



The Impact of ebooks on the Reading Motivation and Reading Skills of Children and Young People

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A rapid literature review

Irene Picton
National Literacy Trust

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Words for life

Registered address: National Literacy Trust, 68 South Lambeth Road, London SW8 1RL
t: 020 7587 1842 **f:** 020 7587 1411 | contact@literacytrust.org.uk | www.literacytrust.org.uk

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Introduction

The National Literacy Trust recognises the importance of technology as a tool for teaching literacy skills and we are keen to explore this in greater detail. In September 2014, the National Literacy Trust and RM Books are embarking on a joint study to explore the impact of ebooks on the reading motivation and reading skills of children and young people in around 100 primary and secondary schools across the UK. Final conclusions will be published in October 2015. In preparation, this rapid literature review explores some of the research currently available on the role that technology plays in the literacy lives of young people.

Overview

While ebooks have been around for many years, recent rapid improvements in the versatility and affordability of e-readers and tablets, along with increased access to broadband internet, have led to a dramatic rise in household ownership of these devices. Between 2012 and 2013, the proportion of children responding to the National Literacy Trust's annual literacy survey who owned an e-reader rose from 20% to 30%, while tablet ownership increased from 38% to 65% and smartphone ownership from 38% to 70%. A 2013 Ofcom survey¹ found that tablet use at home by children aged 5 to 15 almost tripled between 2012 and 2013, rising from 14% to 42%. Electronic publishing has also developed during this time, allowing readers access to an ever-growing range and quality of ebooks, whenever and wherever they happen to have their portable device to hand.

Academic and media interest in the difference between reading in print and reading on screen has grown as devices and software facilitating reading on screen become a greater part of everyday life, leading to a growing field of observation exploring the relationship between children's reading on screen and their reading skills and behaviour. While, until recently, the quality and quantity of ebooks for children has not been sufficient to provide material for large-scale longitudinal studies, many aspects of reading on screen have been explored in a range of international and national research. This rapid review draws together findings from studies related to children's screen reading behaviour, enjoyment and skills, both from secondary sources and in (as yet unpublished) findings from the National Literacy Trust's annual literacy survey 2012², which included questions allowing us to examine the interplay between children's use of technology and their reading habits.

Main findings

The National Literacy Trust's annual literacy survey questions thousands of children and young people aged 8 to 16 about their literacy behaviours. In 2012, children reported reading more on computers and other electronic devices than in print form for the first time, confirming the central role of technology in young people's literacy lives.

- Almost all (97%) children said they had access to electronic devices such as computers, tablets, phones and e-readers, and almost all (97%) had access to the internet at home.
- Children were more likely to say that they read on screen than on paper outside school. 68.7% reported reading on a computer, phone or tablet, compared to 61.8% reading in print (e.g. a book, magazine or newspaper).
- Children were more likely to say that they preferred to read on screen than on paper. More than half (52.4%) said that they would rather read using electronic devices, compared to just under a third (32%) who said they would rather read in print.

Research by Scholastic US in 2012 also indicated children and young people's increasing preference for reading on screen:

¹ Ofcom (2013) Children and Parents: Media Use and Attitudes Report, UK.

² Clark, C (Unpublished) Redefining or Undermining? The Role of Technology in the Reading Lives of Children and Young People: Findings from the National Literacy Trust's annual survey 2012, London: National Literacy Trust

- The proportion of children who had read an ebook rose from 25% to 46% between 2010 and 2012.
- The proportion who felt that ebooks would have a positive effect on their motivation to read increased from 33% to 49% over the same period³.

Studies have shown reading on screen may offer particular benefits for some children and young people, for example, those in groups less likely to be reading at the expected level for their age (such as boys, those from less advantaged backgrounds and less keen or able readers). These have highlighted potential benefits for both reading motivation and skills in these groups, for example:

- OECD analysis of the Progress in International Student Assessment (PISA) 2009 found that although the ‘gender gap’ (a description of the comparatively poor performance of boys in traditional reading assessments) was still in evidence in both the digital and print reading of 15-year-olds across 19 countries, it was narrower for digital reading,⁷ suggesting: *“Boys’ interest and abilities in digital reading could be exploited to...lead to greater enjoyment of reading and better proficiency in print reading, as well.”*⁸
- Scholastic US research found that of children who had read an ebook, 26% of boys and 16% of girls said they were reading more books as a result.
- National Literacy Trust research found that boys were significantly more likely to say that they read on screen (65.7%) than in print (55.4%) outside school. In addition, the gap between boys and girls reading in print outside school (boys 55.4%; girls 68.3%) narrowed significantly in relation to reading on screen (boys 65.7%; girls 72.2%)⁹.
- In 2012, the gap between children from different socioeconomic backgrounds reading outside school was also more pronounced in print than it was on screen. 54.8% of children eligible for free school meals (FSM) reported reading in print outside school compared with 64.1% of children who do not receive FSMs). However, 66.8% of children who receive FSMs said that they read on screen compared with 67.4% of those who do not receive FSMs.
- A 2012 study of 36 struggling readers at KS3 found ‘substantial gains in both accuracy and comprehension’ following an intervention involving both print and enhanced ebooks¹⁰
- A 2013 study of 103 US high school students with dyslexia found that students offered texts on an iPod touch showed significantly improved reading speed and comprehension compared with reading on paper.¹¹

³ Scholastic (2012) *Kids and family reading report*, USA: Scholastic.

