

**STUDENTS' READING PERFORMANCE ON SCREEN AND
ON PAPERS : A CASE STUDY AT THE EIGHT GRADE
OF MTS SWASTA BUSTANUL HUDA LANGSA**

SKRIPSI

By

**NURYATIMAH
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Degree (S1)

Study Program : English Department

**Tarbiyah and Teacher
Training Faculty**



**MINISTRY OF RELIGIOUS AFFAIRS
STATE INSTITUTE OF ISLAMIC STUDIES
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STATEMENT OF APPROVAL

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A CASE STUDY AT THE EIGHT GRADE OF MTS SWASTA
BUSTANUL HUDA LANGSA**

Submitted to the Tarbiyah and Teachers Training
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By

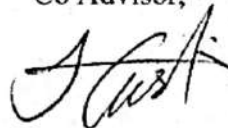
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Menyatakan dengan sebenarnya bahwa skripsi saya ditulis dengan judul *“Students’ Reading Performance on Screen and on Papers: A Case Study at The Eight Grade of MTs Swasta Bustanul Huda Langsa”* untuk memperoleh gelar sarjana Pendidikan merupakan hasil karya saya sendiri.

Apabila di kemudian hari terbukti atau dapat dibuktikan bahwa skripsi ini adalah hasil jiplakan, maka saya bersedia menerima segala sanksi yang diberikan atas perbuatan saya tersebut.

Langsa, January 2022
Yang membuat pernyataan



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MOTTOS

“Seeking knowledge is piety. Conveying knowledge is worship. Repeating knowledge is zikr. Seeking knowledge is jihad”

Abu Hamid Al-Ghazali

*“Knowledge without action is vanity,
action without knowledge is insanity”*

Imam Al-Ghazali

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Langsa, 13th January 2022
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ABSTRACT

Nuryatimah 2022. *Students' Reading Performance on Screen and on Papers: A Case Study at The Eight Grade of MTs Swasta Bustanul Huda Langsa*. Skripsi English Department, Tarbiyah and Teachers Training Faculty, State Institute for Islamic Studies (IAIN) Langsa.

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This research was a mixed-method design with an explanatory sequential approach. This research aimed to find the differences in students' performance in comprehending the text from screens and papers. Then, it was to obtain students' preferences between reading on-screen and papers. The participants of this study were taken using purposive sampling from students of MTs Swasta Bustanul Huda in the eighth class. The overall participants were 18 students but the final participants were 9 students consisting of 6 females and 2 males. Besides that, there were three kinds of instruments namely the reading test (reading on screen and paper) pre-post test, observation, and the interview was used as a tool for data collection. In this study, both quantitative and qualitative technique was used for analyzing the data. The data from the reading test was analyzed quantitatively and the data from observation and interview was analyzed qualitatively. The findings of this study revealed that students' comprehension of material from a paper was better, more effective, and more focused than reading on a screen. In addition, the reading format also affected reading performance. Students reading on-screen has difficulties and are less focused on comprehending the text. In terms of preferences, most of the students in the eighth grade preferred reading on paper rather than reading on screen. Therefore, only half of them preferred reading on screen due to the advantages of reading formats. For the English reading class, all of the students favored printed materials. Only one of them prefers both printed text and screen-based formats because technology made them appear more sophisticated.

Keywords: *Reading, Screen Reading, Printed Reading, Students' Performance*

CHAPTER I

INTRODUCTION

A. Background of Study

Nowadays, technologies are developing increasingly, so it has caused a significant impact on many aspects of life. The common use of technology such as computers for working, mobile phones for communication with family and friends, and tablets for reading books.¹ The widespread use of digital devices such as computers, tablets, laptops, and mobile phones in our daily lives, has led to a transition of reading from paper to screen-based reading.² Even in terms of education, teachers are also encouraged to integrate technology into the learning process. Therefore, many schools use online learning systems and tools, and distribute learning content in electronic format, to support teaching and to improve students' enthusiasm for learning in the classroom.³

As an illustration, digital text is one example of how technology can assist learning and teaching. The use of digital texts would undoubtedly be used differently in the teaching and learning process because they have fundamentally altered students' reading actions and behavior. According to Frechette, emerging media can “...change our very understanding of simple words like reading, writing, and text.” The pattern that technological advances have changed is

¹ Yiren Kong, Young Sik Seo, and Ling Zhai, “Comparison of Reading Performance on Screen and Paper: A Meta-Analysis”, (*Computers and Education* 123, August 1, 2018), 1.

² Guang Chen et al., “A Comparison of Reading Comprehension across Paper, Computer Screens, and Tablets: Does Tablet Familiarity Matter?”, (*Journal of Computers in Education*, Vol. 1, no. 2–3, November 2014), 213–225.

³ Peter McDermott and Kathleen A. Gormley, “Teachers’ Use of Technology in Elementary Reading Lessons”, (*Reading Psychology*, Vol. 37, no. 1, 2016), 121–146.

people's reading, writing, receiving, acting on, using, analyzing, and generating the content, as well as how they connect, communicate, and participate in society. This statement is supported by Coiro et al, whether English teachers realize it or not, technological developments such as digital literacy cause teachers to have a reading perspective that is different from their students. Therefore it is likely that teachers will face challenges in facilitating reading for their students as a result of their different perspectives. As a consequence, teachers must recognize the essence and techniques of interactive literacy.⁴

According to Holleran, Murphy, and Esterly, “the methods necessary for the comprehension of traditional printed text are not the same strategies required for comprehension of electronic texts”. Recent research was conducted for decades, Duffy, Roehler, and Pearson et al have scrutinized reading on paper and they explained that students' on-screen reading experiences have given much less focus, even though on-screen reading has become more common.⁵

On the other hand, reading on paper and reading on-screen certainly result in different reading outcomes and students' performance. Margolin et al. have discussed some of the reasons why reading on a screen differs from reading on paper in terms of reading results. To begin with, it is linked to the psychological characteristics of reading behavior. It claims that screens make it impossible for readers to create an efficient cognitive map of the text or a spatial representation of it. Navigational performance (i.e., searching for or identifying a piece of textual

⁴ Parlindungan Pardede, “Print vs Digital Reading Comprehension in EFL: A Literature Review”, *JET (Journal of English Teaching)* 5, no. 2 (2019), 77.

⁵ Yiren Kong, et. al, “Comparison of Reading Performance on Screen and Paper: A Meta-Analysis”, 2

information), reading speed, content recall, and reading comprehension are all affected by this inefficient ability to generate cognitive maps. Second, focuses on the material characteristics of the screen or paper, and it suggests that the materiality of the reading screen and on paper influences text processing. Text on paper is touchable and tangible, whereas text on screens is intangible, mediated, and detached from the physical support of the reading on screen and paper. The haptic interactions with paper text afford readers richer sensorimotor engagement with the text compared to screen text, which enhances information encoding and comprehension.⁶

Generally, reading comprehension problems are influenced by various causes, including reading preferences. The state of the reading format is one of the reasons that influence the reader's decision to read the text.⁷ Therefore, accuracy in choosing a reading format is highly prioritized because an effective reading format will provide the readers with more comprehension.

Ideally, in terms of reading materials, presenting digital-based reading texts can encourage readers, especially students, to increase their reading interest. In reality, not all readers especially students, have the same ability to understand reading texts presented in various formats. some of them who are used to reading on paper was weak in understanding the text reading on the screen. In this case, it

⁶ Jinghui Hou et. al, "Cognitive Map or Medium Materiality? Reading on Papers and Screen", *Computers in Human Behavior* 67, 2017, 84

⁷ Novi Anggraini and Universitas Airlangga, "Pengaruh Perilaku Screen Reading Terhadap Pemahaman Bacaan Di Kalangan Mahasiswa Digital Native", no. 2001 (2015), 1.

is necessary to consider choosing the formats of reading texts that are following the interests of students.

As a result, this study was designed to find out how format reading affects reading performance on-screen and in papers and include students' preference types formats between reading on-screen and in papers among eighth-grade students.

Based on the researchers' preliminary research when the researcher conducted *Praktik Pengalaman Lapangan (PPL)* or Professional Placement at MTs Swasta Bustanul Huda, the researcher found that so many teachers deliver reading learning material using screen and paper. In this case, using both screens and papers as media in the teaching-learning process certainly give affects students' reading performance, it includes their comprehension in reading. Some students spend different time reading and are weak in understanding reading texts that are presented in different formats. It is undeniable that the most important thing in reading is gaining reading comprehension from the texts they read. However, unfortunately, not all students can understand the content of the texts they read. This can be caused by the presentation of the text in a different format (Screen-based and printed text). Some students have difficulty understanding the reading text and they have to struggle to understand the meaning of the text especially English text that presents in different formats.

Based on the phenomenon, in this study, the researcher wants to ascertain the performance of students who read on-screen and read on paper affects by the reading media.

Considering the statement above inspires the researcher to conduct research entitled **“Students’ Reading Performance on Screen and Papers: A Case Study At The Eighth Grade Of MTs Swasta Bustanul Huda Langsa ”**.

B. Research Question

This research aimed to find out the answer to question about :

1. What were the differences between students’ reading performance in comprehending text from screen and papers at the eighth grade of MTs Swasta Bustanul Huda Langsa?
2. How were students' preferences between reading on-screen and papers among eighth-grade students of Mts Swasta Bustanul Huda Langsa?

C. Study Objective

The objective of this research was to figure out:

1. The differences between students’ reading performance in comprehending text from screen and papers at the eighth grade of MTs Swasta Bustanul Huda Langsa.
2. The student's preferences between reading on-screen and papers among eighth-grade students of Mts Swasta Bustanul Huda Langsa.

D. Significance of Study

Theoretically, this study was expected to provide information about reading performance when reading the text from different formats and preferences

differently among students in the reading activity. Practically, this study will provide information and enrich knowledge in choosing effective reading formats for students in the teaching process. It inspired the teacher in integrating technology in teaching reading based on students' preferences. It was expected to motivate students' reading ability based on the format of the reading material and their fondness. The result of this study would be used as references and provide more knowledge for conducting other research in the future time.

C. Terminology

As a clarification, the researcher defined some terms briefly as described in the following:

1. Reading

Reading is one of the four language skills that involves physical and mental activity that provides us with information and allows us to expand our knowledge. Furthermore, reading is about the reader's capacity to comprehend everything that is intended to communicate the text's meaning, not only print or screen information. The researcher utilized Recount text as reading material in this investigation. In this study, the researcher used Recount text as material for reading.

2. Screen Reading

Screen reading means reading through a screen or digital devices such as laptops, cellphones, computers, etc. In addition, by connecting to the internet, providing opportunities for the readers to access more information

has facilitated the reader to provide a new experience in reading using various platforms such as WhatsApp, Facebook, Instagram, online news, Wikipedia, journals, etc. In this study, screen reading can be defined as reading activities in the digital platform that are performed the reading materials for the readers using a digital format for instance screen projector to display reading materials.

3. Printed Reading

Paper reading is also known as printed text. The printed text refers to traditional reading materials such as textbooks, newspapers, books, magazines, handouts, etc. In this study, paper reading or printed reading text means reading materials provided to the readers in a printed format for instance paper.

4. Students' performance

Performance defines as how well a person, machine, etc does a piece of work or activity.⁸ Students' performance is the ability of students to complete specific tasks given by the teacher which can be measured based on predetermined criteria. In this study, performance is defined as the student's ability in comprehending the text presented in different formats (paper and screen).

⁸Cambridge Advanced Learner's Dictionary, (Cambridge University Press: 2003).

CHAPTER II

LITERATURE REVIEW

A. Definition of Reading

Reading is a very important way for people to acquire information and knowledge. It requires many mental and cognitive processes including attention, pattern recognition, memory, knowledge, reasoning, and problem-solving.⁹ Harmer defines reading as an exercise dominated by the eyes and the brain, the eyes receive the message and the brain then has to work out the significance of the message.¹⁰ While, Alyousef stated that reading can be seen as an interactive process between a reader and a text which leads to automaticity or reading fluency, in other words, reading is a process of understanding the meaning of a text in which the readers can get important ideas.¹¹ Breznits also defines reading as an interactive process in two ways.

Reading combines many cognitive processes working together at the same time. This pattern of parallel interaction is essential to fluent reading. Reading is also an interaction between the reader and the writer. The text provides information that the author wants the reader to understand in certain ways. The reader also brings a wide range of background knowledge of reading, and she or he actively constructs the meaning of the text by comprehending what the writer

⁹ Szu Yuan Sun et.al, "A Research On Comprehension Differences Between Print and Screen Reading", *SAJEMS Special Issue* 16, 2013, 87

¹⁰ Jeremy Harmer, *The Practice of English Language Teaching Longman Handbook for Language Teacher*, (London and New York, 1991) New Edition, 153

¹¹ Hesyam Suleiman Alyousef, "Teaching Reading Comprehension to ESL/EFL Learners", *Language and Learning Journal*, Vol. 5, No. 2005, 144

intends and interpreting it in terms of the background knowledge activated by the reader.¹²

From the above definitions, it can be concluded that reading is an important activity in learning a language process. By reading we can obtain a lot of information and knowledge.

