Transcript for Media Production

Is What we are Reading Changing How we are Thinking?

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What kind of a brain is the internet giving us? This is a question that has been posed and answered by many people already and it will repeatedly be asked and answered as technology continues to saturate virtually every aspect of our lives. Think about the last web page that you visited. Were there hypertext links embedded throughout the body of text? Were there scrolling ads, flashing messages and side bar advertisements drawing your eye away from the information that brought you there in the first place? Interacting with text on the internet involves much more than just decoding and comprehending the words on the page.

So, what kind of brain is the internet giving us? Just like any controversial topic, the answer to this question varies greatly depending on who you ask. Nicholas Carr's thoughts on this matter are not positive ones. According to Carr, "[w]hen we go online, we enter an environment that promotes cursory reading, hurried and distracted thinking, and superficial learning. Even as the Internet grants us easy access to vast amounts of information, it is turning us into shallower thinkers, literally changing the structure of our brain' (Carr, 2010). He posits that part of the reason for these negative impacts are that the human brain relies upon the transfer of information from the working memory into our long term memory. He argues that when we are reading text that requires us to only focus upon the task of reading alone, we have time for this complex transference to take place. Reading text that includes hyperlinks and a plethora of extras that are commonplace on the web pages of today is something quite different. He illustrates his point here via the following analogy:

'Imagine filling a bathtub with a thimble; that's the challenge involved in moving information from working memory into long-term memory. When we read a book, the information faucet provides a steady drip, which we can control by varying the pace of our reading. Through our

single-minded concentration on the text, we can transfer much of the information, thimbleful by thimbleful, into long-term memory and forge the rich associations essential to the creation of knowledge and wisdom. On the Net, we face many information faucets, all going full blast. Our little thimble overflows as we rush from tap to tap. We transfer only a small jumble of drops from different faucets, not a continuous, coherent stream' (Carr, 2010).

Carr refers to the internet as an 'interruption system' that being that it 'seizes our attention only to scramble it' (Carr, 2010). Our reading habits change as soon as we begin reading onscreen and 'the internet is full of distractions (Carr, 2010). Carr expresses concern about the impact that onscreen reading is having on our memory and intelligence, and he cautions that each shift in our attention is also taxing our mental resources forcing our brain to continually need to reorient itself (Carr, 2010). Carr argues that humans 'willingly accept the loss of concentration and focus, the fragmentation of our attention and the thinning of our thoughts' as we have a strong tendency to crave something new and trivial. Carr feels that we are evolving from being 'the cultivators of personal knowledge into hunters and gatherers in the electronic data forest' (Carr, 2010).

Video clip:' The internet, the, the, the network connected computer screen does exactly the opposite. It bombards us with distractions and that you know, that's its great quality as a technology. It is a multi-media system. It, it's great for exchanging messages very quickly. It's great for alerting us to all sorts of information, but the downside of that is it keeps us, uh pretty much in a perpetual state of distraction, constant interruptions' (Paikin, 2010).

According to the UK's National Literacy Trust, new research has found that for the first time, "children are reading more on computers (and other electronic devices) than they are reading books, magazines, newspapers and comics' (Abrams, 2013). The same research also indicates that while technology is providing new ways to engage children in literature, 'children who read on-screen are much less likely to be good readers than those who also read in print form' (Abrams, 2013). Further evidence put forth in this study indicates that children who read only on-screen are also 'three times less likely to enjoy reading very much' (Abrams, 2013). All of these factors have direct implications in the classrooms of today.

People like Scott Rosenberg however, view our reading activities on the web in an entirely different light. Rosenberg, a journalist who writes both print and web based texts feels that hypertext links have become an essential part of how he personally reads and writes (Rosenberg, 2010). His views are illustrated here in the following statement, 'I can follow up on an article's links to explore source material, gain a deeper understanding of a complex point, or just look up some term with which I'm unfamiliar' (Rosenberg, 2010). In contrast to Carr, Rosenberg sees links in text as an opportunity to gain even more knowledge from what he is reading.

In an effort to counter Nicholas Carr's arguments against linking and hypertext, Rosenberg investigated the studies upon which Carr based his conclusions in his book, 'The Shallows.' Rosenberg posits that Carr's data is skewed because of the way in which the onscreen reading material was presented to the study participants (Rosenberg, 2010). He goes on to argue that the case Carr is making based on these flawed studies is misleading, as the screen reading

that those studies pertain to was simply print material transferred to a digital format with added navigation links to sequence their reading path. The participants' use of the onscreen links then were not true hypertext links at all, and Rosenberg expresses that they 'do not illuminate reading on the Web' (Rosenberg, 2010).

