

# Change of the reading paradigm in the age of e-book

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## Abstract

Since the very end of the 20<sup>th</sup> century one can notice the rapid change of the reading paradigm. What meaning can one find in the question “do you read?” This change was influenced by development of ICT, information flood in the electronic space, growing popularity of WWW and possibility to receive information in different ways at the same time. The first mentioned factor affected even the physiology of reading, and children today read in slightly different way in comparison to adults who were introduced to computers in their adulthood. Availability of texts published on the internet raises a question, what kind of relation is between process of reading on the internet and browsing the internet. Could we say that reading a *vook* is the same thing as reading a book? The third factor – offering information in a few different ways – changes the speed of reading and perception of information. How all those factors can affect not only publishing and reading of books, but also the change of reading paradigm in the nearest future? This paper discusses some of these questions.

**KEYWORDS:** digital reading, digital books, choreography of reading, new literacy.

## Introduction

Since the very end of the 20<sup>th</sup> century one can notice the rapid change of the word *reading* paradigm. Nowadays the dialogue: “What are you doing? – I am reading” can be understood in a completely different way than it was understood in pre-computer times. Then the reading was primarily associated with the elementary and functional literacy and these in turn – with a physical ability of reading printed and written text (reading physiology) and the ability to use human basic literacy in the functioning of society.

Colloquially the term reading is still in use in a traditional way, however, a deep look into the circumstances when the term reading is used, one can see that reading, as well as related term literacy, is significantly expanded.

In the beginning of 90s the Western world was surprised by the reading and writing skills surveys, accompanied by the term *functional illiteracy*. It turned out

that many teenagers and adults, even while being fully literate, weren't able to read and understand even the simplest small coherent text. In the U. S., Canada, France, Great Britain, Australia and Germany this problem has proved to be so severe that UNESCO and the United Nations General Assembly announced the year 1990 as the Year of the Global Literacy.

Different terms are in use to describe this problem in different countries: functional illiteracy, secondary illiteracy, semi-illiteracy, dyslectia (dyslexic). Those who cannot properly read are described as high-risk persons. Reluctance to read although possessing the ability to read leads to weak reading skills – it is called passive literacy. Since the early 80-ies in the U. S. it has been observed that about 13% of the population is semi-literate and has been predicted that by the 21<sup>st</sup> century this figure may reach 40% of the total U.S. population (Чудинова 1994).

The researchers noted that this problem becomes latent, i.e. due to public pressure; many semi-literate or completely illiterate people try to hide their disability and because of this cannot receive adequate help.

French scientists distinguished the most common argument that semi-literate persons use to cover up their reluctance to read and it's the lack of time. However, psychologists argue that in fact it is a psychological problem. Semi-literate people are not paying any attention to reading – both at home and in professional surroundings. If they must read, they are choosing short functional texts – advices, horoscopes, short messages about daily events, announcements, i.e. practical information. Often the cause of that is the forced nature of the school. Forced literary reading causes the negative reaction of a person, and he/she completely refuses to read for leisure, avoids libraries and bookstores which offer abundance of books, because they are absolutely disorientated among the stacks.

Students in schools quite often read well phonetically, but many do not understand the meaning of words, their imagination does not generate any images due to the poor experience and clichés, and text remains unrecognized and non-memorized. For these individuals reading as activity is difficult, uninteresting, boring physical work, which cannot be avoided at school, but at the earliest opportunity, this work is abandoned. Often, these people suffer from inferiority complex and are perceived as people who lack the will to overcome their problem.

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## New reading paradigms

However, development of information and communication technologies, uncontrollable expansion of flow of information, the growing popularity of www and changes in the ways of accessing and transferring information drew attention to yet another variation of the problem of literacy. The question that

arose was what is literacy in the 21<sup>st</sup> century and what is its relationship to reading in the digital environment.

Quite soon after PCs came to families the first thing that was noticed then was that there were children who grew up with no books. Their parents, instead of reading books aloud to them allowed children to spend hours playing various computer games. Later these children could easily learn about reading in pictorial way, i.e. each written reference or command in the game they recognized and remembered as an icon. But when children started to read the printed texts, they found it difficult to perceive and remember longer phrases, and encountered many difficulties in writing by ear (Levy 2009). Also reading, especially academic, is destructively influenced by young people's passion to communicate via short messages, because it reduces their skill to concentrate themselves on the text and to understand the scope. Studies in Central Connecticut University have shown that regular reading and writing of short messages while doing the other task on the computer interferes with concentration, accumulating distraction (Levine, Waite and Bowman 2004).

