



Using Manual and Automatic Summarization: What Should Students Consider in Writing a Summary?

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Abstract

Writing a summary related to reading and writing. Writing a summary of a text not only helps students assimilate what they have read by highlighting and connecting the key points but also enables them to articulate their thoughts in writing. It means that a summary must be brief, accurate, and written in individual words. This study describes teaching summarization both manual and automatic summarization for students. This research is library research. The analysis shows that writing and summarizing a journal article is a common task for students. Students can read articles for summaries, plan good summaries, and write summaries to completion. Writing a summary can be manual or online (automatic) summarization. Manually, students need to consider several points before writing a summary including avoiding using personal pronouns, making sentences as objective as possible, beginning by defining the problem statement, discussing the author's methodology, describing the research results, connecting the main ideas featured, do not conclude, provide the interpretation, avoid using direct quotes from journal articles, use appropriate tenses and improve students writing design. Students must check their self-evaluation of summarising skills, such as expressing the central idea or theme as a statement/declarative, assessing the quantity, quality, and order of the evidence, constructing evidence for inferential reasoning, paraphrasing details in their words, and avoiding common pitfalls. While automatic summarisation involved an online summarizer tool. Many summarization tools are available for English languages with abundant resources. However, students need to consider the benefits and the limitations.

Keywords: *automatic summarization, manual summarization, summarization, summarizing*

Introduction

The activity of summarization, which is the extraction of essential information from one or more information sources, has become an integral part of daily life (Hahn & Mani, 2000). Text summarization is the process of extracting data from a document and generating a brief or condensed version of the document (Gupta & Patel, 2020). Summarising is a difficult skill for many students to master (Brunner & Hudson, 2013; Greenleaf et.al., 2023). Students frequently struggle to restate the main idea(s) without altering their meaning. (Kopp, 2017) explains that when students can summarise, they comprehend the main points and can disregard irrelevant details. They are required to analyze the information they read



and think critically about it. When they rephrase the main idea in their words, they not only improve their vocabulary but also remember the material better.

Text summarization is the process of extracting the most significant information from a source to produce a condensed version suitable for a specific audience or purpose (Saraswathi & Arti, 2010). Due to the Internet's swift expansion, it has become increasingly difficult to efficiently access the vast quantities of information available. Users of the Internet need instruments to assist them in managing this enormous quantity of information. After providing a lengthy source text, the text summarization method generates a concise or abstract version of the text. It accurately conveys the meaning of the source text, i.e., the text's meaning remains unaltered. Text summarization tools have a significant impact on the modern world due to the Internet's enormous growth in information. It is extremely difficult to express and comprehend the entire content (Soni et.al., 2020). The purpose of summarising is to express concisely and clearly the most significant facts or ideas about something or someone. In addition, the purpose of summarising is to provide a concise statement of the key points (Sari & Aini, 2019). Summarization appears to enhance cognition or understanding of the text (Rose, 2001). Summarizers make it easier for users to understand the content without reading it completely (Dedhia et.al., 2020). The purpose of text summarization is to convey the essence of the original text with fewer words and sentences.

The method of summarization has been refined over many years (Uddin & Khan, 2007). Text summarization has grown in significance over the past two decades due to the abundance of online data and its ability to extricate useful information and knowledge (Goularte et.al., 2019). Therefore, the purpose of a Text Summarizer is to convey the meaning of a text in fewer words and sentences. Manual conversion or summarization is an arduous task; therefore, automation is required. Automation can be accomplished through the use of artificial intelligence technology (Soni et.al., 2020). Manually summarising lengthy texts is laborious and prone to error (Sarwadnya & Sonawane, 2018). In addition, the results of this type of summarization may produce various outcomes for a given document. Due to the exponential development of information and data, automatic text summarization has thus become crucial. It selects the most informative portions of text and generates summaries that disclose the document's primary purpose. It produces summaries generated by summarization systems that enable readers to comprehend the document's content without having to peruse each document individually.

As information is abundant for every topic on the internet, a summary of the essential information would be beneficial to several users. In light of this, there is a growing interest in the research community to develop novel techniques for autonomously summarising text (Gambhir & Gupta, 2017). The automated text summarization system generates a summary, i.e. a brief text containing all of the document's essential information. Since the introduction of text summarization in the 1950s, researchers have endeavored to enhance techniques for generating summaries so that machine-generated summaries match those created by humans (Gambhir & Gupta, 2017).

In recent years, data overabundance has become a significant issue in education, news, blogs, social media, etc. Due to the increase in the volume of text data, it became difficult for a person to extricate only the valuable data in condensed form. As the quantity of textual content generated by users increases significantly, text summarization algorithms are increasingly used to provide users with a concise overview of the information (DashAbhisek et.al., 2019). As more information becomes available



online, it becomes increasingly difficult for users to comprehend and select relevant information from the lengthier text (Alias et.al., 2018). A summary is a condensed rendition of a text in which the most important information is conveyed. In other words, text summarization enables humans to retrieve relevant and useful texts. The amount of online information is expanding exponentially in the digital age. It results in the emergence of inconvenient searches for related information at the appropriate time (Verma & Verma, 2020). Due to the exponential development of web data production, the need for tools and mechanisms for automated summarization has become crucial. Consequently, an automatic summarizer is essential for minimizing human effort. Text summarization is a crucial task in the analysis of large volumes of text documents and is a significant research topic at present in Natural Language Processing (Bagalkotkar et.al., 2013).