B. Reading Comprehension

Grabe and Stoller stated that reading comprehension is a process of reading to understand the meaning of a text, to analyze the information, and to interpret correctly what the writer is stating. "No one process defines reading comprehension by itself, but together they provide a fairly accurate account of the processes required for fluent reading."¹³

Besides that, Kingston argued that reading comprehension is "a process of communication in which a message is visually transmitted between individuals". He noted that reading comprehension is dependent on the reader's interpretation of the author's written symbols. Therefore, given that not all individuals can interpret the given symbols, reading comprehension is often measured by the extent to which the reader adapts to understanding the text or message conveyed by the author based on background knowledge or interpretation of authority figures such as teachers or educators, etc.¹⁴

¹² William Grabe, *Reading In a Second Language Moving from Theory to Practice*, (New York: Cambridge University Press, 2009), 15

¹³ Steve McKee, "Reading Comprehension, What We Know: A Review of Research 1995 to 2011", *Language Testing in Asia*, Vol. 2, No. 1, 2012, 46

¹⁴ Susan E. Israel, *Metacognition in Literacy Learning: Theory, Assessment, Instruction and Professional Development*, (London: Lawrence Erlbaum Associates, 2005), 20-21

Furthermore, Hornby stated that reading comprehension is not only reading aloud but also understanding the meaning of words, phrases, and paragraph-sense relationships between ideas. If students just read but cannot comprehend the content of the text, this indicates a problem with reading comprehension.¹⁵

According to some researchers, Perfetti, Sinatra, and Royer argued that reading ability is partly determined by the efficiency of component reading processes, and text comprehension involves two levels of information processing: (1) the technical process of phonological decoding and word recognition, (2) the comprehension process of constructing a coherent representation of the text's meaning.

Cornoldi and Oakhill (1996) Stated that the most important elements of reading comprehension are the ability to search out and understand the pieces of information available in the text (literal text comprehension), as well as the ability to make connections between different parts of the text, to fully understand the intended meaning (inferential text comprehension) of the text.¹⁶

On the other hand, reading comprehension is also defined as the process of extracting and creating meaning from written language when communicating with it. The aim of using words is to highlight both the relevance and the insufficiency of the text as a determinant of reading comprehension. There are three components of comprehension: 1) The one doing the comprehension is the reader.

¹⁵ Elvira et.al, "Improving Reading Comprehension of The Grade VIII Students Through Directed Reading Thinking Activity Strategy", *e-Journal of English Language Teaching Society (ELTS)*, Vol. 3, No.1, 2015, 2.

¹⁶ Szu Yuan Sun et.al, "A Research On Comprehension Differences Between Print and Screen Reading", 88.

2) The text to be comprehended, 3) The activity in which understanding is involved. When we consider the reader, we consider all of a person's capacities, skills, expertise, and perceptions as they relate to reading. Any printed or electronic text is considered text in this context. The objectives, procedures, and results involved with the act of reading are all aspects to consider when contemplating behavior.¹⁷

Aside from that, the goal of reading comprehension is to construct meaning by coordinating several complex processes, including language, word reading, word knowledge, and reading fluency. Furthermore, reading comprehension also includes comprehending and interpreting text information. Reading comprehension is also defined as the process of connecting the reader's prior knowledge with the information in the text to understand the text's meaning. The most significant aspect of reading comprehension is not just knowing and remembering the meanings of the words in the text, but also how the readers construct and build the text's meaning. To improve reading comprehension, a reading comprehension strategy is required in this situation.¹⁸

1. Reading Comprehension Strategy

a. Definition of Reading Comprehension Strategy

A reading comprehension strategy is a cognitive or behavioral action that is enacted under particular contextual conditions, intending to improve some

¹⁷ Catherine Snow, Chair, *Reading for Understanding Toward an R&D Program In Reading Comprehension*. (Arlington: RAND Reading Study Group, 2002), 11

¹⁸ Kufakuncsu Zano, "Reading Comprehension Strategies of the Efal Learners in the Fet Phase: Teacher Perspectives", (e-BANGI: Jurnal Sains Sosial dan Kemanusiaan Vol.17, No. 7 2020), 1-12.

aspect of comprehension.¹⁹ Furthermore, Edge also defines reading comprehension strategies as strategies that encourage students to use prior insight, experience, accurate thoughts, and evaluation to assist them to decide how to apply what they know in all reading contexts.

Fundamentally, reading comprehension strategies also is defined as "*multiple processes that involve interaction between the reader and the text, using various skills*". It means that from among the known many strategies some strategies are suitable and successful for some students, and others strategies are suitable for other students, and just as some strategies work with certain types of reading material, and vice versa other strategies work with other types of reading material. Therefore, it is important to understand that to improve student's reading comprehension, teachers must consider the skill level of students, group, dynamic, age, gender, cultural background, and the type of text they read and can determine an appropriate approach.²⁰

Correspondingly, the reading comprehension strategy is very useful for readers. Professional readers use strategies of reading for understanding reading. These strategies may be thought of as changes to reading procedures that represent the readers' aims, the text's complexity, or a mixture of the two. Readers may, by way of example, slow down to better understand a text or speed up including, skimming the text to find information. Based on the study on teaching comprehension strategies, has a wider perspective with strategies being

¹⁹ Danielle S. McNamara, *Reading Comprehension Strategies Theories, Interventions, and Technologies*, (New York and London: Lawrence Erlbaum Associates, 2007), 6

²⁰ Unal Ulker, "Reading Comprehension Strategies", *International Visible Conference on Educational Studies & Applied Linguistics*, (2017), 494–501.

interpreted not only as implicit adjustments to objectives and texts but also as specific procedures to increase comprehension.

b. Theories in Reading Comprehension

There are several theories in reading comprehension. However, it only focuses on the two theories that are categorized as the most important for reading comprehension.

a) Comprehension as a Thinking Process

According to Wolley, the comprehension process includes summarizing, predicting, assessing, synthesizing, and other activities. Hermosa also underlined in this statement that “comprehension requires thinking” and that “as there are different levels of cognition, there are varying levels of understanding.” Additionally, it is also important to highlight that the higher the level of understanding, the higher the level of thinking.

Given these points, there are five levels of reading comprehension: First, *Literal Interpretation* (it is referring to a basic type of comprehension in which a reader uses information immediately stated in the reading material. Thus, to gain this level the readers should recognize the words). Second, *Interpretation* (in this level requires a higher level of thinking because the question deals with answers that are not stated explicitly in the text but are recommended or implied, it means this level of thinking necessitates the reader's ability to make inferences, which generally called reading between the lines and it is crucially significant). Third, *Critical Reading or Evaluation* ((involves drawing the reader's judgment, which

contains two components, namely substance or themes related to the correctness, value, truth, objectivity, novelty, and significance, as well as stylistic features, which refer to the use of language and literary device). Fourth, *Integration or Application to Self and Life* (this level not only emphasizes reading for use and clarifying values, but also applying a concept, philosophy, or theory to practical use in the reader's life which is considered very important). The last level is *Creative Reading* (this level the reader utilizes different thinking skills to come up with new ideas or alternatives to the author's solutions, such as changing the ending, the main idea of the narrative into poetry, or playing a drama, etc).

b) Reading Schemata or Scaffold

This concept emphasizes the importance of the reader's prior knowledge and experience, generally known as "schema," in reading comprehension. Ambruster and Osborn define this theory as how individuals acquire, store, and apply knowledge when reading a text. Furthermore, readers comprehend what they read if it is related to what they already know. Readers derive meaning from the text by connecting the information of the text to their prior knowledge²¹. Readers frequently employ three types of schema theory.

- 1) *Script knowledge* refers to "daily information stored in memory," which mostly "comes from repeated interactions with people, places, events, and situations." It also involves comprehending processes or

²¹ Rossana C Torres, "Factors Affecting the Reading Comprehension of Intermediate Level Learners : Factors Affecting the Reading Comprehension of Intermediate Level Learners", (Department of Education (DepEd) Philippines SDO, May 2021), 2.

strategies of action (for example, teaching students to understand numerous texts).

2) *Knowledge of Text Structure*, this type shows aspects of the text such as the complete message indicating how the content is related. It also has two main levels: (1) text cohesion, which refers to when the understanding of some parts of the text is influenced by the interpretation of others. This is most commonly seen with the use of contextual connections between sentences, which leads to the integration of meaning throughout the text. (2) general structures used to organize the main and small parts of a message in a particular category concerning narrative texts (texts that aim to entertain and attract imagination) readers, it depends on story grammar and metaphorical patterns to create meaning. While expository is the text that aims to teach, describe, or explain the relationship between higher and lower topics, big and small ideas, and argument or reference patterns.

3) *Knowledge About Language* is the last type of schema theory that concerns knowledge of the graphophone system, syntax, and semantics of a particular language. The reader needs to know how this system operates in a particular context or social setting. This is due to the pragmatic theory of language, which states that "language cannot exist outside of context." Additionally, some educators and researchers believe that knowing or comprehending the context of

reading events, including both sociological and cultural factors, is critical for reading comprehension. Another significant characteristic of schema theory is that "spoken or written texts do not contain meaning by themselves," and that reading comprehension requires interaction between multiple perspectives/voices or schemas (or texts). This engagement might lead to misunderstandings or contradictory viewpoints, and the more intense the encounter, the better the comprehension.²²

C. Screen Reading

Screen reading is the act of reading text on a computer screen, smartphone, or e-book reader. In other terms, screen reading means the ability to read and annotate online or digital materials.²³ Also, screen reading means the ability to read and annotate online or digital materials.

According to Chen screen based-reading leads to shallow reading, skimming, screen-shifting, shorter attention spans, and poor comprehension than intensive reading. Besides that, Rose points out the reader faces a temporal rather than a spatial construct while pursuing text on screen, falling out a haphazard, unfocused nature of reading and should not be considered academic reading.²⁴

²² Joderic C Navarrete, "Reading Comprehension: Theories and Strategies Toward an Effective Reading Instruction", *Journal of Education and Practice* Vol. 10, no. 13 (2019), 108–114.

²³ Yogalechumi Ramaligam et.al, "Screen Reading Versus Paper Reading: An Experimental Study on the Impact of Different Reading Materials on Recall and Comprehension Among Students", (*American Journal of Educational Science*, Vol.4, No.4, 2018), 137

²⁴ Saima Qutab et.al, "Screen-Reading Habits and Use of e-Resources of Faculty of Economics and Management Sciences' students: A study of Postgraduate Students", *Library Philosophy and Practice (e-journal)*, Vol. 9, No. 4, 2017, 2

Goodman and Rumelhart point out that the process of text comprehension involves the reader in a complex, dynamic, ongoing interaction with the text. Text interaction, such as highlighting and annotating, is commonly used in this relationship. Reading on a computer screen includes data in several ways. Manipulation of text, whether on the computer or paper, is a common procedure. Conforming with Cobb and Stevens “*externalizes the reader engagement that would otherwise be invisible*”. Text manipulation is a visual representation of a reader's contact with the text, and interaction that helps in the creation of context by collecting brief thoughts and ideas.²⁵

Additionally, reading comprehension in the digital era is not easy than paper. However, we need to realize that along with the development of technology that continues to grow and is modern, presenting information using digital media is very popular. As stated by Christopher Cocchiarella discusses some conditions in which screen reading is significantly more efficient than paper reading. It is crucial to realize that much of the content produced in the modern world was designed to be read and understood via a screen.²⁶

There are several benefits of the digital format, most notably the possibility to transport the device and can make several books into one. In this sense, Romero-Otero et al. (2013) also concluded that the main benefits of digital formats are direct access, ease of keeping information up to date, storage capacity, and low cost. however, they also mention some drawbacks such as the fact that

²⁵Sara Kol and Miriam Scholnik, “Enhancing Screen Reading Strategies”, *CALICO Journal* 18, no. 1 (2013), 69.

²⁶Tuleneva V, “Screen vs. Paper The Study of Reading Preferences”, *Business Education In The Knowledge Economy Journal*, no. 6 (2022), 44-48

reading on certain devices strains the eyes and causes visual fatigue, in line with Ziefle's findings. Another important consideration of digital formats is cognitive load demands when reading digital books are greater than when reading printed books.²⁷

a. Sophisticated

Additionally, the screen is becoming increasingly common in educational terms devices are connected such as tablets and computers, and the availability of internet access opens up a world of possibilities for distance education providers. Reading on a tablet is no longer as difficult as it once was, and the number of applications that can be read is growing.

Distance services have also been resource-based for the last decade or so. Students are given printed materials in the form of research guides and reading content, as well as access to online discussion forums, media (videotapes, CDROM, or DVD), and an external internet connection. Additional learning resources are also available electronically, but they are typically in the form of printable text. As the world on the screen becomes more and more common and important to academic study, the only on-screen educational approach can be seen as a step forward rather than a step back - particularly if the on-screen educational approach entails more than merely translating conventional print tools into electronic formats. Many additional advantages come with improved on-screen education provisioning. There are some advantages as follows:

²⁷ Ana Alejandra, Fuentes Cuiñas, and Pablo Augusto Vailati, "The Smell of Printed Books : A Qualitative Comparison between Printed and Digital Formats" Vol, 6, no. 1 (2022), 214-225.