On the other hand, Umberto Eco in his article, "From Gutenberg to the Internet" (1996) has noticed that modern young people read much faster than did their peers in the pre-computer era. In addition, as noted by the teachers (although specific tests for a scientific validation of this fact, I did not find), children and young people today can split attention between several sources of information much easier – they are equally able to notice the information contained in the TV or computer screen in three ways: words, pictures and scrolling line at the bottom of the screen, although the only common thing is the theme but the information in itself is different (for example, during the news reports at the same time they hear the newscaster reading the text, read a summary of other events on the news ticker and monitor changing images behind the back of the newscaster).

Digital reading of the text on the screen is different from reading on paper media. This is also associated with physiology. In case of the first e-books, initial interest in them subsided very quickly as reading on a computer screen required more time than reading the same text when it was printed on paper. It takes more time to read a text on a vertical monitor of a stationary computer than on a laptop, precisely because of its upright position. Reading also slows down due to the lower resolution of the screen (Mangen 2008).

In addition, haptics is also very important for reading, so we read faster and better if we keep the text in our hands and use fingers to turn pages, i.e. permanently activate sensors of the fingertips. This action cannot be replaced by using a computer mouse (click and scroll), or swiping a finger across the touch screen. However, the ability to hold a laptop or e-reader with both hands significantly increased popularity of e-books and in 2010 amazon.com reported that in the UK 106 e-books for 100 paper books were purchased.

More and more children and young people communicate via social networks, write and read SMS messages via mobile phones, read each other's texts in private blogs, web portals, chat rooms and so on. The majority of teachers, librarians and parents do not associate these activities with reading, naming it in other words – *googling*, *chatting*, *browsing* and emphasizing the fact that often the read text isn't meaningful, but rather fragments of thoughts and emotions, among other things expressed not always by letters, but through using a variety of other elements: icons, shortcuts, abbreviations, even numbers and so on (Brown 2007). Let's read: M07HER, F47HER 4ND 7W0 CH1LDREN – 4 80Y 4ND 4 61RL WEN7 70 7HE 200. 7HERE 7HEY 54W 4 2E8R4, 4 61R4FFE, 4 FEW 816 C475 – L10N5, 716ER5, P4N7HER5, 4ND 4 HU6E 8E4R (Mother, father and two children – a boy and a girl went to the Zoo. There they saw a zebra, a giraffe, a few big cats – lions, tigers, panthers, and a huge bear).

In addition to traditional text abbreviations dominate: LOL (laugh out loud), I ♥ U2 (I love you too), muahahahah (loud laughter), ASAP (as soon as possible), l8r (later), 2U (to you ), U2 (you too), H8 (hate) <3 (love), aka (also known as), B4 (before), | O (yawn), m8 (mate), ;-P (ragging), 8-) (smiling with glasses), IC (I see), bf (boyfriend), F2P (free to play), p2p (pay to play), @-8- (rose, greetings) and many others. New dictionary requires a specific literacy. Umberto Eco calls reading of these brands, as well as computer icons *the new literacy*, i.e. we must learn to read them as we learn the alphabet or road signs.

Undoubtedly, reading these symbols should be associated with functional literacy, but at the same time, their use is ahead of functional literacy and it rather indicates that the reader (as well as the writer) belongs to a certain community which apparently is a digital community. Grammatical literacy is an integral part of the digital one.

Russian scientist V. Tchudinova for more than a decade has been publishing articles about functional, fragmented, utilitarian reading, which implies the "new literacy". Young people no longer have the time, desire, and even skills to read bigger texts or descriptions, because it is much easier to replace them with expression signs (☺, ☹, :o) , :] , :3 , :c) , > =] , 8) , =) , :} , :^) , :) called emoticons.

A good pattern of text transformation to emoticons is given in a children's book by Lane Smith "It's a Book" (Smith 2011):

“Arrrrrr” nodded Long John Silver, “we’re in agreement then?” He unsheathed his broad cutlass laughing a maniacal laugh, “Ha! Ha! Ha!” Jim was petrified. The end was upon him. Then in the distance, a ship! A wide smile played across the lad’s face”

**LJS: rrr! K? lol!**

**JIM: :( ! :)**

Reading utilitarianism moved into writing. Diacritics are used now, not only for short messages, but also for longer texts. One should be “contextually” literate to easily read some of the phrases.