Automatic text summarizers can reduce the amount of time necessary to read extensive text documents by extracting the most significant sections (Moradi, 2018). Automatic text summarization is a technique that condenses lengthy texts into concise versions that retain the essential details (Shah & Desai, 2016). There are two different categories of summaries: extractive and abstractive (Shah & Desai, 2016). The writing of extractive summaries involves omitting complete sentences from the original text. Abstract summaries are constructed by reformulating the sentences of the source text. Automatic Text Summarizer is one of the most prevalently employed strategies. The automatic text summarizer analyses large textual data and condenses it into concise summaries comprising pertinent data. Automatic text summarization proves useful in this regard. It facilitates the creation of a concise and meaningful version of a given text using a natural language toolkit so that users can quickly access the information. Today, many summarization tools are available for languages with abundant resources, such as English (Verma & Verma, 2020). Alias et.al. (2018) explains that Sentence Compression (SC), a specialized task within the field of Automatic Text Summarization, can be used to enhance the quality of a summary. Existing SC techniques rely heavily on syntactic knowledge applied to individual words or phrases to determine compression decisions.

Summarizing is an excellent way to evaluate comprehension. Manual conversion or summarization is an arduous task; therefore, automation is required. Automation can be accomplished through the use of artificial intelligence technology (Soni et.al., 2020). Text summarization is the process of locating specific information within a document's text and producing a concise summary of that information. There are numerous uses for text summarization. It is essential when we need a fast result rather than perusing the entire text (Vaishali et.al., 2022). Many students find it challenging to summarize a piece of text (Smith, 2004). They frequently want to include details that are irrelevant to the text's main idea. Text summarization reduces the length of the text by omitting less important information, thereby facilitating the reader's ability to rapidly locate the important information (Christian et.al., 2016).

Reading is one of the activities carried out to obtain information from the reading sources we read (Fitria, 2023). Many sources to get information through reading (Fitria, 2022a). Not only books, now many online media or websites provide a lot of information that we can read. But sometimes many reading sources are too dense in content. As a result, not a few people become less interested in reading the information contained in these sources. An article will make the reader need more time to complete reading and understanding (Fitria, 2022b; Ma'ruf & Fitria, 2021; Suprihati & Fitria, 2021). Readers are often drowned in information while starved of knowledge (Foong & Oxley, 2011). So, we need a



summary form to speed up the reader in understanding briefly the contents of the article as a whole (Utomo et.al., 2022).

Researchers are examining tools and techniques for summarization that autonomously extract or abstract content from a variety of information sources (Hahn & Mani, 2000). There are several previous studies related to summarization. (Flores & Lopez, 2019) their difficulties with paraphrasing and summarising, as well as the areas in which these skills can be improved. Students who took part in the study identified four main areas of concern: 1) absence of English proficiency, 2) poor reading comprehension, 3) vocabulary deficiency, and 4) lack of or inadequate documentation skills. (Hutagaol, 2021) showed difficulties in writing summaries in class IV SDN 102047 Ria Baru which was quite difficult, students had difficulty putting ideas into writing, students answered that they were not good at summarizing. This is due to the lack of practicing at home so students don't like to write. (Hikmah, 2022) students encountered difficulties in writing summaries, including an inability to comprehend complex vocabulary, difficulty expressing their thoughts in writing, and comprehension of lengthy readings. The internal and external factors of the students are the causal factor. Internal factors include concentration difficulties during learning, apathy while studying, and a failure to comprehend the material. External factors, specifically instructional strategies and learning media. Based on the explanation above, the researcher is interested to know more about teaching summarization, especially using manual summarization and automatic summarization. Therefore, the objective of this study is to describe teaching summarization both manual summarization and automatic summarization for students.

Literature Review

Text Summarization

As a result of the problem posed by the exponential development of electronically accessible information, there is an increasing demand for text summarization (Rautray et.al., 2015). There are several definitions of summarization. Text summarization is the process of autonomously generating a text's abstract or summary (Uddin & Khan, 2007). Text summarization techniques aid in automatically shortening the length of text data and conveying the intended message fluently and accurately (Bharadwaj et.al., 2019). (Zamzam, 2020) state that text summarization (text summary) is an approach that can be used to summarize or condense long article texts into shorter and concise texts so that the results of a relatively shorter text summary can represent a long text. Text summarization is an application of information retrieval that provides the end user with a concise and non-redundant rendition of relatively lengthy text (Sahoo et.al., 2018). Text summarization is the process of extracting the content of the original text into a concise form that provides the user with useful information.