- 1) Professionals of the twenty-first century need to be able to read on a computer screen effectively.
- 2) External tools and guides, such as feedback exercises, illustrative media, and glossaries, can be easily combined with on-screen content.
- 3) On-screen data is highly versatile (limited only by the computer used to view it), and it can be exchanged and synchronized across several platforms.
- 4) Since print materials are usually created electronically and only involve additional formatting, pagination, publication, storage, and dissemination, the production of on-screen text is simplified and more effective. On-screen data can be effectively, rapidly, and inexpensively transmitted and amended.
- 5) The end-user will manipulate and annotate on-screen text, and user comments can be easily exchanged. Text format, font, brightness, and contrast can all be changed by the user.
- 6) Keyword searches can be performed throughout the whole document.
- 7) The reader will use electronic accessibility resources such as Read&Write for Google Chrome and near captioning services (depending on the format).
- 8) Analytics can be used to monitor consumer activities invisibly.²⁸

However, in other facts, students have indicated detrimental physical side effects from using electronic instructional content, because there is a shortage of

²⁸Mark Nichols, "Reading and Studying on the Screen: An Overview of Literature Towards Good Learning Design Practice", *Journal of Open, Flexible and Distance Learning* 20, no. 1 (2016), 34.

reading on the tablet. This includes sight issues such as eye loss and headaches when reading from tablets, as well as the fact that students tire more quickly.²⁹

Besides, in other situations, numerous benefits have been provided by digital technology, including quick and simple access to information and a variety of networking opportunities. Students can access digital texts due to technological advances. Advocates for digital texts assert that they are superior

to paper texts. Noam claims that a book is an antiquated technology that is expensive, challenging to find, ephemeral, continuously out of print, slow to produce, difficult to write and read, and taxing on the eyes. Paper books, in his opinion, will soon be considered historical items. Another argues that since digital texts can be accessed online, they are more cost-effective than their print equivalents and also consume less paper and ink. According to Al-Amir, some students prefer reading on a computer screen because they find it more enjoyable. In addition, James emphasizes the advantages of searching and updating as well as the benefits of innovation to the text, the ability to dynamically display the text, and cost-effectiveness when using computers in place of paper for text presentation.³⁰

²⁹ Augusta Palsdottir, "Advantages and Disadvantages of Printed and Electronic Study material: Perspective Students", The University of Borås, Sweden, Volume. 24. No. 2, June 2019, 1

³⁰ Melisa Nur et al., "Reading Digital Texts vs . Reading Printed Texts : Which One Is More Effective in Iranian EFL Context ?" Hindawi Education Research International Volume 2022, (2022), 2

D. Printed Material

Paper reading is the act of reading a text on paper. Paper-based learning may seem outdated. However, numerous scientific studies prove its benefit. Text in a paper book is easily navigable, and forming a coherent mental map of the information is easier.³¹

O'Hara and Sellen argue that the advantages of printed versions greatly outweigh that of online textual displays after studying the reading processes of ten readers using either online or paper texts. They argue the major benefits of paper texts include the ability to annotate while reading, as well as fast navigation and spatial layout flexibility.³²

E. Previous Study

The study of reading performance on screen and papers has been thoroughly examined. In detail, many studies have been done to investigate the impact and effects of reading on media platforms (screen and paper). There are several studies that writers use as a study writing reference, these studies presented similar issues but the researchers observed different aspects with different perspectives.

Most related studies examined the effectiveness of paper-based reading over the screen as carried out by Yiren Kong et.al, of University at Buffalo, their study investigated screen reading and papers affect the readers' performance. The

³¹ Yogalechumi Ramaligam et.al, *Op. Cit.*, 138

³² I. Chia Chou, "Understanding On-Screen Reading Behaviors in Academic Contexts: A Case Study of Five Graduate English-as-a-Second-Language Students", *Computer Assisted Language Learning*, Volume 25, no. 5 (2012), 414.

result of their research found that reading on paper is better than reading on screen in terms of reading comprehension and there is no significant difference in terms of reading speed.³³ Furthermore, Feyyaz Oztop et. al investigated the reading comprehension level between screens and papers by comparing 12 research (29 comparisons) in primary education, the resulting study demonstrates that the level of comprehension is higher when reading from a paper than screen and in terms of the effect, sizes did not differ considerably depending on the year of publishing, grade level, text style, or digital instrument.³⁴ In other findings proved by Anne Mangen et.al that investigates the impact of text-based and computer-based reading modalities including reading comprehension among 72 tenth graders from two different primary schools in Norway, the result found that reading comprehension on screen-based reading was poorer than paper-based reading.³⁵ Besides that, Troy Jones and Carol Brown investigated reading engagement and comprehension among 22 (11 boys and 11 girls) third-grade children at an urban school in the southeast region of the United States. The first result showed that there is not much effect in terms of the suitability of the characters, themes, the settings format of the book, and the personal preferences of the reader. The second result showed that even though the children are easily comfortable reading e-books but choosing books as reading material has an impact on reading

³³ Yiren Kong, Seo, and Zhai, "Comparison of Reading Performance on Screen and Paper: A Meta-Analysis", 18.

³⁴ Feyyaz Oztop and Omer Nayci, "Does the Digital Generation Comprehend Better from the Screen or the Paper?: A Meta-Analysis", *International Online Journal of Education and Teaching* Vol. 8, no. 2, 2021), 1206–1224,

³⁵ Anne Mangen, Bente R. Walgermo, and Kolbjørn Brønnick, "Reading Linear Texts on Paper versus Computer Screen: Effects on Reading Comprehension", (*International Journal of Educational Research* 58, 2013), 61–68.

engagement and reading comprehension.³⁶ Besides that, in terms of reading habits, Oriolu Chuks Daniel et al examined the effect dan factors of reading habits on the academic performance among 200 students at Afe Babalola University. The results showed that most students are interested in reading textbooks, notebooks, and electronic resources. The main factor that hinders reading habits is social media (e.g Facebook, WhatsApp, Twitter, etc) affects students' academic achievement.³⁷

Numerous studies also highlight the significance and support of screen-based reading conducted by Aysegul Liman Kaban et.al examines reading performance and experience in paper-based and screen-based including motivation level and reading comprehension of sixth-grade students at a state school in Istanbul, Turkey. The result demonstrates that students read on-screen more effectively than on paper and using screen reading improves reading performance and students' motivation.³⁸ Besides, Shirin Shafiei Ebrahimi also investigates the effect of reading comprehension in digital reading among 60 college students in Malaysia. The result showed that college students perform better in digital reading and their preference to read digitally over overprint.³⁹ Hakan Dundar and Akcayir compared reading performance between Tablet PCs

³⁶ Troy Jones et al., Reading Engagement: "A Comparison Between E-Books and Traditional Print Books in an Elementary Classroom", (*International Journal of Instruction*, Vol. 4, no. 2, 2011), 5–22.

³⁷ Oriolu Chuks Danie, "Effect of Reading Habits on the Academic Performance of Students: A Case Study of the Students of Afe Babalola University", Ado-Ekiti, *Ekiti State, Teacher Education and Curriculum Studies* Vol.2, no. 5, 2017), 74.

³⁸ Aysegul Liman Kaban and Sirin Karadeniz, "Children's Reading Comprehension and Motivation on Screen Versus on Paper", *SAGE Open* Vol. 11, no. 1, 2021), 10

³⁹ Shirin Shafiei Ebrahimi, "Effect of Digital Reading on Comprehension of English Prose Texts in EFL/ESL Contexts", (*International Journal of English Language and Literature Studies* Vol. 5, no. 2, 2016), 111–117.

and paper of 20 participants in primary school 5th class students, in Turkey. They found reading on screen is an effective tool and students are more comfortable due to screen-based could rotate (horizontal and vertical position) but in terms of speed and level of comprehension no significant difference.⁴⁰ Komala Dwi Syaputri et. al examined the preference of 139 college students at Palembang who used digital and printed reading. The results showed that overall students prefer digital reading and they are more motivated while reading digitally.⁴¹ According to Dinda Ismu Asyifa, his research explored digital reading issues of 235 youths' of Indonesian Gen Z. The results of the study revealed that Indonesian Gen Z prefers digital reading on their mobile phones over paper-based reading. Even though they were difficulty understanding the content, connection issues, and the internet data will raise while downloading digital text.⁴² Another result was proved by Aisha Mehnaz et. al that examines the memory recall in reading on paper and screen among 125 undergraduates and postgraduate students at Dow University of Health Sciences (DUHS), Karachi, Pakistan. The findings showed that students performed better in reading the soft copy than the hard copy but for learners' short-term memory and recall is better to read from a soft copy than a hard copy.⁴³ According to Murat Cinal et. al, study examined the effects of reading comprehension between paper-based reading and screen-based reading of

⁴⁰Hakan Dundar and Murat Akcayir, "Tablet vs. Paper: The Effect on Learners' Reading Performance", (*International Electronic Journal of Elementary Education*, Vol. 4, no. 3, 2012), 441–450.

⁴¹Komala Dwi Syaputri and Kuntum Trilestari, "A Survey of Readers' Reading Preference: Digital or Printed Reading Text", Universitas Bina Darma – Palembang, 2017), 1–9

⁴²Dinda Ismu Asyifa, "Exploring Indonesian Gen Z Digital Reading Issues", (*UHAMKA International Conference on ELT and CALL (UICELL)* Jakarta, 17-18 December 2020), 17–18.

⁴³Aisha Mehnaz, Lubna Ansari Baig, and Syed Moyn Aly, "Difference in Memory Recall among Medical Students after Reading Printed Text (Hard Copy) vs. On-Screen Text (Soft Copy)", *Journal of the Pakistan Medical Association*, Vol. 71, no. 5, 2021) 1450–1454.

126 students in the fifth– eighth grades of a private elementary school in Ankara, Turkey. Overall, the result showed that the participants were a higher comprehension score in screen reading than on paper and did not have a significant difference in terms of reading time and modality.⁴⁴

Besides that, others studies also claimed no significant difference between performance on screen and paper. Gal Ben Yehudah and Yoram studied the effect of media (print and screen formats) in learning among 93 undergraduates from the Open University, Israel. The results showed that using both formats (screen and paper) in a reading indicates no significant difference in performance and comprehension.⁴⁵ Dar Wei Chen et.al examined the effect of paper and screen reading on comprehension, metacognition, and reader behavior of 92 students from Georgia Tech. The results revealed that did no significant difference both comprehension, metacognition, and performance prediction (POP) but the participants preferred text on paper because they can take notes and spend more time studying reading on screen.⁴⁶ Considering the reading speed and accuracy Andreas Holzinger et. al investigated reading performance between paper and screen of 111 medical professionals at County hospital Styria, Austria. The results demonstrate that no performance differences between both two formats in terms of speed as well as accuracy and the participants prefer reading on paper (90

⁴⁴ Murat Cinar, Dilek Dogan, and Suleyman Sadi Seferoglu, “The Effects of Reading on Pixel vs. Paper: A Comparative Study”, *Behaviour and Information Technology*, Vol. 40, no. 3 (2021), 251–259, <https://doi.org/10.1080/0144929X.2019.1685594>.

⁴⁵ Gal Ben-Yehudah and Yoram Eshet-Alkalai, “Print versus Digital Reading Comprehension Tests: Does the Congruency of Study and Test Medium Matter? ”, (*British Journal of Educational Technology* Vol. 52, no. 1, 2021), 426–440.

⁴⁶ Dar Wei Chen and Richard Catrambone, “Paper vs. Screen: Effects on Reading Comprehension, Metacognition, and Reader Behavior”, (*Proceedings of the Human Factors and Ergonomics Society* 2015-Januari, no. 2005, 2015), 332–336.

percent) due to the quality and advantages that cannot be replicated electronically.⁴⁷ However, Annika Schwabe et al examine the reading performance and emotional and cognitive experiences between print and screen reading of 207 German-speaking participants. The results found that there is no significant difference between reading speed and reading comprehension in both two formats including cognitive and emotional reading experiences, especially in screen reading.⁴⁸

Additionally, some studies also had similar investigations as the current study. Hak Joon et. al examined the differences in reading performance from LCD monitors and papers of 108 senior high school students in Connecticut. The results found that the students reading performance was higher in paper-based reading than in an LCD monitor and they spent less time reading on the LCD monitor.⁴⁹ According to Geoffrey Haddock et al, their studies also assessed the comprehension of information from digital reading and paper-based among 112 undergraduates at British University. The results showed that the message comprehension of the text was slightly greater in printed text than on screen.⁵⁰ Besides that, Raja Yacob et. al also investigates the students' preference for format reading material between screen and paper of 149 undergraduates in UiTM

⁴⁷ Andreas Holzinger et al., "Investigating Paper vs. Screen in Real-Life Hospital Workflows: Performance Contradicts Perceived Superiority of Paper in the User Experience", (*International Journal of Human-Computer Studies* Vol. 69, no. 9, 2011), 563–570.

⁴⁸ Annika Schwabe et al., "Experiencing Literature on the E-Reader: The Effects of Reading Narrative Texts on Screen", (*Journal of Research in Reading*, Vol. 44, no. 2, 2021), 319–338.

⁴⁹ Hak Joon Kim and Joan Kim, "Reading from an LCD Monitor versus Paper: Teenagers' Reading Performance", (*International Journal of Research Studies in Educational Technology*, Vol. 2, no. 1, 2013), 15–24.

⁵⁰ Geoffrey Haddock et al., "The Medium Can Influence the Message: Print-Based versus Digital Reading Influences How People Process Different Types of Written Information", (*British Journal of Psychology* Vol. 111, no. 3, 2020), 443–459.