Blog writing is also a very utilitarian factor related not to the knowledge retrieval and presentation, but to the sole desire for self-expression. More and more online texts readers write, rather than read. Among the online texts the number of persons writing on the internet, including text commentators, developers’ and bloggers’ own web sites, will soon outnumber the number of readers.

Writing these can already be classified as *self-reading*, i.e. certain psychological state when we understand our actions and thoughts, needs and aspirations only by reading our own inscriptions.

On the other hand in the USA primary school and kindergarten children who are experiencing difficulty in learning to read and are possibly becoming reluctant readers are taught to read using e-book readers Kindle, where they can write comments inside of the text. It was observed that even children with dyslexia learn to read much faster and become eager to learn to read when they could immediately express their own thoughts towards the text (Larsson 2010; Lamb and Johnson 2011). Thus, for the children of digital society the processes of reading and writing are much more closely related than for the paper society. This is illustrated by the numerous publications in almost every electronic web portal.

However, long reading on a computer screen is still not very popular in comparison to the paper text and less people choose to read long texts on e-readers. So far, only about 4 % of respondents report that they prefer to read a piece on a digital screen, nearly 80 % prefer to read a digital piece of text in print if they want to understand the text with clarity, and approximately 68 % of the respondents emphasize, that they understand and retain more information when they read printed media (Liu 2005, 702). It seems that many people prefer digital documents for searching and browsing but when they want to read documents in depth, they will print out the text. However, Lamb and Johanson found a lot of evidence, published in various sources, suggesting that the emergence of more comfortable e-reading media, electronic texts gain popularity and don’t impair reading comprehension (Lamb and Johnson 2011).

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## Reading from the screen – from horizontal to vertical and from linear to circular

E-book reading is associated with scanning. This not only means locating information in the document, but also implies the sense of the whole document. Seeing a book we intuitively decide on the amount of text it contains by its weight and plan longer or shorter time for to read it. But it is much more difficult to understand the scope of an e-document, not only because of its virtual

existence, but also because of all those hyper links in it that allow access to other documents.

It is more difficult to read big text on a computer monitor due to the limited space screen. Gordon notes that

“horizontal reading across a screen, rather than vertical reading from the top to the bottom of the printed page, is characterized by skimming, scanning, and squirreling information, that when printed, is usually not read. Vertical reading, punctuated by turning a page, promotes the deep reading that is needed for comprehension, while the horizontal reading, punctuated by clicks of a mouse, lure the reader to skim the surface of meanings, rather than delving deeply into it.” (Gordon 2011, 50)

Albert Manguel equates an e-book to ancient roll manuscripts, because both are read through scrolling from up to down and in both one can see only a limited part of the text (Manguel 2002). E-documents are difficult to read so the maximum acceptable size of an e-document read on the screen is two scrolls while larger documents are printed. Liu cites: “Goldsborough even notes: a total of 90 % of people reading a web page do not scroll down. Scanning offers an effective way to filter through the vast amount of information” (Liu 2005, 706). Therefore to prepare the e-texts for reading on the screen authors try to cut them into smaller parts (especially in the news portals) for the convenience, and this leads to the impoverishment of the text and reading skills.

“Hyper-reading (e.g. jumping) may also affect sustained attention and contributes to more fragmented reading, since each page has to compete with many other pages for the user’s attention. Birkerts (1994) and Stoll (1995) note that the digital environment tends to encourage people to explore many topics extensively, but at a more superficial level. Hyperlinks distract people from reading and thinking deeply about a single subject.” (Liu 2005, 707)

Previously when we read about something interesting in a book or magazine, we had to spend considerable amount of time to learn more about the object of our interests – to find out obscure words, to see the corresponding images, facts about relevant people and so on. Therefore, sometimes we did not, either because we didn’t get around to it, or we simply had no physical possibility. Now while reading an e-document we can find the hyper-links with one mouse click we can get to other sources of interest and start the searching online tour of networks and clouds. If we find ten links in a document we can read ten additional documents and not spend additional time on searching. However, this way of reading changes the “choreography of reading process”. The term is borrowed from the philosopher Jekaterina Lavrinec’s article “Nonlinear Letter: basics of choreography of Reading” (Lavrinec 2002). In this case we call the traditional reading “linear”, and for the other reading methods we have to develop our own choreography. Nowadays traditional e-books become more and more tricky, supplemented by not only hyperlinks, but also moving images,

sounds, do-it-yourself elements. Even the traditional name of e-book is changed to neologism Vook – video-book (<http://vook.com>).



