011). Young second language learners' visual attention to illustrations in storybooks. *Journal of Early Childhood Literacy*, 11, 480-500. doi: 10.1177/1468798411416785
- Verhallen, M. J. A. J., Bus, A. G., & de Jong, M. T. (2006). The promise of multimedia stories for kindergarten children at risk. *Journal of Educational Psychology*, 98, 410-419. doi: 10.1037/0022-0663.98.2.410
- Vermeer, A. (2001). Breadth and depth of vocabulary in relation to L1/L2 acquisition and frequency of input. *Applied Psycholinguistics*, 22, 217-234. doi:10.1017/S0142716401002041

W

- Watkins, K.E., Strafella, A.P., & Paus, T. (2003). Seeing and hearing speech excites the motor system involved in speech production. *Neuropsychologia*, 41, 989-994. doi:10.1016/S0028-3932(02)00316-0
- Westera, 2002. *Lieve, stoute, beer Baboen*. Amsterdam: Hillen B.V.
- Whitehurst, G. J., Falco, F. L., Lonigan, C. J., Fischel, J. E., DeBaryshe, B. D., Valdez-Menchaca, M. C., et al. (1988). Accelerating language development through picture book reading. *Developmental Psychology*, 24, 552–559. doi:10.1037//0012-1649.24.4.552

- Whitehurst, G.J., & Lonigan, C.J. (2001). Emergent literacy: Development of prereaders to readers. In S.B. Neuman & D.K. Dickenson (Eds.), *Handbook of Early Literacy research, Volume 1* (pp. 11-29). New York: The Guilford Press.
- Wright, J. C., Huston, A. C., Vandewater, E. A., Bickham, D. B., Scantlin, R. M., Kotler, J. A., Caplovitz, A. G., Lee, J. H., Hofferth, S., & Finkelstein, J. (2001). American children's use of electronic media in 1997: A national survey. *Journal of Applied Developmental Psychology, 22*, 31–47. doi: 10.1016/S0193-3973(00)00064-2

Z

- Zeijl, E., Crone, M., Wiefferink, C., Keuzenkamp, S. & Reijneveld, S. (2005). *Kinderen in Nederland*. [Children in the Netherlands] (Rep. No. 2005/4). Sociaal en Cultureel Planbureau, Den Haag, the Netherlands.
- Ziegler, J.C., Pech-Georgel, C., George, F., Alario, F.X., & Lorenzi, C. (2005). Deficits in speech perception predict language learning impairment. *Proceedings of the National Academy of Sciences USA, 102*, 14110–14115. doi:10.1073/pnas.0504446102
- Zucker, A., Moody K and McKenna M (2009) The effects of electronic books on prekindergarten-to-grade 5 students' literacy and language outcomes: A research synthesis. *Journal of Educational Computing Research, 40*, doi: 47-87. 10.2190/EC.40.1.c

Appendices

Appendix A [Chapter 3]. Target words per story split into two sets.

	Pete on the pavement	Rokko the crocodile	Bolder and the boat	Cycling with grandpa	Bear is in love with Butterfly
set 1	(in zijn) eentje [(on his) own]	steiger [quay/dock]	(waar de hemel de zee) raakt ['(where the sky touches (the ocean)']	rinkelen [to ring]	verlegen [shy]
	chauffeur	eitand ['egg-tooth']	ijszee ['sea of ice']	beek [brook]	geklieder ['mess']
	kapitein	stoet [procession]	walvis [whale]	blozen [to blush]	fik [fire]
	havenwerker	bui [mood]	vuurtoren [lighthouse]	zweeten [to sweat]	(een vuur) aanwakkeren [to fan (a fire)]
set 2	tegels [paving stones]	brusjes [siblings]	roeiboot [rowing boat]	uultje knappen [to take a nap]	dartelen [to flutter]
	tillen [lift]	gympies [sneakers]	brommen (van een motor) [to hum]	halt houden [to halt]	eierwarmer [egg-cosy]
	stratenmakers [‘road workers’]	jaloers [jealous]	rondvaren [to sail around]	in koor (roepen) [(to call) in unison]	hoogtevrees [fear of heights]
	in de buurt [near]	verschijnen [to appear]	meeuw [sea-gull]	smal [narrow]	gebroken (gevoel) [broken-hearted]

Note. The word set that was used in mc-questions was balanced across participants. Consequently, each word was used for instruction as often as it remained uninstructed.