Kelantan. The findings indicate that most students preferred the reading material paper-based than the screen-based and their easily remember the information from reading printed material.⁵¹ Other findings were also supported by Chin Ee Loh and Baoqi Sun. In their study examine adolescents' digital and print reading habits among 96 students at six secondary schools in Singapore. The results demonstrate that adolescents prefer to read in print, but as time goes on and get older, they switch to reading more online. Online reading habits can reflect their preferences as well as teenagers who read in text format.⁵²

The present study has a similarity with the previous study which discussed students' performance in reading on screen and papers. However, the difference with the current research is that it was conducted in Aceh, Indonesia. The first question guided by this research focuses on analyzing students' comprehension in reading on screen and paper. The second question explained the students' preferences between reading on-screen and papers for eighth-grade students in Junior High School. The writer used a Mix-method approach for this study.

Based on the above literature, it can be concluded that paper-based and computer-based reading formats are still being considered to explore the effects of reading performance. In recent years, the use of reading media such as screen-based formats in teaching and learning has become commonplace. As the result, measuring reading comprehension is an important way to evaluate reading

performance across various media platforms. Therefore, this research tries to determine the effect of the two media platforms (Screen and paper) on reading comprehension and described students' preferences about two formats of reading.

⁵¹ Raja Nur et al., "Students' Preference on Use of in -Print and on-Screen Esl Reading Materials : A Case Study in Odl Session Among Uitm Kelantan Undergraduates", (*e-Proceedings of International Conference on Language, Education, Humanities & Social Sciences*, 2020), 496–504.

⁵² Chin Ee Loh and Baoqi Sun, "I'd Still Prefer to Read the Hard Copy': Adolescents' Print and Digital Reading Habits", (*Journal of Adolescent and Adult Literacy*, Vol. 62, no. 6, 2019), 663–672.

CHAPTER III RESEARCH METHOD

A. Research Design

This study employed a mixed-method design defined by Creswell as "a procedure for collecting, analyzing, and mixing quantitative and qualitative methods in a single study or series of studies to understand a research problem".⁵³ The model of mixed methods used in this study is an explanatory sequential mixed methods design. The explanatory sequential design research model begins with the collecting of quantitative data and continues with the qualitative data collection to help explain and describe the results obtain by quantitative data. Therefore, the research results of this research model are explanatory or explain a general picture (generalization). The thing that underlies this research model is that involves a two-phase project in which the researcher collects quantitative data in the first stage, analyzes the results, and then uses the results to plan (or construct) to the second stage, qualitative.⁵⁴

The researcher selects a mix-method research design as an explanatory sequential model to investigate the students' reading performance in reading on screen and paper and students reading preferences in reading on-screen and paper-based. In conducting the research, Quantitative data was collected using a reading

⁵³ Creswell, *Educational Research Quantitative, Qualitative, and Mixed Approaches 5th Edition*, (United Kingdom: SAGE Publications, 2014), 105

⁵⁴ Creswell, *Research Design Quantitative, Qualitative, and Mixed Approaches 4th Edition*, (United Kingdom: SAGE Publications Ltd, 2014), 274

test while qualitative data were obtained through semi-structured focus open interviews.

B. The Research Participant

The participants of this study are the students of MTs Swasta Bustanul Huda Langsa city. There are 18 students in class VIII and the researchers selected subjects purposively, purposive sampling is a non-probability sampling method and it occurs when the elements selected for the sample are selected by the researcher's judgment researchers believe that they can obtain a representative sample with use good judgment. In other words, Purposive can be interpreted as intent (consideration), purpose, or use.⁵⁵ In this study, the researcher gave pre-post test reading in printed text and screen for 18 students in eight classes and also observed the participants reading activities in class. After conducting the pre-post test, the researcher grouped the students who got the highest score, medium, and poor using the purposive sampling technique. As the result of purposive sampling, the final participants were 9 students consisting of 6 females and 3 males. In this research, the researcher only took 9 students from the total number of students to be interviewed.

C. Data Collection

According to Juliansyah Noor, the data collection technique was the way of collecting data needed to answer the formulation of research problems. So, the data collection technique was the way to collect data to answer the formulation of

⁵⁵ Dr. A. Muri Yusuf, *Metode Penelitian: Kuantitatif, Kualitatif, Dan Penelitian Gabungan Edisi Pertama*, (Jakarta : Kencana. 2014), 169

the research problem.⁵⁶ The data collected in this study consist of observation, reading tests, and interviews as the following explanation :

a. Quantitative data

Reading used in this section was carried out in 2 stages to get students' performance from reading on paper and screens, namely :

- a) In Meeting 1 (Pre-test), the researcher instructs the participant to read the recount text on paper and screen display using the projector. After that, the participant will answer the question provided by the researcher.
- b) In Meeting 2 (Post-test), the researcher instructs the participant to read a different kind of recount text but has the same structure displayed on screen and paper. After that activity, the participant will answer the multiple-choice question provided by the researcher.

b. Qualitative data

1. Observation

Observation is one of the data collection methods that systematically make observations and recording of the symptoms that appear on the object of research. To support these statements, Asyari also stated that observation is a special observation and systematic recording aimed at one or several phases of the problem in the context of research, to obtain the data needed to solve the problem. There are three types of observation: First, participant observation in which the observer takes part in the observation activities. Second, systematic observation or

⁵⁶Juliansyah Noor, *Metodologi Penelitian*, (Jakarta : Kencana Prenada Media Group, 2011), 138.

structured observation where the main character is having a clear structure or framework; it contains all the necessary factors and has been grouped into certain categories or tabulations. Third, experimental observation, where this observation aims to find out the changes in the emergence of variables and symptoms of abnormalities, as an experimental situation that is deliberately held to be investigated.⁵⁷

In this study, the researcher choose systematic observation or structured observation as an observation checklist to find out the student's performance in both reading formats.

2. Interviews

According to Arikunto, the interview is a dialogue conducted by the interviewer to obtain information from the interviewee.⁵⁸ Sugiyono suggested several types of interviews, namely structured, semi-structured, and unstructured interviews.

In this current study, the researcher chooses a Semi-structured interview. This type of interview is included in the in-depth interview category, wherein its implementation is freer when compared to structured interviews. This type of interview aims to find problems openly, where the parties invited to the interview are asked for their opinions and ideas. Therefore, the purpose of a Semi-structured

⁵⁷ Samsu, *Metode Penelitian: Teori Dan Aplikasi Penelitian Kualitatif, Kuantitatif, Mixed Methods, Serta Research & Development*, (Jambi: Pusat Studi Agama Dan Kemasyarakatan (PUSAKA), 2017), 97-98

⁵⁸ Samsu, *Metode Penelitian: Teori Dan Aplikasi Penelitian Kualitatif, Kuantitatif, Mixed Methods, Serta Research & Development*, 96

interview in this research is to allow students to convey their preference and their opinion of reading on paper and screen in-depth and freely without distractions.

A. Technique Collecting Data

The data collection instrument is a tool in data collection. In this study, the researcher used 5 multiple-choice questions to determine students' comprehension of reading through screen and paper. Furthermore, the researcher also used an observation checklist to find out students' reading performance when reading on paper and screen. The observation checklist in this study is divided into two optional checklists namely yes and no.

In addition, the researcher also took all students at the eighth grade of MTs Swasta Bustanul Huda Langsa as an interviewee. The semi-structured interview consisted of 10 questions about students' opinion and their preferences between two formats screen and paper was given after doing the reading test. In the interview section, used the Indonesian Language. It was conducted to find out students' preferences and students opinions about using two different formats in reading. Besides, in this study, the researcher used a short recount text consisting of less than 200 words in the printout for paper reading and a pdf version for on-screen reading.

B. Research Procedure

This research was a mixed-method study both quantitative and qualitative. First, to get the quantitative data the researcher conducted a reading test between two formats of reading materials (screen-based and paper-based).

Second, to get the qualitative data the researcher used observation and interview sessions. There are some steps the researchers did in conducting this study as follows:

1. The researcher made the instruments for the reading test, observation checklist, and interview.
2. The researcher met the English teacher and asked permission to conduct the research. After getting permission the researcher chooses eight grade classes as participants in this research.

3. Pre-test section

In the first meeting, before giving the reading test the researcher explain the procedure of the reading test. Next, the researcher gave a pre-test for all students in an eighth-grade class. In the pre-test section, the researcher asked students to read on paper and screen and answered the five multiple questions provided based on the text. After that, the researcher gave 30 minutes for each section to finish the test. Besides that, during the reading activities section, the researcher observed each student using an observation checklist.

4. Post-test section

In the second meeting, the first step the researcher explains the procedure of the reading test. Next, the researcher gave a pre-test for all students in the eighth-grade class. In the post-test section, the researcher asked students to read on paper and screen and answered the five multiple questions provided based on the text. After that, the researcher

gave 30 minutes for each section to finish the test. Besides that, during the reading activities section, the researcher observed each student using an observation checklist.

5. Collecting the score

In these steps, the researcher tabulated the score of the pre-post test both reading on screen and paper, and compared the scores. Next, the researchers grouped the students into lower, medium, and high categories and the researcher took 9 students to be interviewed.

6. Interview section

In the last meeting, the researcher conducted a semi-structured interview to obtain students' opinions and preferences of reading material in both two formats (screen and paper). The questions of the interview consist of 10 and the researcher interviewed each student one by one.

F. Data Analysis

After collecting the data, the researcher analyzed the data using both quantitative and qualitative analysis techniques.

a. Quantitative Data Analysis

The data was taken from the reading test in a different format (printed and screen) from the pre-test and post-test. To calculate the students' score, the data in this research was analyzed by using descriptive analysis formula according to Anas Sudijono as follow :

1) Determining means score

$$\bar{X} = \frac{\sum X}{N} \text{ }^{59}$$

Notes :

\bar{X} = The means of the student

$\sum X$ = The total score

N = The number of students

2) Determining standar deviation

$$SD = \frac{\sqrt{\frac{\sum (fx)^2}{N} - \frac{(\sum fx)^2}{N^2}}}{N-1} \text{ }^{60}$$

Notes :

SD = Standar Deviation

X = Students' score

N = The number of students

3) Determining categories

In these steps, the researcher divided students' scores into three categories by using the formula recommended by Suharsimi Arikunto, namely :

High : Mean + 1SD ≤ X

Middle : Mean - 1 SD ≤ X ≤ Mean + 1SD

Lowest : X ≤ Mean - 1SD

Notes :

⁵⁹Anas Sudijono, *Pengantar Statistik Pendidikan*, (Jakarta : Raja Grafindo Persada, 2014), 86

⁶⁰Dr. Adam Malik and Minan Chusni, *Statistika Pendidikan Teori dan Aplikasi*, (Yogyakarta : Deepublish, 2018), 88

M = The mean students' score

SD = The square of deviation standard

After calculating the mean, standard deviation, and categorization based on the above formula and obtaining the frequency of each category, then calculating the percentage formula. The percentage formula is used to calculate the percentage of students in the high, medium, and low categories.

$${}^61P = \frac{f}{N} 100\%$$

Notes :

P =Percentage

f = Frequency

N=The number of students

Relate the purpose of this study, namely to determine the differences in reading performance on screen and paper. The calculation of this research test was carried out with the SPSS (Statistical Product and Service Solution) program series computer 23 for Windows.

a. Qualitative Data Analysis

Qualitative data was taken from the observation checklist and interview.

The research used three steps as proposed by Miles and Huberman namely :

1. Data reduction

This section means summarizing, choosing the main topic, and focusing on important things. Researchers collect some important information related to this

⁶¹Dr. Adam Malik and Minan Chusni, *Statistika Pendidikan Teori dan Aplikasi*, (Yogyakarta : Deepublish, 2018), 90

kind of question. This activity involves information obtained from the data source into a coherent description.

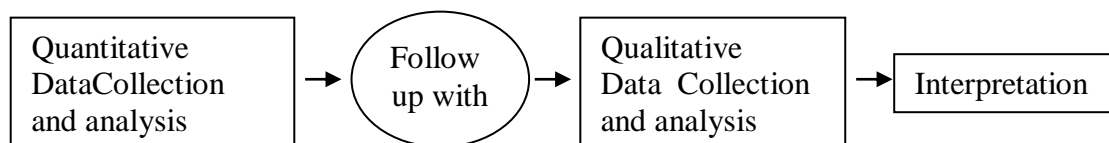
2. Data display

Data display means presenting data in the form of brief descriptions, charts, and relationships between categories. Data can also be enriched with images, tables, charts, and diagrams. Usually, this technique is used to present information, descriptions, or narratives to conclude.