Figure 2: Linear choreography of reading

Reading digital books we can talk about the circular reading when going from one link to another, and in the end we come back to the original text, as if closing some sources of information accumulated in a space framed by the single idea.

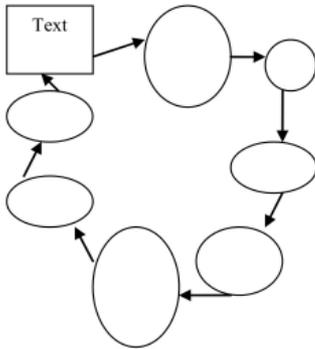


Figure 3: Circling choreography of reading

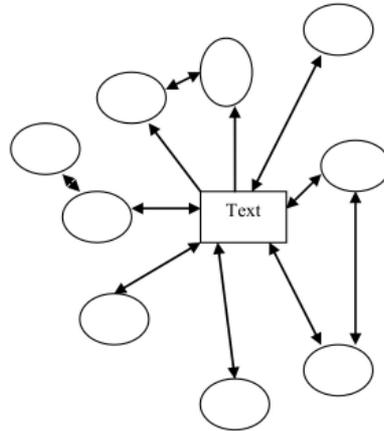


Figure 4: Radiate choreography of reading

Radiation reading is quite frequent when we follow the hyper link and go back to the hyper activated word and repeat this again and again moving in different directions and back again until successfully limiting our search. While reading in both ring and radiant way we lose the original meaning of the text, so we have to go back again to the beginning of the text, because of the specific reading choreography where linear movement of thought is rarely possible, and the denotative meaning of the word changes several times due to the expanded interpretation and the context.

Such a non-linear, 'bouncing' reading is typical while reading icons and text accompanying illustrations. It is noted that children use more complicated reading choreography than adults do, particularly children of the digital era who face interactive digital books from the early years. If they can't figure out

immediately with a single click of a mouse the obscure word, they don't go to look for it in a separate paper or digital dictionary and they lose interest in text. Furthermore, reading digital text with hyper links requires a certain skill, and children gain it much quicker than the adults due to the large number of digital books with active illustrations (Walsh, Asha and Spranger 2007).

## Conclusion

To summarize, we can say that the paradigm of reading in the digital era is not so much related to the changing landscape of the media, but rather to expanding understanding of the "functional literacy". Even if a person masters a linear way of reading perfectly he is not considered literate if he is not well versed in digital text reading methods and if his computer literacy is not developed enough to manage the digital information.

On the basis of these observations American educator Marc Prensky identified two groups formed on paper and digital eras junction – *digital natives* (those born in the digital era) and *digital immigrants*. From the M. Prensky's point of view the ultimate paradox is that *immigrants* educate *natives* (Prensky 2001). However, it is obvious that nowadays the *digital immigrants* are forced to learn to master digital technology, and their teachers are the *natives*, so over time the *digital* immigrant population will decline to zero, while reading and functional literacy paradigms will no longer be so simply described as in paper society.

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## Sažetak

### Promjena paradigme čitanja u doba e-knjige

Od kraja 20. stoljeća zamjetna je brza promjena paradigme čitanja – vidljiva već u smislu pitanja “čitaš li” – na koju je utjecao razvoj informacijske i komunikacijske tehnologije, tijek informacija u elektroničkom okruženju, rastuća popularnost *World Wide Weba* i mogućnost primanja informacija na različite načine u isto vrijeme. Prvi je spomenuti čimbenik utjecao i na psihologiju čitanja pa djeca danas čitaju ponešto drugačije u odnosu na odrasle koji su se s računalima upoznali u starijoj dobi. Dostupnost tekstova objavljenih na internetu dovodi do pitanja kakav je odnos između procesa čitanja na internetu i pregledavanja interneta. Možemo li reći da je čitanje *Vook-a* isto kao i čitanje knjige? Treći čimbenik – ponuda informacija na različite načine – mijenja brzinu čitanja i percepciju informacije. Kako svi ti čimbenici mogu utjecati ne samo na nakladništvo i čitanje knjiga, nego i na promjenu paradigme čitanja u bližoj budućnosti? U ovom se radu raspravlja o nekima od navedenih pitanja.

**KLJUČNE RIJEČI:** čitanje u digitalnom okruženju, digitalne knjige, koreografija čitanja, nova pismenost.