Text Summarization is a technique for retrieving information from multiple documents, the output of which is a generically processed text document comprising the user-requested accurate content (Kumar & Soumya, 2015). Depending on the nature of the textual representation in the documents, a summary may be classified as either an abstract or an extract (Kumar & Soumya, 2015). An extract is a summary composed of a selection of significant text units from the input. An abstract is a summary that



reformulates the most significant text units from the input to summarise the article's content. A summary may contain text units not present in the primary text. Although sentence extraction is not typically used by humans to create document summaries, certain sentences in the documents do represent certain aspects of the document's content. In addition, efficiency will be an essential consideration when integrating the summarization feature on the web (Kumar & Soumya, 2015). Therefore, extraction-based summarization remains valuable on the web. The extractive multi-document summary can be formulated succinctly as the extraction of significant textual units from multiple related documents, the elimination of redundancies, and the reordering of the textual units to produce an effective summary.

The summarization systems need to generate a succinct summary that accurately represents the source document's information (Kumaravel & Sankaranarayanan, 2021). The text to be summarized can be extracted from the web using web scraping, or the textual data can be entered manually on the platform, i.e. the tool (Reddy et.al., 2021). The process of summarization can be quite advantageous for users, as lengthy texts must be condensed so that they can refer to the input rapidly and comprehend concepts that may be beyond their comprehension (Reddy et.al., 2021).

Automatic Summarization

There are several definitions of automatic summarization. Due to the exponential increase in the quantity and complexity of internet-based information sources, automatic text summarization research has received considerable attention in recent years (Kyoomarsi et.al., 2010). Automatic Text Summarization is a text summary that is done automatically by a computer. It is a subfield of natural language processing, which is a technique in which a computer condenses a lengthy text into a non-redundant form to alleviate the issue of information saturation (Rozaimee et.al., 2017). Typically, auto-summarizing applications are developed as plug-ins that are easily compatible with word processors (Burney & Rizwan, 2012). Auto-text summarization is a subfield of Natural Language Processing (NLP) that has acquired prominence in the current era because it expedites task completion (Pattnaik & Nayak, 2021). Automatic summarization is the process of computationally shortening a data set (text, images, and video) to create a subset that represents the relevant information in the original data.

Automatic text summarization system, one of the specialized data mining applications assists with this task by providing a concise summary of the document's information (Yeasmin et.al., 2017). The summary generated by the summarization system enables readers to comprehend the content of the original documents without having to peruse each document individually (Gupta, 2013). Typically, research documents are lengthy and time-consuming for readers (Jain et.al., 2021). It could be resolved by extracting information from the research text that corresponds to the most pertinent portions of the original text, thereby saving their valuable time (Jain et.al., 2021). The objective of text summarization is to produce a condensed version of a relatively lengthy text that includes only the most important information.

Automatic text summarization is a technique that condenses the original text into a condensed form that retains the same meaning and information as the original (Gupta, 2013). Automatic text



summarization research has generated a broad variety of summarization techniques for various types of texts (Galgani et.al., 2014). In recent years, the quantity of text data from a variety of sources has increased exponentially. This volume of text is an invaluable source of knowledge and information that, to be beneficial, must be effectively summarized (Allahyari et.al., 2017). Automated text summarization systems attempt to generate a condensed version of the source or reference text while preserving its essential meaning (Naidoo & Dulek, 2022). Nowadays, there are commercial tools that allow the automatic generation of text summaries (García-Hernández et.al., 2009). Automated summaries aid in managing the ever-increasing volume of available information (Azmi & Altmami, 2018). Automatic summarization can be used to instantly summarize journal texts and book chapters. Long and complex paragraphs become short and easy to understand. Automatic text resume applications generate summaries that usually highlight the main paragraphs of each article. The journal resume application is very helpful, but keep in mind that when we get the same assignment or article, similar results can occur.

Method

This research is library research. This research is a type of qualitative research that generally does not go into the field of searching for data sources. It is referred to as library research because the data or materials needed to complete the research are obtained from the library either from sources in the form of books, journals, documents, magazines, and so on. In this research, the researcher collects the data from documents such as books, and national and international journals related to summarization. This research is a type of research that is rich in data analysis to make sense of existing data sources, one of which uses data reduction and then concludes.

Findings and Discussion

Findings

Manual Summarizing

According to Perkins (2023), summarizing an article journal is the process of highlighting and presenting the essence of a research study published in peer-reviewed scientific sources. The summary of the journal article provides potential readers with short descriptive comments, thereby giving them insight into the essence of the article. Writing and summarizing a journal article is a common task for students and research assistants. Students can learn how to effectively read articles for summaries, plan good summaries, and write summaries to completion. There are several ways of doing manual summarizing as follows:

Reading the Article

First, read the abstract. An abstract is a short paragraph written by the author to summarize the research article. Abstracts are usually found in almost all academic journals and are usually between 100-300



words (Fitria, 2021). Abstracts provide a summary of the entire contents of a journal article and provide important highlights of the research. The purpose of an abstract is to allow researchers to quickly read a journal and see if the article read can be used as a reference for the research they are currently conducting (Fitria, 2018). Second, understanding the research context. Students must ensure that they understand the specifics of the topic the author is discussing and analyzing, as well as why the research or topic was raised, whether the article was written in response to other articles on the same topic, etc. Students will learn the arguments, quotations, and data to extract and analyse for their summary through this activity. Third, proceeding directly to the conclusion. To learn more about the topic and to comprehend where the issues and arguments will lead, proceed directly to the conclusion of the proposed research. If they first read the researcher's conclusions, it will be very simple for students to comprehend the information. After perusing the conclusion, they will still need to review and peruse the article, but only if the research is applicable. If students are searching for disagreement in their research, they may not need to comprehend other sources to support their research. Identify the article's primary argument or position in the fourth step. To avoid reading the same item twice in order to comprehend the passage's main idea, pupils ensure that they comprehend it on the first reading. They take notes, highlight or underline the passage's main idea, and give close attention to the first or second paragraphs. They identify the theory and the primary argument or concept that the author is attempting to prove through the research. They look for words like hypothesis, result, typically, generally, or explicitly to determine whether a sentence describes the principal theory. They can underline, highlight, or rewrite the primary argument from the research, focusing on the main points, so that students can connect the remainder of the article to these ideas and see how they work together. They then examine the arguments. They continue to peruse the article, emphasising the author's most important points as they do so. They focus on the central concepts and ideas introduced and attempt to relate them to the author's central arguments presented at the outset of the article.

Writing Design Planning

First, write a brief description of the research. In concise writing, students characterize the academic journey of the article, enumerate the steps taken from the beginning to the conclusion, and explain the research's methodology and format. Second, identifying the most essential aspects of the article. Students may view this as the most important supporting idea or section of the article. Some of them may have subtitles, while others may require additional digging. Everything used to support the author's primary argument should be included in the summary. Depending on the research, students may need to elucidate the research's theoretical foundations or the researchers' assumptions. In scientific writing, it is essential to summarise the hypotheses outlined by the researchers before conducting the research as well as the methods used for the project. They provide a concise summary of each statistical result along with a rudimentary interpretation. Determine the vocabulary to be used in the summary. Students ensure that their summaries contain all of the article's essential terminology. They must comprehend the meaning of the article's terms so that the summary's reader can comprehend its content. Any words or phrases employed by the article's author must be included and discussed in the summary. Fourth, maintain brevity. A journal summary does not need to contain nearly as many words as the article being summarised. The purpose of the summary is to provide a succinct but distinct explanation, either for use as primary research data collection or to assist the researcher in gathering information later in the research



process. Students should, as a general rule, be able to write one paragraph per main idea, resulting in between 500 and 1000 words for the majority of academic articles. For the majority of periodicals, students will compose several brief paragraphs summarising each section of the article.

Writing a Summary

First, avoid using personal pronouns (you, I, we, we, you, etc.) in your writing. The sentences should be as objective as feasible. The first step is to define the problem statement. At the outset of the article, perhaps in the introduction, the author should describe the scope of the research and its objectives. Typically, there is an introductory section in scientific articles that provides context for the experiment or research, but this section does not summarise much. This section is followed by the development of problem formulation and evaluation procedures, which are essential for determining the article's remaining content. Discuss the authors' chosen methodology. Students must summarise how the authors or researchers determined whether they collected primary or secondary data. Typically, the results of the research are presented in the form of analyzed data, accompanied by unprocessed data. In the summary, only data that has been analyzed should be included. Describe the findings of the inquiry. One of the most essential aspects of a summary is describing the author's findings from his research. Students ensure that our summary contains the formulation of the problem, the conclusions/research results, and the methodology used to obtain these results. These sections are essential to the article and must not be overlooked. Establish connections between the article's key concepts. In some summaries, it will be crucial to demonstrate how the relationship between the author's ideas evolves throughout the article. Do not conclude. Unless an explicit explanation is included as part of the student's assignment, the summary of an article does not permit students to provide their interpretation of research data. In general, the purpose of a summary is to summarise the author's argument, not to contribute to it. Avoid using verbatim quotations from journal articles. It is less essential to include quotations in the summary of a journal article compared to when writing scientific essays or college-level essays. When writing a summary of a journal article, students should emphasize the explanation of concepts without losing sight of the meaning and intended content. Use the present tense in your sentences. Students should always use the present tense when discussing the contents of a scientific journal article. This will aid students in modifying their overall grammar structure. Improve the writing design of students. Good writing requires revision. Compare the focus and content of what has been written to the context of the journal article to ensure that it suits and supports the context. An abbreviated journal article provides potential readers with a concise overview, which is essential when they are seeking specific information on a specific topic.