3. Drawing conclusions

These are the last steps in the data analysis technique in this study. In qualitative research, the conclusion may be able to respond to the formulation of the research problem. This step displays the research's outcome. The conclusion is still a work in progress, and it will be refined after further investigation. The researcher anticipates being able to provide clear descriptions based on the findings.⁶²

b. Explanatory Sequential Analysis



Picture 3.1 Data analysis using explanatory sequential mixed methods

⁶²Samsu, *Metode Penelitian: Teori Dan Aplikasi Penelitian Kualitatif, Kuantitatif, Mixed Methods, Serta Research & Development*, 105-107

The analytical model applied in this study is explanatory sequential mixed methods recommended by Creswell.⁶³ The procedures for conducting research were as follows:

- 1) In the first stage, the researcher conducted a test on the respondents to get quantitative data.
- 2) Collect data from test results and perform quantitative data analysis (determining means score, standar deviation, categories, and percentage).
- 3) Select informants according to the criteria for conducting interviews.
- 4) From this first stage, findings are produced to answer the first research question and become the basis for conducting the second stage of research.
- 5) In the second stage, the researcher conducted an observation checklist and interview (semi-structured interview) to get qualitative data with the aim of deepening, proving, and supporting the quantitative data obtained in the first stage.
- 6) Collect data from the observation checklist and interview and perform qualitative analysis.
- 7) From this second stage, findings are produced to answer the second research question and are also collaborated with the findings in the first stage to generalize from the results of quantitative and qualitative data.

⁶³ Creswell, *Research Design Quantitative, Qualitative, and Mixed Approaches 4th Edition*, (United Kingdom: SAGE Publications Ltd, 2014), 270

CHAPTER IV

RESEARCH FINDINGS AND DISCUSSION

A. Research Finding

In this section, the researcher described a brief description of MTS Swasta Bustanul Huda Langsa. This school is located in Medan-Banda Aceh street KM.445 Sungai Lueng village. This school is one of the schools that integrate technology into the teaching-learning process. Besides that, the school also provided the teacher with various subjects to implement technology in the classroom and encouraged students interested in learning. As an illustration, teachers used projector media to display material in the teaching and learning process. The school also provides free internet connection such as WIFI (Wireless Fidelity) to make it easier for teachers to connect learning materials with the internet in teaching.

Based on the above description of the school, so the teacher chooses the school as the place for the researcher to conduct this research. In this research, the researcher used reading tests, observation, and interviews to collect the data. The research design in this study was an explanatory sequential mixed methods design. In calculating students' scores using mean, standard deviation, and categorization formula was analyzed quantitatively. Besides, analyzing the data from interviews and observation was qualitative.

1. The result of the pre-test and post-test

Related the first research question in this research is to find out the students reading performance in comprehending the text from screen and paper. The researcher conducted a reading test to determine students' reading performance that consist of pre and post-test. Each pre-post test given to students was divided into two sections namely, reading on-screen display in projector and paper. There are two digital reading passages where PDF Version is displayed by using the Projector screen.

Text 2

"TRIP TO JOGJAKARTA"



source: www.goog.le.com

Last holiday my students and I went to Jogjakarta. We stayed at Morison Hotel which is not a long way from Malioboro. On Friday, we went to the sanctuaries in Prambanan. There are three major sanctuaries, the Brahmmana, Syiwa and Wisnu sanctuaries. They are truly stunning. We went by just Brahmmana and Syiwa sanctuaries, on the grounds that Wisnu sanctuary is being remodeled.

On Saturday morning we went to Yogya Kraton. We spent around two hours there. We were fortunate on the grounds that we were driven by a brilliant and amicable aide. At that point we proceeded with our adventure to Borobudur. We touched base there at four p.m. At 6 p.m. we heard the declaration that Borobudur entryway would be closed. In the evening we left Jogjakarta by bus.

After reading above text, please answer the following questions !

- 1) The content above basically talks about ?
 - a. The writer's trip to Yogyakarta
 - b. The writer's experience at Yogya Kraton
 - c. The writer's experience at Bali
- 2) What else the big temples in Prambanan?
 - a. Paria, brahmmana, and temples
 - b. Borobudur, syiwa, and brahmmana temples
 - c. Brahmmana, syiwa, and wisnu temples
- 3) When the writer's went to the sanctuaries in Prambanan ?
 - a. On Tuesday
 - b. On Friday
 - c. On Saturday
- 4) When did they go home ?
 - a. On Friday evening
 - b. On Thursday evening
 - c. On Saturday evening
- 5) Why did they just visit Brahmmana and Syiwa sanctuaries?
 - a. Because wisnu temple was being repaired

-
- b. Because wisnu temple was amazing
 - c. Because wisnu temple was too small

Figure 4.1 Capture of screen reading pre-test section.

Text 2**“MY TRIP TO KELIMUTU LAKE”**

Source: www.goegle.com

Last week, I took a trip to Kelimutu Lake which is located in Ende regency. It took me almost two hours to arrive there by bus due to the winding terrain and ups and downs but even so I still felt happy.

When I arrive there, my tiredness was paid off by a view of the tropical rainforest which is incredibly beautiful and still very natural, added by the beautiful appearance of the exotic Three Colour Lake. I also spent my time enjoying this amazing work of the creator while occasionally taking pictures.

That was my unforgettable trip ever and I want to go back there someday.

After reading above text, please answer the following questions!

- 1) Where did the writer go last week?
 - a. Toba Lake
 - b. Kelimutu Lake
 - c. Ende Lake
- 2) Why did it take 2 hours to arrive at Kelimutu Lake?
 - a. It's due to the winding terrain and ups and downs
 - b. It's due to the heavy rain
 - c. It's due to the low bus speed
- 3) What province is Kelimutu Lake located?
 - a. Aceh
 - b. Bali
 - c. Ende
- 4) How many colors Kelimutu Lake has?
 - a. 5 colour
 - b. 3 color
 - c. 7 colour
- 5) What did the writer do after she/he arrives there?
 - a. He/ she enjoyed the scenery and took pictures
 - b. He/ she took a rest for some time
 - c. He/ she had lunch

Figure 4.2 Capture of screen reading post-test section.

In the first meeting, the researcher gave a pre-test that was conducted on Friday, November 26th, 2021. For the first section, the researcher would explain the procedure of the reading test. Next, the researcher gave the reading material for students about recount text in the printed text and included 5 multiple-choice questions based on the text. After that, the researcher gave 30 minutes for students to finish the test. In the second section of the pre-test, the researcher gave the reading material about recount text including 5 multiple choice questions in screen-based format with a PDF version, but display on the projector. After that, the researcher gave 30 minutes for students to finish the test. Furthermore, to identify the students' behavior in reading, the researcher also observed the students during the activity.

a. Result of Pre-test

Here is the score of students in reading performance on papers and screen as follows:

Table 4.1
The result of the Students' Reading Performance Pre-test

No.	Name	Score reading on papers	Score reading on screen
1.	Amar Ukhrawi	60	40
2.	Ardika	80	60
3.	Chairul Faizi	80	60
4.	Emi Almaira	60	40
5.	Intan Putri Cahyani	60	80
6.	Jihan Aura	60	40
7.	Katrun Nada	80	80
8.	M. Mujiburrahman	60	40
9.	M. Rajab	60	60
10.	Maujihan Riandi	80	80

11.	Mauliza	40	20
12.	Mira Maisura	40	60
13.	Muarif	80	40
14.	Nuzul Fuzari	80	60
15.	Raja Beetra	60	60
16.	Sity Zahara	80	40
17.	Syifa Lulaika	80	80
18.	Wilda Safriani	80	80
Total		1220	1020
Mean		67.7	57
Std. Deviation		13.95605	18.47096

Based on the table of the pre-test above, the student's performance in reading on papers showed the minimum score was 40, the maximum score of the pre-test was 80, and the Mean of the pre-test was 67.7. In addition, the minimum score of students' performance in reading on a screen was 20, the maximum score on the pre-test was 80 as well as the Mean of the reading pre-test was 57.

Table 4.2
Categorization of Students' Reading Scores

Score reading on papers	Frequency	Category	Percentage
40	2	Lowest	11.11%
60	7	Middle	38.88%
80	9	Middle	50%
Score reading on screen	Frequency	Category	Percentage
20	1	Lowest	5.55%
40	6	Middle	33.33%
60	6	Middle	33.33%
80	5	High	27.77%

To determine the students' score category in the table above, the researcher used this formula :

High : $\text{Mean} + 1\text{SD} \leq X$

Middle : $\text{Mean} - 1\text{SD} \leq X \leq \text{Mean} + 1\text{SD}$

Lowest: $X \leq \text{Mean} - 1\text{SD}$

1) The categorization Score reading on papers pre-test

$$\text{Mean} = 67.7 \qquad \text{Mean} - 1\text{SD} = 67.7 - 13.95605 = 54$$

$$\text{Std. Deviation} = 13.95605 \qquad \text{Mean} + 1\text{SD} = 67.7 + 13.95605 = 82$$

$$\text{High} = X \geq 82$$

$$\text{Middle} = 54 \leq X \leq 82$$

$$\text{Lowest} = X \leq 54$$

2) The categorization Score reading on the screen pre-test

$$\text{Mean} = 57 \qquad \text{Mean} - 1\text{SD} = 57 - 18.47096 = 35$$

$$\text{Std. Deviation} = 18.47096 \qquad \text{Mean} + 1\text{SD} = 57 + 18.47096 = 74$$

$$\text{High} = X \geq 74$$

$$\text{Middle} = 35 \leq X \leq 74$$

$$\text{Lowest} = X \leq 35$$

Meanwhile, to calculate the percentage of students reading on paper and screen into the high, medium, and low categories. The researcher used this formula :

$$P = \frac{f}{N} 100\%$$

1) The students' percentage of reading on paper

$$P = \frac{2}{18} \times 100\%$$

$$P = \frac{7}{18} \times 100\%$$

$$P = \frac{9}{18} \times 100\%$$

$$\text{Lowest} = 11.11\%$$

$$\text{Middle} = 38.88\%$$

$$\text{Middle} = 50\%$$

2) The students' percentage of reading on screen

$$P = \frac{1}{18} \times 100\%$$

$$P = \frac{6}{18} \times 100\%$$

Lowest = 5.55%

Middle = 33.33%

$$P = \frac{6}{18} \times 100\%$$

$$P = \frac{5}{18} \times 100\%$$

Middle = 33.33%

High = 27.77%

The result of the table and description of the pre-test above, the students' score category and percentage in reading on paper showed the lowest score was 40 or 11.11%. The middle score was 60 or 38.88% and 80 or 50%. Besides that, the student's score category and percentage in reading on the screen showed the lowest score was 20 or 5.55%. The middle score was 40 and 60 or 33.33%. The high score category was 80 or 27.77% of the pre-test.

b. Result of Post-test

In the second meeting for Post-test, the researcher gave a pre-test that was conducted on Monday, November 29th, 2021. The second meeting same as the first meeting with the same material about recount text, but different topics and format. In the first section, the researcher would explain the procedure of the reading test. Next, the researcher gave the reading material for students about recount text in the printed text and included 5 multiple-choice questions based on the text. After that, the researcher gave 30 minutes for students to finish the test. In the second section of the post-test, the researcher gave the reading material about recount text including 5 multiple choice questions in screen-based format with the PDF version, but display on the projector. After that, the researcher gave 30 minutes for students to finish the test. Besides that, to know the students'

behavior in reading, the researcher observed the students during the whole activity.

Table 4.3
The result of Students' Reading Performance Post-test

No.	Name	Score reading on papers	Score reading on screen
1.	Amar Ukhrawi	100	80
2.	Ardika	80	60
3.	Chairul Faizi	80	80
4.	Emi Almaira	80	40
5.	Intan Putri Cahyani	100	60
6.	Jihan Aura	80	40
7.	Katrun Nada	100	80
8.	M. Mujiburrahman	60	40
9.	M. Rajab	80	60
10.	Maujihan Riandi	80	100
11.	Mauliza	80	60
12.	Mira Maisura	80	80
13.	Muarif	80	60
14.	Nuzul Fuzari	100	80
15.	Raja Beetra	80	80
16.	Sity Zahara	80	60
17.	Syifa Lulaika	100	100
18.	Wilda Safriani	100	100
Total		1540	1380
Mean		85.6	72.6
Std. Deviation		12.93523	19.10268

Based on the table of the post-test above, the student's performance in reading on papers showed the minimum score was 60, the maximum score of the post-test was 100, and the Mean of the post-test was 85.6. In addition, the minimum score of students' performance in reading on a screen was 40, the maximum score of the post-test was 100 as well as the Mean of reading post-test was 72.6.

