

UNVEILING THE ROLE OF ARTIFICIAL INTELLIGENCE ON READING PROCESSES

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ABSTRACT

In recent years, the utilization of artificial intelligence-powered tools in education has witnessed a significant surge. These tools offer invaluable assistance to teachers in classroom preparation and learners seeking to enhance their English language proficiency. With their considerable potential, AI-powered tools provide an affordable, effective, and efficient approach to teaching and learning. This research focuses on analyzing AI-powered tools that facilitate the reading process. Employing a qualitative research design with content analysis as the primary methodology and documentation as the technique, this study delves into the examination of selected AI-powered tools to aid in the reading process. The findings underscore the benefits and advantages of these tools when aligned with the various stages of the reading process. Specifically, ChatGPT emerges as beneficial for the pre-reading stage, while Quillbot and Paraphraser.io prove advantageous during reading. Post-reading activities can be facilitated by tools such as ChatGPT and Storywiz.io. In conclusion, based on the outcomes, the research recommends the utilization of the AI-powered tools to enhance the reading process.

Keywords: Artificial Intelligence; AI-Powered Tools; Reading Processess

INTRODUCTION

Reading is an important process in learning a language whether we are reading for fun or for academic purposes. In the three reading process' stages (pre, during, and after reading) however, we may find several

challenges such as being overloaded with information, difficulty of finding reading topics, or are struggling to read a text. These are the problems that may arise as we read; to overcome the challenges mentioned, we can use technology such as a smartphone or a laptop to solve the problems. However,

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as the problems get more and more complicated, we need a rather effective and efficient solutions. In this case, Artificial Intelligence or AI can be used to assist reading process.

Artificial Intelligence or AI as stated by Kathikeyan (2022) is a set of capabilities of robots to carry out tasks that usually require human intelligence, it includes visual generation, speech recognition, translation, and decision making. The application of Artificial Intelligence (AI) in education can improve language learners' English language proficiency. According to Dewi (2021), students' English language proficiency can be improved by using AI-based tools, including apps, websites, and virtual reality.

Artificial Intelligence-based tools have several important advantages. First, AI-based tools can provide fast, concise, and accurate results according to the users' needs and with the pronunciation, read aloud, text-to- speech and a lot of other assistant-type features students are able to learn by themselves even when they face some problems in the process. Second, AI- based tools can learn and recommend reading topics as it is able to analyze users' search prompts or history of usage. This can help students to be able to learn more vocabularies and topics in their reading. In addition,

this day and age is perfect for students to start improving their English reading comprehension by using smartphones which are widely available. Students can improve their English language proficiency, especially reading skill anywhere and anytime.

Thus, Artificial Intelligence has the potential to help improve reading comprehension and assist reading process efficiently and effectively. This research aims to analyze several AI-based tools that can help in English language reading comprehension and assist in the reading process. The research also aims to bridge the gap in the explorations of AI-based tools to help improve reading comprehension and assist reading process, especially for students.

METHODS

To comprehend the process of organizing the materials, media, actions, activities, and scenarios during the teaching and learning process, the researcher intends to describe the artificial intelligence- powered tools to help reading process. To this end, the research employed a qualitative design. The researcher collected, examined, and disseminate the data using Descriptive Qualitative methodology to shed light on the significance of the artificial

intelligence-powered applications and websites on reading process.

The research method used in this study is content analysis. It is a research method that is used to get a natural, walkthrough-like description of the content found in the object of the research. In other words, content analysis is a tool to determine the words, themes or concepts within, in this case, artificial intelligence-powered tools such as application and websites. The research's objects are online applications and websites that are powered by artificial intelligence. They are mixed of purpose, some are focused on improving reading skill e.g AI-powered Chatbots, storywiz.io, and Myreader AI and others are websites to support English language learning in general e.g Quillbot, paraphraser.io, and ChatGPT.

