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SCREEN VS. PAPER THE STUDY OF READING PREFERENCES

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The article examines people's preferences for a particular method of reading from screen or from paper using surveys and interview. The author identifies the reasons influencing the choice of a reading method. Analyzing previous studies in this area and conducting her own research, the author comes to the conclusion that preferences depend on peoples professional activity and habits.

Today, e-readers, tablets and computer screens are extremely popular in the world of highly advanced technology. They are used for the daily consumption of a significant amount of information for a variety of purposes. However, in what format people prefer to read (from paper or from screen) remains a question today.

The purpose of the paper was to identify the preferred way of reading among people associated with the educational sphere. As previous research in this area has shown, many people would rather prefer read from paper, emphasizing some advantages. Research in this area mainly concerns the effectiveness of different reading; however, this paper examines the choice and preferences rather than the effectiveness. The research also aimed to understand and analyze the reasons that motivate people when they choose a certain reading format.

Literature Review

In the modern world, the topic of information perception, especially effective reading, is very relevant. In the 21st century of information technology, there is a question of what fits effective reading better — a screen or a paper. One of the first surveys was conducted in 2004 using a paper questionnaire. Altera of St Joseph's College distributed it to several randomly selected undergraduate courses, and the study found that students generally had a positive view of e-reading, but preferred to read traditional paper books [5].

Two analyses of effective reading conducted by scientists from the University of Maryland in 2017, analysis by researchers from Spain and Israel in 2018. International analysis concluded that paper outperforms screens, although not significantly [2].

Virginia Clinton's next analysis, published in 2019, is now at least a third study summarizing authoritative research on reading comprehension in the digital age and finding that paper is better. She drew this conclusion based on an analysis of 33 high-quality studies in which students were tested reading comprehension on the screen and on paper [7].

However, questions remain open about the interpretation of the results. The results of research and scientific evidence were split 50/50 over which was more effective. Kerry Benson argues that there are a number of scientific facts, such as the subtle information processing, the method of turning pages or scrolling the page, and others, that indicate that it is much easier for the brain to process and understand information from paper [3].

Researcher Lisa Allcott has unexpected findings in her work. Weighing the advantages of two types of reading, both electronic and paper, she concludes is that there is no best way to perceive information in general. However, each type of reading can be more effective than the other, depending on the goal we set for the reading. Obviously, if we need to learn about e-commerce with examples, screen reading will be much

more effective. However, for reading fiction, paper may be better for the perception of all the details [1].

Christopher Cocchiarella describes a number of situations in which screen reading can be much more effective than paper reading. It is important to understand that in the modern world there is a lot of material that was created specifically for reading and understanding from the screen [4]. The author indicates key features for effective screen reading: visualization of abstract ideas or images, navigation and direction, producing a presentation, providing demos such as video tutorials and creation of simulators and educational video games. Thus, each author forms their opinion on the effectiveness of reading and a number of factors by which this effectiveness can be assessed.

Methods

To ensure more objectivity, both qualitative and quantitative methods were used in the research.

The audience that was of interest for the research are university students, university teachers, all adults wishing to participate in the research and high school teenagers. The objective of the study was to identify the general current trend towards the preferred way of reading. A wide age sample of people was selected for the study. As a result, 25 people took part in it, 20 of whom were surveyed and 5 were interviewed.

The quantitative method of research involves conducting a survey that anyone could take. More than 20 people took part in the poll. In the questionnaire, the age of the participants was important in order to reveal a possible correlation between age and the preferred type of reading. For the analysis of the data, it did not make significant sense to separate the participants in terms of gender since only the dynamics between generations mattered. In the survey, the participants were asked to choose specific answers to clearly formulated questions, without the possibility of editing, adding or changing the final answer. The survey consisted of eight questions on the topic of what form of reading people prefer and why. Questions included choosing preferred reading for academic purposes or reading fiction. The respondents were asked to select factors due to which one type of reading was more preferable than the other. For example, they had to choose what influences the choice paper reading easy for perception, convenient to carry and use (no need to charge), better for the eyes, habit, no distractions on paper (ads, bright pop-ups). The following factors have been suggested for choosing screen reading: no need to leave home to get material, availability of resources (including free ones), possibility to copy or save to personal devices, special sites for translating words by clicking on a word, a low weight of an electronic device compared to that over 800-page book. The survey was conducted online in a Google form. The questionnaire was chosen as a research method due to some of the advantages of this format: standardization, simplicity, the possibility to track statistics and conduct statistical analysis, as well as the ability to conduct in-depth

analysis, due to the use of sequential clarifying questions.