Appendix B [Chapter 4]. Target words per story.

	Rokko Krokodil	Tim op de tegels	Bolder en de boot	Kleine Kangoeroe	Lieve	Na-apers	Beer is op Vlinder	Lieve Stoute Beer Baboen
Experiment 1	Brusjes <i>siblings</i> Steiger <i>quay/dock</i> Gympies <i>sneakers</i> Waaien <i>to blow (wind)</i> Letten <i>to watch/ take care</i> Verschijnen <i>appear</i> Jaloers <i>jealous</i>	Tegels <i>Paving stones</i> Kapitein <i>captain</i> Redden <i>to save</i> Tillen <i>to lift</i> in zijn eentje <i>on his own</i> in de buurt <i>near</i> Gevaarlijk <i>dangerous</i>	Rotsen <i>rocks</i> Ijszee <i>"sea of ice"</i> Vuurtoeren <i>lighthouse</i> Roeiboot <i>rowboat</i> in de buurt <i>(waar de hemel de zee) raakt</i> <i>"(where the sky)touches (the ocean)"</i> Rondvaren <i>sail around</i> Zwaar <i>heavy</i>	Kangoeroe <i>kangaroo</i> Buidel <i>pouch</i> Giraffe <i>giraffe</i> Fladderen <i>to flutter</i> Fluiten <i>to whistle</i> Veilig <i>Safe (adverb)</i> Uitgeput <i>exhausted</i>	Lieve <i>lady bug</i> Wangen <i>cheeks</i> Ovenwanten <i>oven mittens</i> Versieren <i>to decorate</i> Sippen <i>to weep</i> op een kier <i>(a door) is set ajar</i> Verrukkelijk <i>delicious</i>	Oppassers <i>caretakers</i> Buren <i>neighbors</i> (handen) schudden <i>to shake (hands)</i> na-apen <i>imitate</i> (naar binnen) stormen <i>to storm (inside)</i> Wild (doen) <i>(to act) wild</i> Gewoon (doen) <i>(to act) normal</i>	Vlinder	Baboen
Experiment 2	Eitand <i>egg-tooth</i> Stoet <i>procession</i>	Havenwerker <i>dock worker</i> Stratenmakers <i>road workers</i>	Vertrekken <i>leave</i> Brommen <i>to hum</i>	Rondsjouwen <i>to drag</i> Stoeten <i>"to play around"</i>	Paardbloem <i>dandelion</i> Tor <i>beetle</i>	Slingeren <i>to sway</i> (Op de deur) bonken <i>to bang (on the door)</i>	Verlegen <i>shy</i> Aanwakkeren <i>to fan (the flames)</i> Geklieder <i>messy</i> Eierwarmer <i>egg-cosy</i> Hoogtevrees <i>fear of heights</i> Fijk <i>fire</i> Dartelen <i>to flutter</i> Gebroken <i>broken-hearted</i> Breien <i>to knit</i>	(Hand) grijpen <i>to grab (a hand)</i> (kleren) passen <i>to fit (cloths)</i> Hij geeft de beer een standje <i>to reprimand</i> Gesnurk <i>snoring</i> kwijt <i>lost</i> Wieg <i>cradle</i> Zwempak <i>swimming suit</i> staan <i>to stand</i> Wippen <i>to bounce</i>

Note. Verbs, adjectives and adverbs are printed in bold. Six books are used in both experiments but with 7 target words in Experiment 1 and 2 additional words in Experiment 2. Two stories were used in Experiment 2 only