The researcher chose the mentioned applications and websites as the research objects because of the availability, most of them are free and easily accessible for students and the application and websites are made specifically for quality of life in terms of reading process such as being able to help readers find a topic, create a summary, paraphrase a text or assist them in skimming or scanning the text. Documentation is the research technique employed in this study. A

data collection methodology called documentation technique entails gathering and examining written or recorded data. This method of data collection uses written items such as records, documents, and other written resources. In qualitative research, where data is gathered through observation, interviews, and other techniques, documentation methodology is frequently utilized. Following data collection, data reduction, data presentation, and conclusion drafting are used in the analysis process.

The researcher in this study examined the contents of the chosen applications and websites to analyze the data. Following their observation of the data, the researchers gathered or made notes to document or clarify the data's content before going on to discuss it. The process that follows data collecting and organizing is data analysis. The first step in the data analysis process is gathering data from documentation. The descriptive form is then updated with the data analysis findings. Observing the research objects is the first phase in the data collection process for this study. after which the data's contents were categorized and examined.

When collecting data, pick things that will help the researcher handle the topic of the study, according to Creswell & Creswell (2018). Consequently, a description of the information included in the study is required. And lastly, it's imperative to define the kind of data and collect information that goes beyond mere observations.

FINDINGS AND DISCUSSION

Findings

This research aims to explain artificial intelligence-powered applications and websites that can be used by learners for their reading comprehension and to assist them in their reading process as stated in the research' objective. In this section, the researcher grouped the artificial intelligence-powered applications and websites for reading process such as Pre-reading Stage, During Reading Stage, and After Reading Stage.

Pre-reading Stage

Artificial intelligence-powered tool for pre-reading stage is ChatGPT. It uses seamless language processing to create human-like conversation. Learners can ask questions about certain topics which includes articles, essays, and just a little bit about everything. ChatGPT is also available

on smartphones and PC. Learners can use ChatGPT's search engine for the pre-reading stage of reading process to find information about the topic of their reading. Furthermore, they can ask questions regarding the details of the topics. For example, if they need to list the accomplishments of Indonesian Presidents, learners can ask just that to the artificial intelligence-powered tool, and it will generate the answers for them to take notes or read.

During Reading Stage

During reading stage can be assisted by Quillbot and Paraphraser.io. Quillbot is widely known as a tool that uses artificial intelligence to help with writing process. Its ability is well known for the use of paraphrasing, summarizing, and to correct grammar in a text. The tool is good to use for students or academics in their learning, especially reading. While it is known for its use to assist learners in their writing. It has several benefits for reading such as personalized paraphrasing and translation. Quillbot is a great assistant overall, not just for reading but also other English language learning activities since it can translate long texts for free, paraphrase for free and do a quick plagiarism check for academics who are in the process of writing an academic-related text.

Paraphraser.io is an artificial intelligence-based paraphraser developed using state-of-the-art technology. It functions as a rewriter for articles, documents and rewords sentences. It also helps to reduce plagiarism. Learners can use this tool for their reading comprehension as it stimulates them with better structured sentences, terms and synonyms. It leads to faster and more accurate understanding of certain topics. Overall, it functions the same as Quillbot' paraphraser but has a more customized look to the paraphraser as it is the main and only function of paraphraser.io compared to Quillbot's multipurpose assistance for language learning.

After Reading Stage

After reading stage can be assisted by Myreader AI and Storywiz.io to process the written materials. Reading is a process of making sense of written text, getting the main idea and taking away important points to fulfill certain needs, be it casual or academic purposes. Using Myreader AI, learners can have an environment that isn't only comfortable but also effective. It is a tool in which the AI reads the book or documents for the users to explore what is in the text

via the ask questions or generate questions feature.

Learners face certain challenge in their reading such as being overloaded with information. This makes them unable to find the main idea of the text. Storywiz.io turns texts to summaries so that the learners can take the main idea and important points of the text. Storywiz.io offers two types of formats for effective and efficient reading, summary and visual presentation. These excellent summaries offer a quick and effective approach to comprehend an article's essential ideas. Users can learn key ideas more quickly by using Storywiz' AI Summary or Visual Story. These two features not only able to help readers understand the materials better but also save time. Storywiz can determine how much time is saved after the reading using the summary and visual story.