Table 4.4
Categorization of Students' Reading Scores

Score reading on papers	Frequency	Category	Percentage
60	1	Lowest	5.55%
80	11	Middle	61.11%
100	6	High	33.33%
Score reading on screen	Frequency	Category	Percentage
40	2	Lowest	11.11%
60	6	Middle	33.33%
80	6	Middle	33.33%
100	3	High	16.66%

To determine the students' score category in the table above, the researcher uses this formula :

$$\text{High} : \text{Mean} + 1\text{SD} \leq X$$

$$\text{Middle} : \text{Mean} - 1 \text{SD} \leq X \leq \text{Mean} + 1\text{SD}$$

$$\text{Lowest} : X \leq \text{Mean} - 1\text{SD}$$

1) The categorization Score reading on papers post-test

$$\text{Mean} = 85.6 \qquad \text{Mean} - 1\text{SD} = 85.6 - 12.93523 = 74$$

$$\text{Std. Deviation} = 12.93523 \qquad \text{Mean} + 1\text{SD} = 85.6 + 12.93523 = 97$$

$$\text{High} = X \geq 97$$

$$\text{Middle} = 74 \leq X \leq 97$$

$$\text{Lowest} = X \leq 74$$

2) The categorization Score reading on screen post-test

$$\text{Mean} = 72.6 \qquad \text{Mean} - 1\text{SD} = 72.6 - 19.10268 = 54$$

$$\text{Std. Deviation} = 19.10268 \qquad \text{Mean} + 1\text{SD} = 72.6 + 19.10268 = 92$$

$$\text{High} = X \geq 92$$

$$\text{Middle} = 54 \leq X \leq 92$$

Lowest = $X \leq 54$

Meanwhile, to calculate the percentage of students reading on paper and screen into the high, medium, and low categories. The researcher used this formula :

$$P = \frac{f}{N} \times 100\%$$

1) The students' percentage of reading on paper

$$P = \frac{1}{18} \times 100\%$$

$$P = \frac{11}{18} \times 100\%$$

$$P = \frac{6}{18} \times 100\%$$

Lowest = 5.55% Middle = 61.11% High = 33.33%

2) The students' percentage of reading on screen

$$P = \frac{2}{18} \times 100\%$$

$$P = \frac{6}{18} \times 100\%$$

Lowest = 11.11%

Middle = 33.33%

$$P = \frac{6}{18} \times 100\%$$

$$P = \frac{3}{18} \times 100\%$$

Middle = 33.33%

High = 16.66%

The result of the table and description of the post-test above, the students' score category and percentage in reading on paper showed the lowest score was 60 or 5.55%. The middle score was 80 or 61.11% and the high score was 100 or 33.33%. Besides that, the student's score category and percentage in reading on the screen showed the lowest score was 40 or 11.11%. The middle score was 60 and 80 or 33.33%. The high score category was 100 or 16.66% of the post-test. The result from the pre-post test between reading on paper and screen. The result showed that students' performance in reading on paper is more effective than

reading on screen. It seemed from the post-test result in the reading on paper section. The total score was 1540 highest than the screen reading score was 1380 from the total score.

Furthermore, there were students categories in reading on paper one student got the lowest score was 60, eleven students got the middle score was 80 and six students got the high score was 100. In addition, in reading on the screen there were students categories two students who got the lowest score was 40, and twelve students who got the middle score was 60 and 80. The last, only three students got the high score was 100. Therefore, to get the interviewee the researcher only took two students who got the lowest score from post-test reading on paper and post-test reading on screen, four students with the middle score and three students with the high score. So, the researcher only has nine students for interviews.

2. The Result of Observation

The researcher carried out the observation of the pre-post test. On Friday morning, November 26th, 2021, from 08.30 to 09.40 AM, the researcher used an observation checklist to gather data on students' reading performance while reading on-screen and on paper for the pre-test session. For the post-test section the researcher conducted on Monday, November 29th, 2021 from 10.00 until 11.10 AM. The result of observation from the pre-post-test showed that most of the students easily focused attention and does not spend less time reading printed text. Students enjoyed themselves without showing physical boredom such as

slouching, side of the face with the hand, etc. Besides that, the learners were able to read in printed independently and using their finger or pointer for marker during the reading activity.

However, the result of observation in reading on screen the researcher found that students more seemed obstacles during reading activity and loss of concentration. In addition, the researcher found that students were unable to control their body movement and showed physical boredom, students do not enjoy reading on screen, does not able to read independently, they were felt confused, and asked other students. Nevertheless, both reading in a different format the students were able to answer all the questions that have provided and they were able to pass the pre-post-test section.

3. The Result of the Interview

In this section, the researcher interviewed the eighth-grade students that consist of 9 participants using purposive sampling, the interview used 10 questions. The result of the interview namely :

a) What do you think about printed reading?

Students initials AU, CF, EA SL, and MM opinions, “ *printed reading is a text that comes from the paper*”. Meanwhile, students' initials MR, WS, JA, and KN opinions, “*text that is printed from paper for example a printed book*”.

b) What do you think about screen reading?

Students initials JA, MM, WS, and EA answered, "*reading that using a computer screen*". Meanwhile, students' initials SL, MR, and KN answered, "*readings displayed on the screen using the light from infocus*". Meanwhile students initials CF and AU answered, "*screen reading is reading on a computer screen or other technology such as a cellphone screen*"

c) What do you feel when reading printed text?

Students initials KN, WS, MR, CF, EA, and MM opinions, "*It is just so so, the writing on printed text is easier to read*". Meanwhile, students' initials CF, JA, and AU opinions, are "*easy to read and clear, even though it was written in English*".

d) What do you feel when reading on screen?

Students initials MR, KN, and WS opinions, "*happy ehm, but trying to understand when reading because the writing is in English*". Meanwhile students' initials CF, MM, AU, SL, JA, and EA opinions, "*interesting, but I feel bored, less focused and confused about the text because it is in English and the text displayed on the screen is difficult to understand*".

e) What format do you often use for reading?

Students' initials WS and JA answered, "*I read more often on screens like cellphones, sometimes I like to read any news from cellphones such as from WhatsApp and Facebook applications*". Meanwhile, students initials MR, and KN answered, "*Actually, I often read in the printed*"

text, but sometimes I also read on screen but not oftentimes".

Meanwhile, student initials SL answered, *"I often read on screens because more interesting, more complete information especially reading from cellphones"*. Meanwhile, student initials MM, EA, CF and AU answered, *"I read often reading in printed text such as printed book and sometimes read the newspaper"*.

- f) In your opinion, what are the advantages and disadvantages of reading printed text?

Student initials KN, CF, EA, and SL opinions, *"the advantages of reading in print is easier, clearer, and can be touched. The disadvantage is if the text does not have pictures it looks unattractive and if the sheets of paper are thick it can make us easily bored reading"*. Meanwhile, students' initials MR, MM, JA, and Weasiers, *"the advantages are more focus during reading and easy to flipped from the previous page and next page"*. Meanwhile student initials AU opinions, *"the advantages of reading in printed is easier to understand, clearly and focus than screen reading, can be scribbled and the disadvantages are if reading on paper, it's easier to damaged and tear"*.

- g) In your opinion, what are the advantages and disadvantages of reading on screen?

Student initials CH, MM, JA, SL, EA, AU, KN, and MR opinions, *"the advantages are more fun and advanced but the disadvantage is I do not focus on reading because it is in English and easy to hurt the eyes"*.

Meanwhile, students initials WS opinions, "*the advantages reading on screen is more up to date because using technology and the disadvantage is less focus and felt difficult while reading*".

- h) What are your difficulties when reading both printed and screen reading?

Students initials KN, JA, MM, EA, SL, JA, and AU opinions, "*so far, reading on paper there is no difficulty it is just difficult to understand because it is in English, and the difficulties reading on screen is hard to read and the light is blinding and make hurt eyes if reading a long time, sometimes the writing is blurry*". Meanwhile student initials CF and MR opinions, "*the difficulty in reading on paper is a little difficult to understand because the writing is in English and not all of my vocabularies know the meaning, it might be fluent in reading if the text is in Indonesian, and the difficulties reading on screen is the writing is small and not clear when to read and the lighting is poor*".

- i) In your opinion, which one of the formats of reading do you like the most?

Students initials MR, KN, JA, CF, SL, and AU opinions, "*I prefer to read on paper because the writing is easy to read, clear and not hurting my eyes*". Meanwhile, students' initial MM, EA, and WS opinions, "*I prefer reading on the screen because it looks more attractive and more sophisticated because it uses technology, especially it is reading in cellphones easy to carry anywhere*".

- j) For English reading class, which one of the formats of reading do you prefer? why?

Student initials AU, WS, SL, EA, MR, JA, and KN opinions, *“I think for English reading class I prefer to use printed text because, yeah it was easy to understand and clear”*. Meanwhile, students initials CF opinions, *“In my opinion, for English reading class I prefer to use printed text and screen-based format because it was looked modern by using technology”*.

Through the interview section, the researcher figured out the students' difficulties, and preferences that affected students' performance in reading on printed text and screen. Overall, the big reason was given by students about reading performance on printed text better because most of the students said that if reading on paper easier to read, more to understand. In addition, students also said that reading on paper is more focused than reading on screen. It was said by a student :

"Reading in printed is easier to understand, clearly and focus than screen reading".⁶⁴

In addition, in terms of difficulties, the students have no difficulties when reading on paper, but some of them have a problem comprehending the text because it was written in English. It was indicated by the statement :

"The difficulty in reading on paper is a little difficult to understand because the writing is in English and not all of my vocabulary knows the meaning".⁶⁵

Besides that, in reading on screen the students said that they were having difficulties understanding the text, most of them has a problem with the light of the screen and hurt their eyes during reading. This statement was described by the student:

"The difficulties reading on screen is hard to read and the light is blinding and make hurt eyes if reading a long time, sometimes the writing is blurry"

The students could not focus during the screen reading activity. This statement was described by students and observed by the researcher :

" I feel bored, less focused, and confused about the text because it is in English and the text displayed on the screen is difficult to understand".⁶⁶

During the screen reading activity, the researcher found that the students seemed confused and they were asked each other questions. Students could not control their body movement and they showed physical boredom. They were slouching, supporting chin, and so on".⁶⁷

However, in terms of preferences, most of the students prefer reading on paper to reading on screen. students said that reading on paper is more clear and easy to understand and can be touched. Half of them prefer reading on screen due to being more interesting and easy to carry anywhere. The student expresses their opinions:

⁶⁴Students interview conducted on November 30th, 2021

⁶⁵Students interview conducted on November 30th, 2021

⁶⁶Student interview on November 30th, 2021

⁶⁷Researcher observations were conducted on November 26th and 29th, 2021

"I prefer to read on paper because the writing is easy to read, clear and not hurting my eyes"

"I prefer to read on screen because more attractive and sophisticated because it uses technology".⁶⁸

Based on the above statement, the researcher knew that students reading performance in comprehending the text was affected by the reading format. This statement related to O'Hara's theory cited in Yogalechumi Ramaligam's research explained that the advantages of printed versions greatly outweigh that screen displays and the benefits of o paper texts could annotate while reading fast navigation and flexibility.

Additionally, the Margolin et al theory cited in Jinghui Hou's research has explained the reasons why reading on a screen differs from reading on paper in terms of reading results. First, it is linked to the psychological characteristics of reading behavior. Screens reading makes it impossible for readers to create an efficient cognitive map of the text or a spatial representation of it. Navigational performance, reading speed, content recall, and reading comprehension are all affected by this inefficient ability to generate cognitive maps. Second, focus on the material characteristics of the screen or paper, and it suggests that the materiality of the reading screen and on paper influences text processing. Text on paper is touchable and tangible, whereas text on screens is intangible, mediated, and detached from the physical support of the reading on screen and paper.⁶⁹

⁶⁸ Students interview conducted on November 30th, 2021

⁶⁹ Jinghui Hou et. al, "Cognitive Map or Medium Materiality? Reading on papers and Screen", 84

B. Discussion

According to data that was the researcher obtained, the researcher found that students reading performance and students reading preferences. The results of the pre-post test revealed that students reading performance was better on paper than on screen. The mean score of the pre-test in printed reading was 67.7 and the mean score of the pre-test screen reading was 57. Referring to the score of post-test, the mean score of printed reading was 85.6 and the mean score of the screen reading was 72.6. Furthermore, between reading on papers and screens pre- post-test section. In the pre-test section between reading on paper and screen, there were no students who obtained 100. The percentage of students who gained middle category score or 80 of reading on papers was 50% only 9 students who gained it and the percentage of high category in reading on a screen was 27.77% and only 5 students who obtained 80 scores of the pre-test. Meanwhile, the percentage of post-test in high category (100 scores) reading on paper was 33.33% 6 students obtained it. The percentage of reading on screen in the high category was 16.66% only 3 students obtained 100 scores. based on the above explanation It can be concluded that students reading performance on paper was greater than reading on screen. It was seemed by the total score and percentage of students reading on paper higher than screen reading.

In addition, to obtain more about students reading performance the researcher also conducted observation during the whole pre-post test reading activity in different formats. The result of observation showed that the students spend less time and seemed less focused while reading on screen. Based on

previous research, that was conducted by Hak Joon. He was compared teenagers reading performance between LCD monitor and paper at the Southern Connecticut State University of USA. The result showed that teenagers reading performance is more effective on paper and they can read significantly faster on papers than on LCD monitors.⁷⁰

Analyzing students reading preferences, the researchers conducted interviews among eight grade students. The result found that most of eight grade students preferred reading on papers because it was could touchable and more focused during reading activity. Besides that, based on the interview result the researcher also identified the formats for English reading classes based on students' preferences. All of the students preferred printed materials only one of them preferred to use printed text and screen-based formats because it was looked modern by using technology, especially for reading class. In line with Raja Nurhidayah study. He was determined students' reading preferences about print and screen reading materials at University Teknologi Kelantan undergraduates. The result of the research found that most students preferred reading materials in print rather than screen-based.⁷¹

Along with the current study also showed reading performance in comprehending the text from the paper was better. In this study the researcher investigated the reading performance and reading preferences among eighth-grade

⁷⁰Hak Joon Kim and Joan Kim, "Reading from an LCD Monitor versus Paper: Teenagers' Reading Performance", (*International Journal of Research Studies in Educational Technology*, Vol. 2, no. 1, 2013), 15–24.