⁴ Wästlund, E., Reinikka, H., Norlander, J. and Archer, T. (2004) *Effects of VDT and paper presentation on consumption and production of information: Psychological and physiological factors*, Sweden: University of Karlstad.

⁵ Morineau, T., Blanche, C., Tobin, L., Guéguen, N. (2004) *The emergence of the contextual role of the e-book in cognitive processes through an ecological and functional analysis*, France: University of Southern Brittany

⁶ Mangen, A (2008) ‘Hypertext fiction reading: Haptics and immersion’, *Journal of Research in Reading*, 31(4), pp. 404–419 .

⁷ OECD (2011), *PISA 2009 Results: Students On Line: Digital Technologies and Performance (Volume VI)*, PISA, OECD Publishing. doi: 10.1787/9789264112995-en

⁸ *PISA IN FOCUS* 2012/01 (January) – © OECD 2012

⁹ Clark, C (Unpublished) *Redefining or Undermining? The Role of Technology in the Reading Lives of Children and Young People: Findings from the National Literacy Trust’s annual survey 2012*, London: National Literacy Trust

¹⁰ Unpublished study, cited by G Brooks (2013) *What works for children and young people with literacy difficulties?*, Fourth edition: University of Sheffield

¹¹ Schneps, MH, Thomson JM, Chen C, Sonnert G, Pomplun M (2013) *E-Readers Are More Effective than Paper for Some with Dyslexia*. PLoS ONE 8(9): e75634. doi:10.1371/journal.pone.0075634

The variety of age groups, subgroups and reading formats involved in published research to date, alongside changes in technology over time, has made finding areas of consensus among studies relatively difficult. However, it is possible to find some concurrence around the greater advantages of a 'mixed' reading diet (one that includes both print and screen reading), for example:

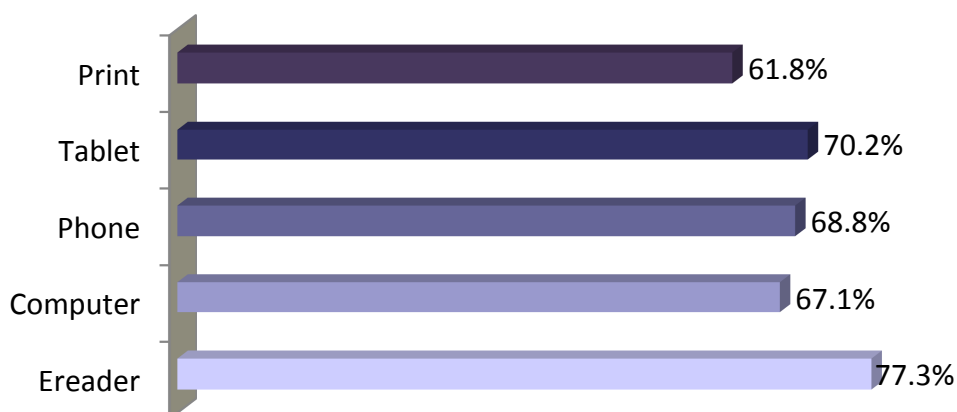
- In the National Literacy Trust's 2012 annual literacy survey, children who included some print reading daily reported greater reading enjoyment than those who read on screen only (51.3% vs. 11.8%) and nearly twice as many children who included some print reading daily read at above the expected level for their age compared to those who read on screen only (26.1% vs. 15.5%)¹².
- This improved performance in those who read a mixture of formats also applied to the range of texts being read, with children and young people who included some fiction, whether in print or on screen, more likely to be reading at above the expected level for their age.

This was also the conclusion of OECD analysis of the Progress in International Student Assessment (PISA) 2009, which found that: "...although students who read fiction are more likely to achieve high scores, it is students who read a wide variety of material who perform particularly well in reading. Also, students who are extensively engaged in online reading activities ...are generally more proficient readers than students who do little online reading."¹³

Ebooks and reading behaviour

2012 was the first time that the proportion of respondents to the National Literacy Trust's annual literacy survey reporting reading on screen outside school outnumbered those reading in print.

Figure 1: Proportion of children reading in print and on electronic devices



(Source: National Literacy Trust's annual literacy survey 2012; N = 34,910)

Children responding to the survey were also more likely to say that they preferred reading on screen, with more than half (52.4%) saying they would rather read on an electronic device, compared with just under a third (32%) preferring print. This was evident in responses relating to reading behaviour, as 38.9% of respondents reported reading daily on screen only, 33.2% reporting reading daily both in print and on screen and only 27.9% reporting reading daily in print alone.

¹² The data gathered did not allow us to determine a causal relationship; it is possible that less able readers chose to read on screen.

¹³ OECD (2010), PISA 2009 Results: Executive Summary