Discussion

Based on the findings, there are several artificial intelligence-powered tools that can be used to assist learners' reading process. As stated by Dewi (2021) students' English language proficiency can be improved by using AI-based tools, including apps, websites, and virtual reality. In this case, AI-based tools are used in reading activities. To bridge the gap found in

the research question and in accordance with the findings of the research, the researcher divided the use of artificial intelligence-powered tools on reading process into several different categories based on the stages of reading, that is Pre-reading, During Reading and After Reading.

Keertiwansha (2018) argued that the use of artificial intelligence can minimize teachers' involvement while also enabling the learners to look up at materials themselves. Artificial intelligence-powered tool such as ChatGPT can be used by learners who wants to find their desired topic of reading and based on the advantages mentioned in the findings, the search engine of ChatGPT, especially GPT-4 enables a more personalized and customized results. Thus, the process of Pre-reading is cost-effective and time efficient.

During pre-reading stage, learners who use artificial intelligence-powered tool to prepare for reading can gather information needed about the topic faster because of the way the system works. It generates not only the result for the topic of the search, but also key points to take away. Therefore, it's easier for learners to prepare whether they want to scan or skim the text.

In during reading stage, learners tend to read and modify their memories or knowledge about the text as they go. This is the stage where learners process the information found from pre-reading stage and combine it with the new ones as they read. Artificial intelligence-powered tools such as Quillbot and Paraphraser.io are the most suitable for this stage of reading process. During this stage, learners can use Quillbot' paraphrase and summarize feature to get a better grasp of the text. During Reading stage's goal is to improve comprehension and analysis of the text and to practice meta-cognitive skills. Artificial intelligence-powered tools such as Quillbot and Paraphraser.io helps learners to discover the main ideas and key concepts faster by highlighting the essential words. Furthermore, learners can write marginal notes to aid in comprehension, analysis, and interpretation.

Artificial intelligence-powered tools can also help learners develop fluency, comprehension and vocabulary by reading aloud the text with the artificial intelligence-powered tool used. According to Meliyawati (2016) reading is a process and skill that is a part of a rather complicated action. Some AI tools can read texts and learners can join them to understand

subtle meanings found in text. This is done by paying attention to the fast and slow lines, loud and soft lines, high and low voices, and the emphasize of key words or phrases by the artificial intelligence-powered tool. This works well with poetry or other rhythmic passages.

Paraphraser found in artificial intelligence-powered tools can also be used by learners to begin constructing meaning from a text. Artificial intelligence-powered tools can be used to highlight important contents and learners can group them into relevant categories to find the main idea of a text. Say a learner must find the accomplishments of Indonesian Presidents throughout the years, they are able to group the key points and construct a concise and meaningful text about it using the highlights done by the artificial intelligence-powered tools.

In this stage, the use of artificial intelligence-powered tools can also benefit teachers to highlight certain key words and analyze the content of the text. For example, teachers can highlight all of the verbs used in a text and organize the verb tenses for the learners to review prior to reading the text. Thus, teachers can use this as a material for quick quizzes or questions for the learners to engage and enrich

them with essential information prior to reading the text.

Andoko et al. (2021) stated that to obtain knowledge the learners must know how to read, and reading is a rather active and fluent process that involves both readers and materials. The use of artificial intelligence-powered tools for this stage depends on the readers' goal, whether they need to summarize, paraphrase, or just to analyze the text. Storywiz.io can be used as the artificial intelligence-powered tool by learners to create an engaging summary of a story in form of text or visual. The point of summarizing is to shorten the longer texts but still be able to retain the main ideas and key points of the topic.

Learners can use Storywiz.io to do just that, only better. Storywiz.io provides a quick and efficient way to understand the main points of a text by cutting through information overload and enhance the learning experience. Researchers can also use Storywiz.io to extract key insights and information quickly from a wide range of articles and studies.

