

DIGITAL v PRINT READING – resources from Nicola Morgan



I'm very interested and up-to-date in the differences between reading digitally and reading print. We may not know about long-term effects but we now have a substantial body of evidence about some short-term differences, even though some of these are relatively small. And we know quite a bit about the *reasons* why print and digital are processed slightly, but perhaps crucially, differently. This document lists some starting points for you.

After selected resources, you will see what I *think*, based on my expert reading of this science. You'll also find articles I've written in the [Reading brain](#) area of my site.

For the main resources and references for Readaxation, reading for pleasure and its benefits to wellbeing and stress relief, go to my website's [Resources section](#) and select the Core Resources for **The Reading brain**.

BOOKS

- [Proust & the Squid – Story & Science of the Reading Brain](#), by Maryanne Wolf
- [Such Stuff as Dreams – The Psychology of Fiction](#), by Keith Oatley – read this for the information about the importance of engagement but treat cautiously some of the conclusions about the hegemony of fiction, which I challenge fundamentally, as the research does not lead to those conclusions
- [iBrain – Surviving the Technological Alteration of the Modern Mind](#), by Gary Small
- [Words on Screen – The Fate of Reading in a Digital World](#), by Naomi Baron
- [The Organized Mind](#), by Daniel Levitin

ONLINE

“Print Matters More” - wonderful research from the publisher Egmont: Print Matters More
<https://www.egmont.co.uk/research/print-matters-more/>

“The Science of Paper versus Screens” in Scientific American Mind, “E-readers and tablets are becoming more popular as such technologies improve, but research suggests that reading on paper still boasts unique advantages:
<https://www.scientificamerican.com/article/reading-paper-screens/>

“Readers absorb less on kindles than paper” – the Guardian newspaper reporting on some of the research coming out of Norway’s Stavanger University:

<https://www.theguardian.com/books/2014/aug/19/readers-absorb-less-kindles-paper-study-plot-ereader-digitisation>

“What does your brain like better – print or ebooks?” reporting in Publishing Perspectives on research from the [National Literacy Trust](#). “New research shows ‘electronic readers promoted more deep reading and less active learning.’”

<http://publishingperspectives.com/2014/06/what-does-your-brain-like-better-paper-or-ebooks/>

“As Kids On-screen reading overtakes print, the outcome is worrying” Nat Lit Trust re online reading for children: <http://publishingperspectives.com/2013/05/as-kids-on-screen-reading-overtakes-print-outcome-is-worrisome/>

“Ebooks vs Paper” by Julian Baggini, looking at various bits of research and reporting in the FT: <https://www.ft.com/content/53d3096a-f792-11e3-90fa-00144feabdc0?mhq5j=e6>

“eReaders more effective than paper for some with dyslexia” by physicist (and dyslexic) Matthew Schneps:

<http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0075634>

“Science has great news for people who read actual books” according to Rachel Grate but caution: she uses the dreaded 68% statistic which is utterly meaningless as it’s based on a study of 16 people. (And I think she means print books when she says “actual”).

<https://mic.com/articles/99408/science-has-great-news-for-people-who-read-actual-books#.HfGTcrZvj>

“Taking notes with a laptop may make it harder to process and recall” – Cindi May in SciamMind in 2014: <https://www.scientificamerican.com/article/a-learning-secret-don-t-take-notes-with-a-laptop/>

“How reading lights up your mind” - different brain activities between engaged ‘deep’ reading and skim-reading e.g. digital, research from Michigan State University reported on PsychCentral by Christy Matta <http://psychcentral.com/blog/archives/2012/10/15/how-reading-lights-up-your-mind/>

“Serious reading takes hit from online scanning” say researchers at American University in 2014, reported here in the Washington

Post: https://www.washingtonpost.com/local/serious-reading-takes-a-hit-from-online-scanning-and-skimming-researchers-say/2014/04/06/088028d2-b5d2-11e3-b899-20667de76985_story.html?utm_term=.be71a02499b4

“Are tablet computers harming our children’s ability to read?” No consensus on the answer in this article in the Guardian in 2015 but some useful stats and starting points:

https://www.theguardian.com/technology/2015/aug/24/tablets-apps-harm-help-children-read?CMP=share_btn_fb%0d

What do I think about all that?



Having read all of the above (and much of the original research) and vast amounts more – and having questioned and challenged some of the findings as far as I possibly can – here’s what I believe. Note that my first area of expertise was literacy acquisition and the psychology and process of learning to read, and I have an

RSA Diploma in Specific Learning Difficulties (Dyslexia). This really is a deep interest of mine.

I will put my feelings as bullet points rather than a discursive essay. In doing so, I am pandering to the idea that when we read online (which you are probably doing right now) we tend to expect and respond well to bullet points. That does not mean that it’s always the right thing to do but I’m doing it now because I don’t want to lose you!

- Digital reading offers some practical advantages, such as being able to change the font, increase type size, look up words, carry a lot of books and disguise what we are reading.
- But digital usually contains distractions: competing (and sometimes moving) icons on the screen, notifications and hyperlinks etc.
- Print is, for very many people, slightly (and sometimes significantly) easier to engage deeply in, to become carried away with. That state is important to wellbeing, state of mind and processing the text. This seems to apply just as much to “digital natives”.
- For most people, probably in all age groups, there is a small (but sometimes significant) “advantage” to reading in print, in terms of comprehension, processing and recall. There is good, though not incontrovertible, evidence for this.
- Therefore, when it’s something difficult and something you very much want to understand properly, it may be more useful (and easier) to read it in print. Many people of all ages seem to sense this, often choosing to print things out when they need to concentrate on them. We should enable this instinct.
- There are good reasons for this small advantage, to do with the fact that reading occupies many mental actions and different brain areas, including those responsible for touch, sight, space, proprioception and motor actions, as well as the more “intellectual” acts of language comprehension and word recognition.
- When we take notes, we would usually be advised to do so with pen and paper (unless we have a writing difficulty or physical barrier). When we take notes by hand, we process the words we are hearing or reading, in order to turn them into a shortened form; most people who type, type faster and therefore often don’t process the meaning but rather copy it down automatically. They are likely to recall it less well.
- Text that looks difficult may be understood better, because our brains are tricked into working hard. (If the text is much too difficult, this effect may not happen.)
- Regardless of any research, children should be allowed and encouraged to read whatever they feel comfortable with, whether digital or print.
- Schools and libraries should NOT ditch print. It’s the crucial route for many.

- There is far less difference (if any) between digital natives and digital immigrants when it comes to reading preferences. Young people very often prefer print, too, especially after the novelty of ebooks has worn off.
- Publishers and creators of teaching materials should not feel pressured into “going digital”: digital and print both have different important benefits. Each should be used for those activities suited to that medium. It’s too easy for us to go starry-eyed about digital, but young people are not: they want what does the job and feels most comfortable and sometimes that is print. Horses for courses.
- However, research is ongoing. We can’t know about longterm effects of digital reading. Technology may improve to iron out current deficits. And studies that show a difference between print and digital comprehension usually only show a small difference.
- Overall, the message is: do what feels better for you but be aware that there are times when you might well be better reading and writing on paper. And don’t ditch print altogether!

Just read – your brain will thank you for it!

For more information about Nicola Morgan’s writing, speaking and consulting on many aspects of adolescence, wellbeing, learning and screen-time, or to book her to speak:
www.nicolamorgan.com