To get qualitative data five people were interviewed (18 to 35 years old). It was conducted online via the Skype application in an open-ended question format. Because survey respondents were primarily students, for more objectivity it was decided to conduct interviews for people of a different age group (35+). The questions were aimed at identifying the underlying reasons for the choice of a reading method. For example, special attention was paid to the emotional component of reading: How do you feel when you read from paper or from a screen? In what situations do you choose your reading method depending on? How much does a habit affect your reading choices? Does your profession influence your choice? Are you used to taking information from the screen or, conversely, do you spend too much time behind the screen. Interviewers

were supposed to talk about how in the near future they had to look for new information and habit (from a screen or paper) they read it. The interview method was chosen because makes it possible to identify internal complex thoughts respondents problems, which are difficult to saw in the questionnaire, to get a detailed answer of the interviewee about the question and ask clarifying questions. Another main advantage of the interview is that the answers given by the interviewees are open and the person is not limited by a set of factors, as in the survey.

Results& Discussion

The graph below shows the results of the online survey. There were respondents aged 16 to 25, and respondents aged 25–40. It is important to note that 75 % of respondents answered that their choice of the reading method depends on what purpose they pursue while reading.

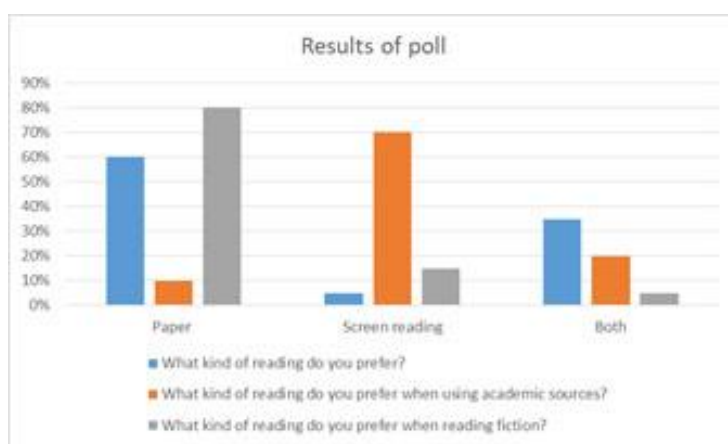


Figure 1. Online survey results

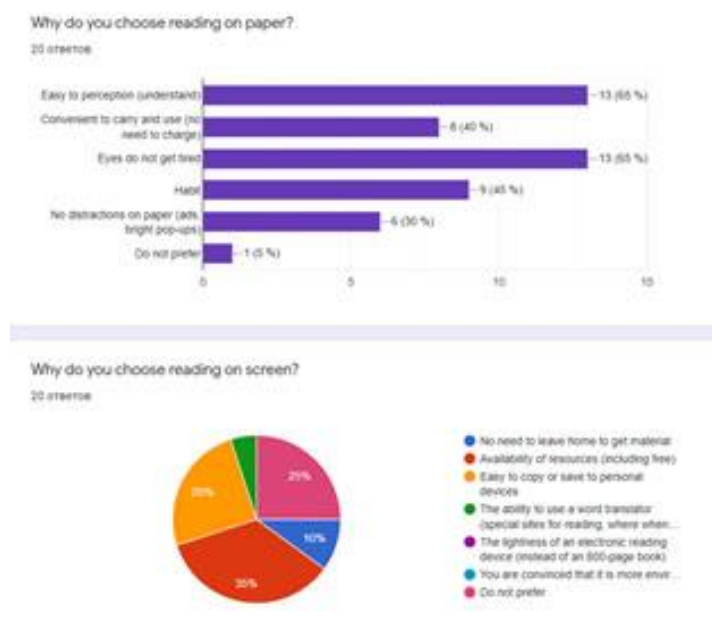


Figure 2. Online survey results

Results vary greatly from question to question. When ask about reading in general, the majority of

people generally do not prefer reading from the screen at all, giving priority to paper or a combination of types

of reading. However, when there is a qualifying circumstance, such as reading for academic purposes, the results change significantly in favor of screen reading. When it comes to reading works of fiction, the majority prefers paper. Interesting fact, that 25 % answered that they choose either of two types of reading regardless of the purposes. Figure 2 shows the results of the more detailed questions of the questionnaire. When choosing to read from paper, most people mention that it is easier for them to understand the material, and that their eyes do not get tired quickly. One seems to follow from the other, when, readers eyes do not get tired quickly, they concentrate more on the text, and, therefore, its comprehension. When choosing a screen, people tend to consider the accessibility and convenience benefits of saving data.