After reading stage typically involves learners to critically analyze what they have read and that is to identify the main ideas, summarize and to check if the purpose of reading was met. Furthermore, successful readers

tend to ask questions regarding the topic. Artificial intelligence-powered tool such as ChatGPT can be a good assistant when learners want to ask questions regarding the main ideas of the text. Using the chatbot, learners can respond to the text by participating in a conversation with the AI. When used correctly, learners are leading their thinking and discussions while the AI is there to facilitate, much like teachers.

Artificial intelligence-powered tools are widely available for learners to use with various functions and features that are packed into an often-free package in form of applications or websites. These tools complement the reading process very well from the Pre-reading, During Reading and After Reading. Although, the use of each tools mentioned depends on the purpose of the learners, artificial intelligence-powered tools can accommodate the many needs of a learner. Nurdina (2018) concluded that before, during and after reading had a significant effect on students' reading comprehension.

Artificial intelligence-powered tools can be used in unison to support learners in their reading process as mentioned above. For starter, ChatGPT can manage learners' need to find the desired topic for their reading and also

able to summarize the text if needed. Quillbot and Paraphraser.io are the ones to use when learners need to get better understanding of the topic during their reading process by paraphrasing and translating when needed. Storywiz.io can be used by learners who wants to summarize, prepare for presentation, or get key points from a text as soon as possible by using the highlights feature.

CONCLUSIONS AND SUGGESTION

Based on the findings and discussion, the researcher found there are several artificial intelligences-powered tools that are useful for learners, teachers and individuals for reading process. The researcher grouped the artificial intelligence-powered tools into two parts according to the use and features of the tools for reading process. They are artificial intelligence-powered tools for the three reading stages: pre- reading, during reading and after reading. Artificial intelligence-powered tools reading techniques: skimming, scanning, intensive reading and after reading. ChatGPT can be used for Pre- reading activities. Paraphraser.io and Quillbot can be used for During Reading activities. Storywiz.io and Quillbot can be used for After Reading activities.

Learners who are looking for artificial intelligence-powered tools to assist them for reading process by scanning and skimming can use ChatGPT, Quillbot and Paraphraser.io. Intensive reading and Extensive reading can be assisted by using Storywiz.io and Myreader AI. The artificial intelligence-powered tools mentioned are very useful in terms of providing assistant, instantaneous feedback, quick information, room for conversation and overall quality of life improvement for learners, teachers, individuals or groups in the field of education and especially for reading process as the focus of the research.

The research also reveals that while artificial intelligence is effective and efficient to use for reading process. It is, however, still a machine that is created to imitate human being. It is shown to have mistaken in translations and sometimes tend to go overboard with terms used for paraphrasing. Therefore, it is advised for the users to double check on the results from the artificial intelligence-powered tools. In this case, the use for translations, paraphrasing and summarizing may still need more care from the users to determine the quality of the text that will be used for reading process

REFERENCES

- Abimanto, D., & Mahendro, I. (2023). Efektivitas Penggunaan Teknologi AI Dalam Pembelajaran Bahasa Inggris. *Sinar Dunia: Jurnal Riset Sosial Humaniora dan Ilmu Pendidikan*, 2(2), 256-266.
- Andoko, B. & Mubarak, F. & Hirashima, T. & Arhandi, P. & Astiningrum, M. & Najib, M. (2022). Constructing Toulmin's Logical Structure Through Viatmap Application for Reading Comprehension of EFL Students. 196-200.
- Brown, H. D., & Principles, T. B. (2001). *An Interactive approach to language pedagogy*. New York: Longman.
- Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approach*. SAGE.
- Dewi, H. K., Wardani, T. I., Rahim, N. A., Putri, R. E., & Pandin, M. G. R. (2021). The Use of Ai (Artificial Intelligence) In English Learning Among University Student: Case Study in English Department, Universitas Airlangga.
- Fajriah, N., Gani, S. A., Samad, I. A. (2019). Students' perceptions toward teacher's teaching strategies, personal competence, and school facilities. *English Education Journal (EEJ)*.