Automatic Summarizing

Using Artificial intelligence (AI), the summarization tool condenses lengthy texts into brief ones. Typically, a summary contains key phrases that provide an overview of the subject being discussed. The following definitions will assist in our comprehension of the Summarise instrument. Summarising is the process of condensing a substantial quantity of information into a brief but comprehensive statement. With the press of a button, the Summary Tool integrates multiple paragraphs into a single section. We can reduce it to 200 words from more than a thousand. With the Summarising Tool, we can summarise,



analyze, and draw conclusions from our research-related texts, articles, scientific papers, and historical papers. We can summarise with a single click, skip to the main point, or peruse the text so that the user can instantly analyze and synthesize the text. Online summary tools condense the most essential information from documents, articles, and other resources into a single view.

AI algorithms determine the most appropriate sentences for our content when summarising text. These tools analyze the punishments to ensure that they are optimized, properly worded, and well-structured, and use the algorithm correctly. In addition, this instrument can identify informative sentences based on their scores and comprehend the significance of these phrases. Using an AI-based summary utility, an article can be read with ease. Using advanced algorithms, Summarise Text provides a summary of the words in our writing. The content is visually conveyed without altering its meaning. In other words, it only comprehends the complete spectrum. The purpose of the summary tool is to condense information without altering its significance. They will discuss some of the processes required to summarise an article using AI-based summarising tools. We begin by pasting or uploading a text (.pdf,.txt,.doc) in the text area. Based on the available options, we can select the duration of the summary, display the points, and choose a rating. Lastly, press the summary icon. The summary text can be copied and pasted wherever the reader desires.

Today, many summarization tools are available for languages with abundant resources, such as Paraphraser (www.paraphraser.io/id/alat-meringkas), Resoomer (resoomer.com/id/), Summarizer (www.summarizer.org), Prepostseo (www.prepostseo.com/tool/id/text-summarizer), Smodin (smodin.io/id/ringkasan-teks), Rephrase (www.rephrase.info/id/rangkuman-online), Paraphrasing.io (www.paraphrasing.io/id/text-summarizer), Summarizing Tool (www.summarizingtool.net/id/rangkuman-online) and many more. The online summarizing application has several important features that make it easier for users to summarize the text. The several features of the application summarize online, including 1. Automatic Text Processing. The automatic text processing feature allows users to quickly and easily summarize the text. Users only need to enter the text they want to summarize, then the application will automatically summarize. 2. Text Analysis. The text analysis feature allows the user to find out important statistics from the processed text. Some statistics that can be seen include the number of words, the number of sentences, important sentences, and keywords that appear frequently. 3. Language Selection. Some online encapsulating applications can process text in multiple languages. This allows users to easily summarize articles or texts in any language. 4. Summary Adjustments. Some online summarizing applications allow the user to select the level of accuracy of the summary so that the user can adjust the resulting summary to suit their needs. 5. Fixed Text. Several online summarizing applications can also help correct processed text, such as checking spelling, grammar, and writing incorrect words. With these features, online summarizing apps can be very useful tools for students or anyone who needs to quickly and easily summarize the text.

There are some of the advantages of an automatic text shortener application: 1. Speed up the process of creating a summary. Automatic text summarizers allow students to quickly cut through issues and summarize the main ideas. So, they no longer need to spend a lot of time and effort just to make a summary. 2. Effective and efficient summary results. Automatic text summarizing applications can produce effective and efficient summaries because the resulting text is well structured. 3. Can be used anytime and anywhere. They can use the auto text shortener app anywhere and anytime, as long as they

have an internet connection on their device. So, they can be more flexible at work. 4. Free and Easy to Use. You don't need to pay anything to use the auto text shortener application, and it is very easy to use. No need to have special skills to use it.

Of course, like other applications, the auto text summarization application also has some drawbacks. The following are the disadvantages of this application: 1. Inaccurate summary results. Most automatic text summarizing applications can indeed produce fast summaries, but the summary results tend to be inaccurate. So, users still need to check before using the summary. 2. Dependence on Technology. Students can experience difficulties when the automatic text shortener application crashes or crashes, affecting the work they're working on. 3. Cannot replace human skill level. Automatic text summarizing applications, although they look practical, cannot replace the level of human expertise in summarizing. The summary results generated by this application may differ from the summaries generated by humans. Fatmalasari (2022) adds that the automatic text summary system has weaknesses, namely the system cannot read English text so the resulting summary results are not optimal. The summary system can only summarize the computational journals that have been provided by the system. Therefore, in the future, similar research is expected to be able to develop a system that can summarize journals that have vocabulary using English. 2. Add or update text features on system development text summarization to improve precise, accurate summary results. 3. Adding features to system development with free input text to summarize the desired journal. 4. Applications built can be further developed on the device mobile.

How the online summarizing application works, online summarizing applications can help users speed up the process of reading and understanding a text by summarizing it automatically. 1. Text Collection. The online summary application will collect the text that the user wants, be it from websites, PDF documents, or existing text files. 2. Text Analysis. After the text is collected, the application will perform an analysis of the text. This analysis includes identifying topics, structures, and keywords in the text. 3. Text Reduction. Next, the application will process the text to create a summary. Usually, online summarizing applications will use certain algorithms to identify important sentences and delete unimportant parts. 4. Summary Presentation. After the text reduction process is complete, the application will present a text summary in an easy-to-understand form. Users can choose to display the summary in text or visual form. Although the way online summarizing applications work is generally the same, each application may have differences in the methods of analyzing and reducing text. Therefore, the summary results for each application may vary, depending on the algorithms and technology used by the application.