⁷¹Raja Nur et al., "Students' Preference on Use of in -Print and on-Screen Esl Reading Materials : A Case Study in Odl Session Among Uitm Kelantan Undergraduates", (*e-Proceedings of International Conference on Language, Education, Humanities & Social Sciences*, 2020), 496–504

students at junior high school level, the researcher found that the students reading performance on paper was better than on screen. Additionally, in terms of preferences, most students were preferred reading on paper to screen, but half of them preferred reading on screen.

CHAPTER V

CONCLUSION AND SUGGESTION

A. Conclusion

The researcher has made some conclusions as described in the following :

1. Students reading performance in comprehending the text from the paper was better, effective, more focused, and comfortable in terms of reading materials. Besides that, the reading format was affected reading performance among eighth-grade students. It was seemed from students reading on-screen has difficulties and obstacles in comprehending the text.
2. In terms of reading preferences, most students in the eighth grade were preferred reading on paper rather than reading on screen. Half of them were preferred reading on screen due to the advantages of reading formats. However, for the English reading class all of the students preferred printed materials. Only one of them preferred both printed text and screen-based formats because it was looked modern by using technology.

B. Suggestion

The researcher gave some suggestion as follow :

1. The students should get used to reading especially in digital formats. It was related to the revolution era 4.0 and Millennial generation all of the aspects using technology included education.
2. Teachers should integrate technology in the classroom during the teaching and learning process is good, but it must be balanced with the condition of the students.
3. The teacher should be balanced gave the reading materials according to students' preferences.
4. The other researchers should conduct the study about students' performance on paper and screen focused on students' difficulties in both different formats (printed and screen).

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APPENDIX I
RESEARCH INSTRUMENTS

1. Observation Checklist

The observation checklist which has used in this research was Guttman scale consist of two option (yes and no) which adaptive from Louis Guttman.

Students' Name :
 Class :
 Age :
 Gender :
 Date observation :
 Time observation :
 Meeting : 1 (Pre-test)
 Topic : Reading Recount Text in printed text and screen based format

No.	Activities	Yes	No
1	Students' were able focus attention in reading printed text.		
2	Students' were able reading in printed text independently.		
3	Students' moves head while reading in printed text.		
4	Students' using their finger/pointer for marker when reading in prited text.		
5	Students' spend less time in reading printed text.		
6	Students' showed physical boredom such as supporting chin/side of the face with hand, slouching, yawing and so on) during reading activities.		
7	Students' were able answer all the question that has		

	provided after reading the text.		
8	Students' were able focus attention while reading on screen.		
9	Students' were able reading on screen independently.		
10	Students' moves head while reading on screen.		
11	Students' using their finger/pointer for marker when reading on screen.		
12	Students' spend less time in reading on screen.		
13	Students' showed physical boredom such as supporting chin/side of the face with hand, slouching, yawing and so on) during reading activities.		
14	Students' were able answer all the question that has provided after reading the text.		

Observation Checklist

Students' Name :
 Class :
 Age :
 Gender :
 Date observation :
 Time observation :
 Meeting : 2 (Post- test)
 Topic : Reading Recount Text in printed text and screen based format

No.	Activities	Yes	No
1	Students' were able focus attention in reading printed text.		
2	Students' were able reading in printed text independently.		
3	Students' moves head while reading in printed text.		
4	Students' using their finger/pointer for marker when reading in prited text.		
5	Students' spend less time in reading printed text.		
6	Students' showed physical boredom such as supporting chin/side of the face with hand, slouching, yawing and so on) during reading activities.		
7	Students' were able answer all the question that has provided after reading the text.		
8	Students' were able focus attention while reading on screen.		
9	Students' were able reading on screen independently.		
10	Students' moves head while reading on screen.		

11	Students' using their finger/pointer for marker when reading on screen.		
12	Students' spend less time in reading on screen.		
13	Students' showed physical boredom such as supporting chin/side of the face with hand, slouching, yawning and so on) during reading activities.		
14	Students' were able answer all the question that has provided after reading the text.		

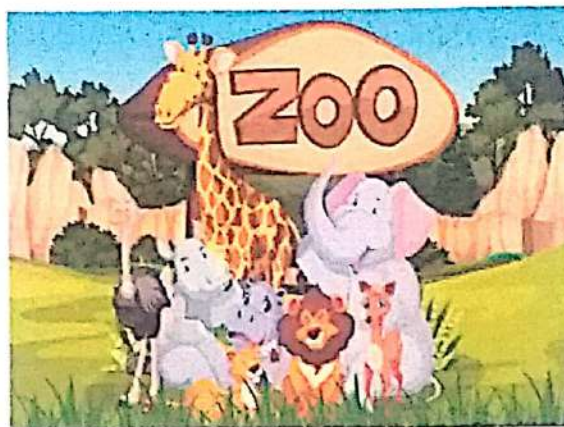
2. Reading Test

This is a personal recount text display in printed and screen(PDF version) reading format

PRE- TEST

Text 1 (Printed Text).

"A TRIP TO THE ZOO"



source: www.google.com

Yesterday, my family and I went to the zoo to see the elephant. When we got to the zoo, we went to the shop to buy some food to give to the animals. After getting the food, we went to the nocturnal house where we saw birds and reptiles which only come out at night.

Before having lunch, we went for a ride on the elephant. It was a thrill to ride it. Dad fell off when he let go of the rope, but he was ok. During lunch we fed some birds in the park. In the afternoon we saw the animals being fed. When we returned home we were very tired but happy. It was because we had so much fun activities at many places at the zoo.

After reading above text, please answer the following questions !

- 1) Where did the writer go yesterday?
 - a. Zoo
 - b. Circus

c. Forest

Key answer : a

2) Why did the writer buy when he got to the zoo ?

- a. The writer buy some food
- b. The writer buy some biscuits
- c. The writer buy some clothes

Key answer : a

3) What happened to he writer's dad when he rode an elephant ?

- a. He felt fun
- b. He fell off
- c. He failed

Key answer : b

4) Why did the writer and his family feel very tired after having a trip to the zoo?

- a. They had to visit many places in the zoo
- b. They had took a long time to reach the zoo
- c. They had no lunch in the zoo

Key answer : a

5) Although the writer and his family felt tired after visiting the zoo, they were still ?

- a. Bored
- b. Sad
- c. Happy

Key answer : c

Text 2 (Screen Reading)**“TRIP TO JOGJAKARTA”**

source: www.google.com

Last holiday my students and I went to Jogjakarta. We stayed at Morison Hotel which is not a long way from Malioboro. On Friday, we went to the sanctuaries in Prambanan. There are three major sanctuaries, the Brahmana, Syiwa and Wisnu sanctuaries. They are truly stunning. We went by just Brahmana and Syiwa sanctuaries, on the grounds that Wisnu sanctuary is being remodeled.

On Saturday morning we went to Yogya Kraton. We spent around two hours there. We were fortunate on the grounds that we were driven by a brilliant and amicable aide. At that point we proceeded with our adventure to Borobudur. We touched base there at four p.m. At 6 p.m. we heard the declaration that Borobudur entryway would be closed. In the evening we left Jogjakarta by bus.

After reading above text, please answer the following questions !

- 1) The content above basically talks about ?
 - a. The writer's trip to Yogyakarta
 - b. The writer's experience at Yogya Kraton
 - c. The writer's experience at Bali

Key answer : a

- 2) What else the big temples in Prambanan?
 - a. Paria, brahmana, and temples

- b. Borobudur, syiwa, and brahmana temples
- c. Brahmana, syiwa, and wisnu temples

Key answer : c

- 3) When the writer's went to the sanctuaries in Prambanan ?
- a. On Tuesday
 - b. On Friday
 - c. On Saturday

Key answer : b

- 4) When did they go home ?
- a. On Friday evening
 - b. On Thursday evening
 - c. On Saturday evening

Key answer : c

- 5) Why did they just visit Brahmana and Syiwa sanctuaries?
- a. Because wisnu temple was being repaired
 - b. Because wisnu temple was amazing
 - c. Because wisnu temple was too small

Key answer : a

POST-TEST

Text 1 (Printed Reading)

"VACATION IN SURABAYA"



Source: www.google.com

Last holiday, I went to Surabaya with my friend for a vacation. We went there on a night bus.

When we arrived in Lamongan, the bus stopped at a small restaurant for a rest. I got off the bus to get a cup of ginger tea, and my friend drank some cold lemonade. Then I went to the toilet. It took only a few minutes. When I came out again, the bus was not there. *It* had gone! My friend was not there too. Feeling shocked and confused, I asked a waitress about the bus. She said that the bus departed about five minutes ago. I tried to call my friend on my cell phone, but the battery was running low. I could not do anything but hope and pray. After several minutes, my wish came true.

The bus came back! I got on the bus and walked to my seat. I was so ashamed when everybody on the bus looked at me. I could feel my face turn red.

After reading the above text, please answer the following questions!

- 1) What is the topic of the text above?
 - a. My vacation
 - b. Vacation to Surabaya

c. Vacation with family

Key answer: b

2) What did the writer do when the bus stop for rest in Lamongan ?

a. The writer got off the bus to get a cup of ginger tea

b. The writer went to the toilet

c. The writer bought some souvenirs

Key answer : a

3) What did the writer feel when the bus is not there?

a. Shocked and confused

b. Sad and Angry

c. Ashamed

Key answer: a

4) How many friend that the writer had to join the vacation?

a. Two

b. One

c. Three

Key answer: b

5) What the writers did after the bus comes back ?

a. The writer's Sad and angry

b. The writers got on the bus

c. Sad

Key answer: b

Text 2 (Screen Reading)**"MY TRIP TO KELIMUTU LAKE"**

Source: www.google.com

Last week, I took a trip to Kelimutu Lake which is located in Ende regency. It took me almost two hours to arrive there by bus due to the winding terrain and ups and downs but even so I still felt happy.

When I arrive there, my tiredness was paid off by a view of the tropical rainforest which is incredibly beautiful and still very natural, added by the beautiful appearance of the exotic Three Colour Lake. I also spent my time enjoying this amazing work of the creator while occasionally taking pictures.

That was my unforgettable trip ever and I want to go back there someday.

After reading above text, please answer the following questions!

- 1) Where did the writer go last week?
 - a. Toba Lake
 - b. Kelimutu Lake
 - c. Ende Lake
- 2) Why did it take 2 hours to arrive at Kelimutu Lake?
 - a. It's due to the winding terrain and ups and downs
 - b. It's due to the heavy rain
 - c. It's due to the low bus speed

Key answer : b

Key answer: a

- 3) What province is Kelimutu Lake located?
- a. Aceh
 - b. Bali
 - c. Ende

Key answer: c

- 4) How many colors Kelimutu Lake has?
- a. 5 colour
 - b. 3 color
 - c. 7 colour

Key answer : b

- 5) What did the writer do after she/he arrives there?
- a. He/ she enjoyed the scenery and took pictures
 - b. He/ she took a rest for some time
 - c. He/ she had lunch

Key answer : a

3. Interview

The questions which has used in this research were :

- 1) What do you think about printed reading ?
(*Apa pendapatmu tentang membaca teks cetak?*)
- 2) What do you think about screen reading ?
(*Apa pendapatmu tentang membaca dilayar?*)
- 3) What do you feel when reading printed text?
(*Apa yang kamu rasakan ketika membaca teks tercetak?*)
- 4) What do you feel when reading on screen ?
(*Apa yang kamu rasakan ketika membaca di layar?*)
- 5) What format do you often use for reading?
(*Format apa yang sering kamu gunakan untuk membaca ?*)
- 6) In your opinion, what are the advatages and disadvantages of reading on printed text ?
(*Menurutmu, apa saja kelebihan dan kekurangan membaca pada teks cetak ?*)
- 7) In your opinion, what are the advantages and disadvantages of reading on screen?
(*Menurutmu, apa saja kelebihan dan kekurangan membaca dilayar?*)
- 8) What is your difficulties when reading both printed and screen reading?
(*Apa saja kesulitanmu saat membaca di teks cetak maupun membaca dilayar ?*)
- 9) In your opinion, which one the formats reading do you like the most?
why ?
(*Menurutmu, format bacaan mana yang paling kamu sukai? Kenapa ?*)
- 10) For English reading class, which one the formats reading do you prefer ?
why ?
(*Untuk kelas membaca bahasa Inggris, format bacaan mana yang kamu sukai? Kenapa?*)

APPENDIX II

TRANSCRIPT OF AN INTERVIEW

Date interview : Tuesday, November 30th 2021
 Narasumber : Students initials AU
 Class : VIII
 Gender : Male
 Age : 13 years old

No.	Questions	Answer
1.	Apa pendapatmu tentang membaca teks cetak?	Membaca teks cetak adalah bacaan dari kertas.
2.	Apa pendapatmu tentang membaca dilayar?	Mmm..baca dilayar adalah baca di layar komputer atau teknologi kayak Hp.
3.	Apa yang kamu rasakan ketika membaca teks tercetak?	Mudah dibaca terus jelas walaupun dalam bahasa Inggris.
4.	Apa yang kamu rasakan ketika membaca di layar?	Menarik...tapi kayak bosan enggak fokus terus bingung teks nya bahasa Inggris dan kalau bacanya dilayar susah dipahami.
5.	Format apa yang sering kamu gunakan untuk membaca ?	Lebih sering dikertas ...kadang baca koran gitu.
6.	Menurutmu, apa saja kelebihan dan kekurangan membaca pada teks cetak ?	Baca dikertas lebih mudah ngerti, mmm.. jelas terus lebih fokus dari pada baca di layar. Terus juga pas dibaca bisa di bolak-balik kertasnya. Kalau kekurangannya lebih cepat rusak dan cepat koyak gitu.
7.	Menurutmu, apa saja kelebihan dan kekurangan membaca dilayar?	Kelebihannya itu menyenangkan, kalau kekurangannya kurang fokus.
8.	Apa saja kesulitanmu saat membaca di teks cetak maupun membaca dilayar ?	Kalau baca dikertas kalau baca dilayar susah aja pas bacanya.
9.	Menurutmu, format bacaan mana yang paling kamu sukai? Kenapa ?	Suka baca dikertas karena jelas tulisannya.
10.	Untuk kelas membaca bahasa Inggris, format bacaan mana yang kamu sukai? Kenapa?	Lebih suka pake format baca yang dikertas karena mudah dipahami terus jelas juga.