- <https://www.jurnal.unsyiah.ac.id./EEJ/>
- Fitria, T. N. (2021). The use technology based on artificial intelligence in English teaching and learning. *ELT Echo: The Journal of English Language Teaching in Foreign Language Context*, 6(2), 213-223.
- Fisher, H. S., & Ayu. (2016). Students Reading Techniques Difficulties in Recount Text. *Journal of English and Education*. Vol 4, No. 2.
- Harmer, J. (2007). *The Practice of English Language Teaching*. Harlow: Pearson Education Limited.
- Johnson, R. (2019). The Potential of AI in Language Education. *Journal of Educational Technology*, 42(3), 187-203.
- Kathikeyan, T., Revathi, S., Supreeth, B. R., Sasidevi, J., Ahmed, M., & Das, S. (2022). Artificial Intelligence and Mixed Reality Technology for Interactive Display of Images in Smart Area. In 2022 5th International Conference on Contemporary Computing and Informatics (IC3I) (pp. 2049- 2053). IEEE.
- Keerthiwansha, N. B. (2018). Artificial intelligence education (AIEd) in English as a second language (ESL) classroom in Sri Lanka. *International Journal of Conceptions on Computing and Information Technology*, 6(1), 31-36.
- <https://wairco.org/IJCCIT/August2018Paper4SL.pdf>
- Liang, J. C., Hwang, G. J., Chen, M. R. A., & Darmawansah, D. (2021). Roles and research foci of artificial intelligence in language education: an integrated bibliographic analysis and systematic review approach. *Interactive Learning Enviroments Online First*. <https://doi.org/10.1080/10494820.2021.1958348>.
- Meliyawati. (2016). *Pemahaman Dasar Membaca*. Yogyakarta: CV Budi Utama.
- Miles & Huberman. (2014). *Qualitative Data Analysis: A Methods Source Book*. (3rd Ed). California: SAGE Publications.
- Meniado, J. C. (2016). Metacognitive reading strategies, motivation, and reading comprehension performance of Saudi EFL students. *English Language Teaching*.
- Mujiman, H. (2007). *Belajar Mandiri (Self - Motivated Learning)*. Surakarta: LPP UNS dan UNS Press.
- Nurdina, A. (2018). *Pengaruh Budaya Organisasi Dan Motivasi Kerja Terhadap Kinerja Karyawan Pada Bank Mandiri Cluster Pamulang*. Fakultas Ekonomi Universitas Pamulang.
- Praherdhiono, H., Adi, E. P., & Devita, R. N. (2018, October). Understanding of digital

- learning sources with the heutagogy approach using the k-means and naive bayes methods. In 2018 4th International Conference on Education and Technology (ICET) (pp. 23-27). IEEE.
- Pourhosein G., A., & Sabouri, N., B. (2016). How can students improve their reading comprehension skill? *Journal of Studies in Education*, 6(2), 229. <https://doi.org/10.5296/jse.v6i2.9201>.
- Rebecca, J. B. (2005). *Reading Comprehension and Reading Strategies*. American: University of Wisconsin- Stout Menomonie.
- Sari, I. M., (2016). Cognitive and Metacognitive Reading Strategy Use and Reading Comprehension Performance of Indonesian EFL Pre-service Teachers. *Journal of Foreign Language Teaching and Learning*. Universitas Muhammadiyah Yogyakarta.
- Sarjan, N. (2017). *An Analysis on the English Teachers Strategies*. Thesis.
- Sharadgah, T. A., & Sa'di, R. A. (2022). A Systematic Review of Research on the Use of Artificial Intelligence in English Language Teaching and Learning (2015-2021): What are the Current Effects? *Journal of Information Technology Education: Research*, 21.
- Wang, Z. (2022), Computer-assisted EFL writing, and evaluations based on artificial intelligence: a case from a college reading and writing course. *Library Hi Tech*, Vol. 40 No. 1, pp. 80-97. <https://doi.org/10.1108/LHT-05-2020-0113>
- Yusuf, S. B., Nasir, C., & Rohiman, C., L., N. (2018). Using think-aloud method in teaching reading skill. *Studies in English Language and Education*, 5 (1), 148-159. <https://doi.org/10.24815/siele.v5i1/9898>