The online summarizing application has various benefits to help its users. Here are some of the benefits of using apps included online in general. 1) Saving time. Many people don't have enough time to read an entire article or a long document. When we have to understand all of the reading, we can take advantage of online summarizing applications. By using an application included online, users can save time by speeding up the process of reading and understanding the information contained in the article. 2) Simplify the contents of the article. In the learning process, we often have to read long articles to understand the material being studied. Applications included online can help simplify the learning process by providing a summary or essence of the article in an easy-to-understand form. In addition, application users can also adjust the length of the summary according to their needs. 3. Practical. Applications



summarized online can be accessed easily via the Internet, so they are very practical to use. In addition, this application can also be accessed from various devices, including cell phones and laptops. 4. Free. Most of the apps included online are available for free. Users do not need to pay subscription fees or purchase licenses to use this application. In addition, applications included online generally do not display intrusive ads, so users can focus on the article or summary material.

Discussion

Students need to quickly check self-evaluation for summarizing. According to Athans & Parent (2014), quick check self-evaluation for summarizing, such as stating/expressing the central idea or theme as a statement/declarative, sizing up the quantity, quality, and order of the evidence, building evidence for inferential thinking, paraphrasing details in our words, avoiding common pitfalls. 1) Stating the central idea or theme as a declarative. How we express the central idea or theme we have identified is significant. Construct a statement from our thought. For instance, it is insufficient to state that the central idea of a passage is about alternative energy sources or that the story is about friendship. It is necessary to describe what is said or the author's position on the subject. Generally, central ideas and themes are universal, valuable concepts that merit inclusion in a carefully crafted statement. 2) Assessing the quantity, caliber, and arrangement of our evidence. Not all evidence is created equal. Even if we have already extracted key concepts from the text (using the skills we learned in earlier chapters of this book), we may still need to refine our evidence pool. Determining what to include and what to exclude can be challenging, particularly in a summary or one written under time constraints. The most effective details are those that strengthen our arguments. Consider the order in which we present our evidence, beginning with the most compelling. Returning to the text to thoroughly consider these issues and evaluate the evidence's robustness is beneficial. 3) Constructing evidence for deductive reasoning. When information, events, a character's motivation, or other concepts are implied but not stated explicitly form the thoughts, feelings, and opinions based on hints. Returning to the passage and locating these indicators allows us to bolster our arguments. Ensuring that the ideas are congruent with textual cues guarantees that we are interpreting the passage as the author most likely intended. Use caution when using inferential evidence to support our summary. 4) Restate specifics in our terms. It is acceptable to use character dialogue, excerpted text, or key phrases as they appear in the text (with proper citation) when writing a summary. However, the information should be justified and should support an original concept. The majority of a summary will consist of paraphrased events interspersed with original thoughts. 5) Avoid prevalent pitfalls. It is possible to misinterpret any portion of the text if our reasoning is inconsistent with textual evidence. Always consider whether the interpretation is most likely what the author intended. Ensure that the summary is objective. Separate from our opinion and judgment. Check our summary to ensure that the supporting details we have selected are both essential and intriguing. Keep in mind that a summary is not a reiteration; we are only highlighting the most essential ideas, not all ideas.

Schaffe (2012) states that summarizing is an essential reading comprehension skill in all subject areas. Summarizing is the skill of comprehending, concentrating on the most essential information, and rephrasing it concisely. Summarizing is retelling the most important ideas of what a text is about (Dugan, 2014). To get these important points, students need to read the entire text. However, with a text-



shortening application, they no longer need to do that. Text-shortening applications can be found easily on the Internet. It is one of the technological innovations that students can use. With this innovation, the task of summarizing is no longer a difficult thing. Summarizing is an activity to record important things from reading to get information from all the descriptions presented in it. The goal of writing a summary is to present the reader with the most important ideas from a text and summarize the information and arguments used in supporting the main ideas of a piece of writing (Sihabuddin, 2019).

Teachers can give assignments to summarize to students, such as “Directions: Read the paragraph and write a short paragraph summarizing what you have read. Include the main idea and the most important details.

Directions: Read the paragraph and write a short paragraph summarizing what you have read. Include the main idea and the most important details.

Butterflies are beautiful insects. They flitter around in the spring air. They rest upon the tulips and daisies.

Butterflies can be dark brown, bright yellow, orange, blue, or any number of colors. They begin life as caterpillars. Then, they spin silky covers called cocoons. Inside the cocoon, the caterpillar turns into a butterfly. Butterflies help to spread pollen from one flower to another, so butterflies are helpful as well as beautiful.



Summarize the paragraph above.