Rosenberg concludes his article on this matter with a few points about hypertext. He states that many people who are reading online text pass over links, or occasionally open a link to look over once they are done reading the original piece of text (Rosenberg, 2010). It is not then a chaotic multi-tasking experience leaving us in a state of distraction. He acknowledges that there are poorly written and poorly linked writing on the net and he agrees that 'too many links can be distracting' (Rosenberg, 2010). Finally he calls upon the work of Steven Johnson and shares a few quotes that support his own opinions in regard to hypertext. Johnson (1997), makes the case for links as a tool for synthesis, 'a way of drawing connections between things' (Johnson, 1997). Johnson believes that 'Web links don't make [the internet] a vast wasteland or a murky shallows; they organize and enrich it' (Johnson, 1997).

Do the two lines of thought that have been fathered by the invention of hypertext really just come down to personal preference? Text that is free of links whether it be onscreen or in print is one dimensional and linear. The reader is left to make learning connections and extensions internally as they interact with the words on the page. Text that contains hyperlinks provides readers which much more variety in regard to the information they choose to pursue and how deeply they travel away from the original piece of text that was their starting place. I think that another factor to consider here is the purpose or intent of the reader. If a reader intends

to read a piece of text from start to finish, then sidebar distractions and links would be viewed negatively. If a reader is surfing for information on a topic of interest, related links and additional excursions via hypertext may be just what they are seeking.

I have presented the opinion of just two individuals in regard to this contentious issue. It would seem that neither Rosenberg or Carr, are going to switch camps anytime soon and accept the argument of their adversaries. For now, they may just need to agree to disagree, at least until the next round of research in favour of one argument or the other is published and the debate is sparked again.

Take a look at your own onscreen reading habits. Do you read onscreen text and print text differently? Do you interact with linked text in varied ways depending on your purpose for reading? By taking a closer look at our own habits, we can start to think about the ways in which this issue is impacting our students and how we should be addressing this concern in our classrooms. Do we need to worry that our students' onscreen reading habits are going to permeate into their print reading resulting in many of our learners skimming and scanning rather than processing and comprehending the text in deep and meaningful ways? It is critical that students today are taught media literacy skills and how technology is changing our reading habits is something that we need to monitor closely. Do we need to explicitly teach our students how to effectively read and interact with hyperlinked text in our media education programs? Which side of the argument do you support? Your answer could have far reaching implications for both you and your students.

References:

Abrams, D. (2013, May 15). As kids' on-screen reading overtakes print, outcome is worrisome. Retrieved from http://publishingperspectives.com/2013/05/as-kids-on-screen-reading-overtakes-print-outcome-is-worrisome/#.VmSvrb-zmnk

Carr, N. (2010, May 24). Author Nicholas Carr: The web shatters focus, Rewires brains. Retrieved from http://www.wired.com/2010/05/ff_nicholas_carr/

Johnson, S. A. (1997). *Interface Culture: How new technology transforms the way we create and communicate.* New York, NY. Basic Books.

Rosenberg, S. (2010, August 30). In defense of links, part one: Nick Carr, hypertext and delinkification. Retrieved from http://www.wordyard.com/2010/08/30/in-defense-of-links-part-one-nick-carr-hypertext-and-delinkification/

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Example from Carr's study- retrieved from http://www.wordyard.com/2010/08/30/in-defense-of-links-part-one-nick-carr-hypertext-and-delinkification/. This image has been used under the fair dealing exception in the Copyright Act which allows for use of this image for the purpose of education.

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Video Credits:

Paikin, S. (2011, June 2). Nicholas Carr: Is the Internet Making Us Stupid? on The Agenda with Steve Paikin. Retrieved from https://www.youtube.com/watch?v=5tqRMbg7MPc

Related Links to Pursue:

The following is an online article and interview that poses some interesting questions.

Raphael, T.J. (2014, September 18). Your paper brain and your Kindle brain aren't the same thing. Retrieved from http://www.pri.org/stories/2014-09-18/your-paper-brain-and-your-kindle-brain-arent-same-thing

The following is an online article pertaining to link debate:

T.S. (2010, June 1). To link, or not to link? That is the question. Retrieved from http://www.economist.com/blogs/babbage/2010/06/pros_and_cons_hyperlinks

The following is a cbc.ca interview on Spark titled 'Scanning and Skimming' featuring Maryanne Wolf and Tim Carmody. Scanning and Skimming- cbc.ca audio. Retrieved from http://www.cbc.ca/radio/popup/audio/player.html?autoPlay=true&clipIds=2455335936

Additional Resources:

Bolter, J.D. (2010). Writing space" *Computers, hypertext, and the remediation of Print.* New York, NY: Lawrence Erlbaum Associates, Inc., Publishers

Paikin, S. (2011, June 2). Nicholas Carr: Is the Internet Making Us Stupid? on The Agenda with Steve Paikin. Retrieved from https://www.youtube.com/watch?v=5tqRMbg7MPc