Thanks to the interview method, it was possible to identify the answers of people of a different age group (35+), which made it possible to clearly divide the opinions of the younger and older generations of the preferred way of reading. The majority of respondents defined the reading process primarily as reading fiction or magazines, and secondarily as reading academic literature in order to obtain new information of interest. The respondents also answered that when reading, the emotional component of the material is extremely important for them, as well as understanding the position of the author. Due to an old habit, developed over the years, people prefer reading a book, as «books can smell great, reading a book creates a certain atmosphere, the rustling of pages is always pleasing.» This quote from respondents explains how important the emotional component is when reading.

As it turned out, what kind of profession they are engaged in has a significant impact on the choice of the reading method. For example, a dentist most definitely prefers to read scientific articles from paper, since over many years of experience the doctor can easily identify sources, books on medicine and authors of articles that can be trusted. Since she is used to reading non-fiction on paper, she uses the same habit to read fiction. The next example is a lawyer and an accountant who prefer to read from the screen. They argue that in the modern world there is a high level of digitalization of all business processes, which forces them to be active users of gadgets. Literature and the latest professional news are much easier to find on the Internet than in magazines. This does not mean that they do not read from paper, but they have a commitment and a habit of reading from the screen that prompts them to use this method, regardless of the purpose. So everyday activities make people use a particular format of reading.

There is a fair amount of research out there on the preferred way of reading and its effectiveness. Such studies often include experiments and interviews with more than 300 people. It is not surprising that this topic is so relevant, because the modern pace of life makes people extremely efficient in order to be sufficiently competitive in the labor market. This research embraces primarily university people (both students and teachers). The results of the study were mixed. Despite the

influence of the sphere of activity of people, age or habits, in general, people read more from the screen, since in the modern world there is a serious informatization (digitalization) of everyday processes. People have to read from the screen, even if their preference in general would be to read from paper.

A specific goal has a significant impact on the choice of a reading method since sometimes it is impossible to find the necessary material in both formats. With the introduction of the Internet into our life, any information has become available anywhere in the world. Even if a city has libraries, Internet access can give you a wider choice of sources, which also stimulates reading from screen.

It is well known that the printing industry as a whole is in decline as even the most popular publications and magazines have moved to the Internet over the past 10 years. It is expected that the printing industry will become quite narrow and in the future people will read less from paper. This process was especially stimulated by the 2020 coronavirus pandemic. In the first weeks of the lockdown, many print media ceased to exist. Some have united, others today are openly asking for donations from readers, most have cut staff, salaries, output, or announced a three-month break. This affected both world and regional publishing houses. The print media were hit by the phobias of the population. US residents are afraid to pick up printed materials due to fear of catching COVID-19. In the United States, the government discusses the need to save the media. Washington Post columnist Margaret Sullivan has offered incentive funds to help the industry [6].

Some say that reading from paper becomes, rather, a «special» process not for the broad masses, but only for special connoisseurs. But at the moment, such dynamic are not justified, because in the survey 60 % of people answered that they prefer reading from paper. We can assume that the print industry needs support now and in the years to come after the coronavirus, which is the opposite of the fast-growing e-reading industry. If the printing industry will be supported, the tendency to preferentially read from paper may be maintained in the future.

Conclusion

People's preference for the reading method mainly depends on two factors: their professional activity and long-term developed habit. As shown by the research data, the goal that the reader pursues while reading has less influence than the factors listed above. Besides, in the near future, the pandemic will probably make people read more from screen as they have developed a consumer habit of reading online.

The results of this study can be useful not only for teachers, but also for online educational resource creators. The printing industry and books have been around for a very long time and the system has long been optimized for children's literature, science books and more. Online reading services do not have such a rich history, which means they are not well adapted to all readers. If screen materials become more comfortable for reading, over time, reading from the screen may

become more popular than reading from paper, and even replace it. ■

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Чтение с бумажных или электронных носителей: что предпочитают сегодня

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В статье раскрывается вопрос предпочтения людей определенного метода чтения с бумажных или электронных носителей. Рассматриваются работы в данной области и выявляются причины, которые способствуют выбору предпочтительного метода чтения. Данное исследование дает информацию о том какой метод чтения является предпочтительным сегодня и рассказывает о том, для кого это может быть полезна данная информация.

Ключевые слова: методы чтения, эффективность чтения, современные тенденции