Source: *Informational Text: Summarizing Practice* (Dugan, 2014)

The example above shows that understanding the central idea and theme, as well as recognizing key details. Summarising is the union of the main idea or theme with supporting details (Housel, 2015). When students express information in their words, both their immediate comprehension and long-term retention are enhanced. Summarising implies removing all but the most important elements from a text or passage. Therefore, it is ideal to teach after having utilized some of the following sections' queries. Teaching summarization and question-asking skills enhances comprehension (Mascolo et.al., 2014). Teachers should discuss the following questions to teach summarization: (a) What are the main ideas? (b) What are the most important supporting details? (c) What information is irrelevant or superfluous? Teaching summarization rules were effective in enhancing summarization skills and reading/studying abilities (Klein et.al., 2014).



Özdemir (2018) states that the most effective summarization strategies are identifying the main idea, beginning the first sentence with an introductory sentence that expresses the subject of the main text, summarising the following subject or event order and time consistency, expressing the main idea of the text in the final sentence of the summary, and paying careful attention to the distinction between the author and the summarizer in the style of the summary text". A summary reveals the level of a reader's comprehension. For this reason, summarization strategies should be taught at all levels of reading instruction. The ability of a student to "sum up" what has been read is essential for comprehension. For example, the teacher requests that students write a recount the text, ensuring that the events are recounted in chronological order. Students may use graphic organizers with numbers or arrows during class think-aloud. They can teach the following summary basics: If there is not a main idea or theme sentence, create one. Identify the most important supporting details (phrases or sentences) for the primary idea/theme, group all associated terms or concepts, and construct the synopsis.

Students are better able to retain information in long-term memory when they comprehend it through summarizing (Susar & Akkaya, 2009). Summarising, which is one of the metacognitive strategies, promotes the effective use of cognitive abilities and improves memory and comprehension. Summary writing exemplifies a mixture of reading and writing. Students must master the ability to summarise textual information. Summarising entails extracting only the passage's essential elements, such as the primary idea and supporting details. According to Greathouse (2008), when students place information into their language, it is processed more thoroughly. Thus, summarising enhances both comprehension and long-term retention of information. Information can be summed up through a variety of activities, including speaking, writing, sketching, and constructing a project. The fundamental stages of summarising are: If there is no main idea sentence in the paragraph, create one. Identify the supporting evidence, making sure to group all related terms or concepts. Record repeated or restated information only once and assemble the summary in an organized format.

By linking text comprehension to recall, summarization links reading and memory. This strategy makes sense as a prelude to the implementation of the other strategies for a variety of reasons, some of which are unrelated to the brain (Willis, 2008). Some students, for instance, may not have completed the assigned reading, may have missed several days of class reading, or may have special requirements that are met by hearing summaries of the material. Through scaffolded practice, students who struggle with summarising can build up to summarising stories. Students may begin with a synopsis of events, such as weekend activities or sporting contests. They can note their summaries and compare them with those of their peers to determine how precise they were.

As students practice text summarization, remind them to use textual evidence to back up their opinions and inferences. They may recognize the need for taking notes to assist with summaries. If students have difficulty summarising or identifying the main idea of a paragraph or story, they can practice summarising familiar stories from other books they have read or stories they have heard multiple times. The practice of summarising films and television programs can also aid in text summarization. Additionally, students can practice locating the primary idea of paragraphs or pages. A list of guiding queries, such as "Who is the subject of the paragraph?" and "What is the most important information or idea?" can be provided to get students started. Additionally, summarising provides instructional opportunities for students to become acquainted with complex and/or unfamiliar texts in a stress-free



setting (Schneider, 2023). When a student engages with a complex resource, increased cognitive burden (working memory strain) and anxiety frequently emerge.

In teaching summarization, the students are taught through the process of summarizing how to take a large amount of text and reduce it to its main elements for better comprehension. After perusing a passage, teaching summarizing assists students in identifying key concepts and consolidating supporting details. It is a technique that allows students to concentrate on the important words and phrases of an assigned text that are worth remembering. Summarizing improves comprehension by reducing confusion. Teachers train students to process the information they read to condense it into concise chunks. This technique may be implemented with the entire class, in small groups, or as an individual assignment. Text summarization through writing activities enhances prior knowledge, improves writing, and expands vocabulary.

Conclusion

Writing a summary can be manual or online (automatic) summarization. Manually, students need to consider several points before writing a summary including avoiding using personal pronouns, making sentences as objective as possible, beginning by defining the problem statement, discussing the author's methodology, describing the research results, connecting the main ideas featured, do not conclude, but provide the interpretation of research data, avoid using direct quotes from journal articles, use appropriate tenses, and improve students writing design. However, students must check their self-evaluation of summarising skills, such as expressing the central idea or theme as a statement/declarative, assessing the quantity, quality, and order of the evidence, constructing evidence for inferential reasoning, paraphrasing details in their own words, and avoiding common pitfalls. While, automatically, summarisation involved an online summarizer tool. Many summarization tools are available for English languages with abundant resources. The several features of online summarization tools include automatic text processing, text analysis, language selection summary adjustments, and fixed text.