Date interview : Tuesday, November 30th 2021
 Narasumber : Students initials SL
 Class : VIII
 Gender : Female
 Age : 13 years old

No.	Questions	Answer
1.	Apa pendapatmu tentang membaca teks cetak?	Bacaan teks cetak adalah bacaan yang berasal dari kertas.
2.	Apa pendapatmu tentang membaca dilayar?	Bacaan yang ditampilkan pake infocus.
3.	Apa yang kamu rasakan ketika membaca teks tercetak?	Baca dikertas lebih mudah enggak sulit, tulisannya enggak susah dibaca.
4.	Apa yang kamu rasakan ketika membaca di layar?	menarik...tapi sulit dipahami ...bingung ..apalagi pas baca dilayar bacaannya tu dalam bahasa Inggris.
5.	Format apa yang sering kamu gunakan untuk membaca ?	Sering bacanya dilayar gitu kayak di Hp..karena lebih lengkap aja penjelasannya lebih banyak juga.
6.	Menurutmu, apa saja kelebihan dan kekurangan membaca pada teks cetak ?	Kelebihannya enggak sulit dilihat lebih mudah pas dibaca, kalo kekurangannya kalo bacaannya enggak ada gambar kurang menarik pas bacanya.
7.	Menurutmu, apa saja kelebihan dan kekurangan membaca dilayar?	Lebih seru dan canggih, kalo kekurangannya kurang fokus terus mudah sakit mata.
8.	Apa saja kesulitanmu saat membaca di teks cetak maupun membaca dilayar ?	Kalau pas baca dikertas enggak sulit cuman kurang ngerti karena dalam bahasa Inggris teksnya.Tapi kalau dilayar lebih sulit pas dibaca terus matanya sakit kalau lama baca.
9.	Menurutmu, format bacaan mana yang paling kamu sukai? Kenapa ?	Lebih suka bacanya dikertas kayak dibuku.. karena tulisannya mudah dibaca enggak bikin sakit mata.
10.	Untuk kelas membaca bahasa Inggris, format bacaan mana yang kamu sukai? Kenapa?	Lebih suka pake format kertas aja, yeahh....karena lebih mudah terus jelas.

Date interview : Tuesday, November 30th, 2021
 Narasumber : Students initials MM
 Class : VIII
 Gender : Male
 Age : 13 years old

No.	Questions	Answer
1.	Apa pendapatmu tentang membaca teks cetak?	Teks cetak itu bacaan yang berasal dari kertas.
2.	Apa pendapatmu tentang membaca dilayar?	Bacaan yang menggunakan layar komputer.
3.	Apa yang kamu rasakan ketika membaca teks tercetak?	Biasa aja gitu, tapi ya lebih gampang dibaca.
4.	Apa yang kamu rasakan ketika membaca di layar?	Menarik, tapi enggak fokus pas bacanya... Terus... bingung sama teksnya kalau dilayar susah dipahami.
5.	Format apa yang sering kamu gunakan untuk membaca ?	Sering baca dikertas kayak buku.
6.	Menurutmu, apa saja kelebihan dan kekurangan membaca pada teks cetak ?	Lebih mudah fokus pas bacanya terus kertasnya bisa di bolak-balik. Kalau kekurangannya cepat kusut.
7.	Menurutmu, apa saja kelebihan dan kekurangan membaca dilayar?	canggih aja...kalau kekurangannya itu kurang fokus apalagi tulisannya bahasa Inggris.
8.	Apa saja kesulitanmu saat membaca di teks cetak maupun membaca dilayar ?	Kalau dikertas enggak sulit kayak baca dilayar.. cuman susah ngerti aja karena dalam bahasa Inggris. Kalau dilayar itu memang susah bacanya.
9.	Menurutmu, format bacaan mana yang paling kamu sukai? Kenapa ?	Lebih suka baca dilayar karena lebih menarik tampilannya terus lebih canggih.
10.	Untuk kelas membaca bahasa Inggris, format bacaan mana yang kamu sukai? Kenapa?	Kalau saya lebih suka baca dikertas aja karena lebih mudah dimengerti.

Date interview : Tuesday, November 30th, 2021
 Narasumber : Students initials CF
 Class : VIII
 Gender : Male
 Age : 13 years old

No.	Questions	Answer
1.	Apa pendapatmu tentang membaca teks cetak?	Teks cetak itu bacaan yang berasal dari kertas.
2.	Apa pendapatmu tentang membaca dilayar?	Membaca dilayar adalah membaca dilayar komputer atau teknologi yang lain contohnya kayak layar Hp.
3.	Apa yang kamu rasakan ketika membaca teks tercetak?	mm..mudah dibaca terus jelas walaupun bahasa Inggris.
4.	Apa yang kamu rasakan ketika membaca di layar?	Menarik ... tapi kurang fokus terus bingung sama teksnya apalagi itu bahasa Inggris kalau dilayar lebih susah dipahami.
5.	Format apa yang sering kamu gunakan untuk membaca ?	Seringnya baca dikertas kayak dibuku kadang-kadang ada baca koran juga.
6.	Menurutmu, apa saja kelebihan dan kekurangan membaca pada teks cetak ?	Yaa kalau dikertas lebih mudah bisa dipegang kertasnya terus jelas juga. Kalau kekurangannya misalnya halaman kertasnya itu tebal cepat bosan pas dibaca.
7.	Menurutmu, apa saja kelebihan dan kekurangan membaca dilayar?	Kalau menurut saya kelebihannya itu lebih seru sama canggih. Kalau kekurangannya itu kurang fokus pas baca.
8.	Apa saja kesulitanmu saat membaca di teks cetak maupun membaca dilayar ?	Kesulitan pas baca dikertas sulitnya untuk ngerti karena tulisannya bahasa Inggris dan nggak semua kata-katanya tahu artinya. Kalau dilayar kurang jelas pas dibaca.
9.	Menurutmu, format bacaan mana yang paling kamu sukai? Kenapa ?	Lebih suka yang dikertas karena tulisannya mudah dibaca.
10.	Untuk kelas membaca bahasa Inggris, format bacaan mana yang kamu sukai?	Kalau menurut saya, untuk dikelas bahasa Inggris lebih suka pake format

Kenapa?	yang dikertas sama yang dilayar karena lebih modern pake teknologi.
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Date interview : Tuesday, November 30th 2021

Narasumber : Students initials EA

Class : VIII

Gender : Female

Age : 13 years old

No.	Questions	Answer
1.	Apa pendapatmu tentang membaca teks cetak?	Bacaan yang berasal dari kertas.
2.	Apa pendapatmu tentang membaca dilayar?	Membaca yang menggunakan layar komputer.
3.	Apa yang kamu rasakan ketika membaca teks tercetak?	Biasa aja tapi tulisannya lebih mudah dibacanya.
4.	Apa yang kamu rasakan ketika membaca di layar?	Menarik,tapi merasa bosan karena kurang fokus dan bingung juga sama teksnya karena bahasa Inggris.
5.	Format apa yang sering kamu gunakan untuk membaca ?	Lebih sering bacanya dikertas contohnya kayak dibuku.
6.	Menurutmu, apa saja kelebihan dan kekurangan membaca pada teks cetak ?	Kelebihan diketas bisa dipegang lebih mudah dan jelas juga. Kalau kekurangannya kalau enggak pake gambar kurang menarik aja teksnya.
7.	Menurutmu, apa saja kelebihan dan kekurangan membaca dilayar?	Kelebihannya lebih seru sama canggih kalau kekurangannya kurang fokus karena bahasa Inggris terus mudah sakit mata.
8.	Apa saja kesulitanmu saat membaca di teks cetak maupun membaca dilayar ?	Kalau sejauh ini enggak ada sulitnya cuman sulit dimengerti aja karena dalam bahasa Inggris. Kalau dilayar sulit pas dibaca silau cahayanya.
9.	Menurutmu, format bacaan mana yang paling kamu sukai? Kenapa ?	Lebih suka baca dilayar karena lebih menarik dan canggih apalagi kalau bacanya di Hp bisa di bawa kemana-mana.
10.	Untuk kelas membaca bahasa Inggris,	Kalau menurut saya lebih suka baca

format bacaan mana yang kamu sukai? Kenapa?	dikertas aja karena lebih mudah dimengerti dan jelas.
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Date interview : Tuesday, November 30th, 2021

Narasumber : Students initials KN

Class : VIII

Gender : Female

Age : 13 years old

No.	Questions	Answer
1.	Apa pendapatmu tentang membaca teks cetak?	Teks cetak adalah teks yang berasal dari kertas contohnya kayak buku.
2.	Apa pendapatmu tentang membaca dilayar?	Bacaan yang ditampilkan dilayar menggunakan infocus.
3.	Apa yang kamu rasakan ketika membaca teks tercetak?	Biasa aja.. tulisan dikertas mudah dibaca.
4.	Apa yang kamu rasakan ketika membaca di layar?	Ehm.. senang aja tapi coba dipahami karena tulisannya bahasa Inggris.
5.	Format apa yang sering kamu gunakan untuk membaca ?	Sebenarnya sering bacanya dikertas, tapi ada baca dilayar juga kadang-kadang tapi enggak sering.
6.	Menurutmu, apa saja kelebihan dan kekurangan membaca pada teks cetak ?	Kelebihannya lebih jelas dan lebih mudah aja. Kekurangannya itu kalau teksnya enggak ada gambar kurang menarik aja.
7.	Menurutmu, apa saja kelebihan dan kekurangan membaca dilayar?	Untuk kelebihannya yaa lebih seru dan canggih, kalau kekurangannya enggak fokus pas baca karena dalam bahasa Inggris.
8.	Apa saja kesulitanmu saat membaca di teks cetak maupun membaca dilayar ?	Sejauh ini belum ada kesulitannya cuman sulit paham aja karena bahasa Inggris. Tapi kalau baca dilayar memang lebih susah bacanya cahayanya juga silau.
9.	Menurutmu, format bacaan mana yang paling kamu sukai? Kenapa ?	Kalau saya lebih suka baca dikertas karena mudah dibaca tulisannya dan jelas.
10.	Untuk kelas membaca bahasa Inggris, format bacaan mana yang kamu sukai? Kenapa?	Untuk kelas bahasa Inggris saya lebih suka pake format dikertas karena jelas dan mudah dipahami.

Date interview : Tuesday, November 30th, 2021
 Narasumber : Students initials MR
 Class : VIII
 Gender : Female
 Age : 13 years old

No.	Questions	Answer
1.	Apa pendapatmu tentang membaca teks cetak?	Teks yang berasal dari kertas seperti buku.
2.	Apa pendapatmu tentang membaca dilayar?	Bacaan yang ditampilkan dilayar pake infocus.
3.	Apa yang kamu rasakan ketika membaca teks tercetak?	Tulisan dikertas lebih mudah dibaca.
4.	Apa yang kamu rasakan ketika membaca di layar?	Senang... tapi coba dipahami juga karena tulisannya dalam bahasa Inggris.
5.	Format apa yang sering kamu gunakan untuk membaca ?	Sebenarnya sering bacanya dikertas tapi kadang-kadang ada baca dilayar juga tapi enggak terlalu sering.
6.	Menurutmu, apa saja kelebihan dan kekurangan membaca pada teks cetak ?	Kelebihannya lebih fokus pas bacanya dan bisa dibolak-balik halaman selanjutnya dan sebelumnya juga.kekurangannya kalau dikertas cepat kusut kertasnya.
7.	Menurutmu, apa saja kelebihan dan kekurangan membaca dilayar?	Kelebihannya lebih seru dan canggih kalau kekurangannya saya enggak fokus bacanya karena dalam bahasa Inggris dan cepat sakit mata.
8.	Apa saja kesulitanmu saat membaca di teks cetak maupun membaca dilayar ?	Kalau kesulitan baca dikertas susah ngertinya karena tulisannya bahasa Inggris kan enggak semua kata-katanya tau artinya.. tapi kalau dalam bahasa Indonesia bisa lancar aja bacanya. Kalau kesulitan baca dilayar tulisannya kecil dan enggak jelas pas dibaca dan cahanya juga kurang.
9.	Menurutmu, format bacaan mana yang paling kamu sukai? Kenapa ?	Saya lebih suka baca dikertas karena tulisannya mudah dibaca terus jelas dan enggak bikin sakit mata.