References

- Alias, S., Mohammad, S. K., Gan, K. H., & Ping, T. T. (2018). MYTextSum: A Malay Text Summarizer Model Using a Constrained Pattern-Growth Sentence Compression Technique. *Computational Science and Technology*, 141–150. https://doi.org/10.1007/978-981-10-8276-4_14
- Allahyari, M., Pouriyeh, S., Assefi, M., Safaei, S., Trippe, E. D., Gutierrez, J. B., & Kochut, K. (2017). *Text Summarization Techniques: A Brief Survey* (arXiv:1707.02268). arXiv. <https://doi.org/10.48550/arXiv.1707.02268>
- Athans, S. K., & Parente, R. W. (2014). *Tips and Tricks for Summarizing Text*. The Rosen Publishing Group, Inc.



-
- Azmi, A. M., & Altmami, N. I. (2018). An abstractive Arabic text summarizer with user controlled granularity. *Information Processing & Management*, 54(6), 903–921. <https://doi.org/10.1016/j.ipm.2018.06.002>
- Bagalkotkar, A., Kandelwal, A., Pandey, S., & Kamath, S. S. (2013). A Novel Technique for Efficient Text Document Summarization as a Service. *2013 Third International Conference on Advances in Computing and Communications*, 50–53. <https://doi.org/10.1109/ICACC.2013.17>
- Bharadwaj, A., Srinivasan, A., Kasi, A., & Das, B. (2019). Extending The Performance of Extractive Text Summarization By Ensemble Techniques. *2019 11th International Conference on Advanced Computing (ICoAC)*, 282–288. <https://doi.org/10.1109/ICoAC48765.2019.246854>
- Brunner, J. T., & Hudson, M. S. (2013). *The HM Learning and Study Skills Program: Level 2: Teacher's Guide*. R&L Education.
- Burney, B. S. N. M. Z. A. A., & Rizwan, K. (2012). Urdu Text Summarizer using Sentence Weight Algorithm for Word Processors. *International Journal of Computer Applications*. <https://www.semanticscholar.org/paper/Urdu-Text-Summarizer-using-Sentence-Weight-for-Word-Burney-Rizwan/60f29d5b66d464a89e3f2956bec940f6b3f85f04>
- Christian, H., Agus, M. P., & Suhartono, D. (2016). Single Document Automatic Text Summarization using Term Frequency-Inverse Document Frequency (TF-IDF). *ComTech: Computer, Mathematics and Engineering Applications*, 7(4), 285–294. <https://doi.org/10.21512/comtech.v7i4.3746>
- DashAbhisek, ShandilyaAnurag, BiswasArindam, GhoshKripabandhu, GhoshSaptarshi, & ChakrabortyAbhijnan. (2019). Summarizing User-generated Textual Content: Motivation and Methods for Fairness in Algorithmic Summaries. *Proceedings of the ACM on Human-Computer Interaction*. <https://doi.org/10.1145/3359274>
- Dedhia, P. R., Pachgade, H. P., Malani, A. P., Raul, N., & Naik, M. (2020). Study on Abstractive Text Summarization Techniques. *2020 International Conference on Emerging Trends in Information Technology and Engineering (ic-ETITE)*, 1–8. <https://doi.org/10.1109/ic-ETITE47903.2020.087>
- Dugan, C. (2014). *Informational Text: Summarizing Practice*. Teacher Created Materials.
- Fatmalasari, D. (2022). *Peringkasan Teks Otomatis Menggunakan Metode Pembobotan Kalimat Pada Artikel Ilmiah Bahasa Indonesia* [Undergraduate Paper, Universitas Lampung]. <http://digilib.unila.ac.id/59886/>
- Fitria, T. N. (2018). Translation Techniques Found in English to Indonesian Abstract Translation of Journal Edunomika 2018. *Elite: English and Literature Journal*, 5(2), Article 2. <https://doi.org/10.24252/elite.v5i2a4>
- Fitria, T. N. (2021). Grammatical Error Analysis of English Abstracts Translation in Jurnal Ilmiah Ekonomi Islam (JIEI) Journal. *LITE: Jurnal Bahasa, Sastra, Dan Budaya*, 17(2), 117–126. <https://doi.org/10.33633/lite.v17i2.5050>
- Fitria, T. N. (2022a). An Analysis of the Students' Difficulty in Reading the TOEFL Prediction Test. *Komposisi: Jurnal Pendidikan Bahasa, Sastra, Dan Seni*, 23(2), 110–123. <https://doi.org/10.24036/komposisi.v23i2.116291>
- Fitria, T. N. (2022b). Analysis of EFL Students' Difficulties in Writing and Completing English Thesis. *LLT Journal: A Journal on Language and Language Teaching*, 25(1), 295–309. <https://doi.org/10.24071/llt.v25i1.3607>
-



-
- Fitria, T. N. (2023). Teaching Teaching Extensive Reading to EFL and Non-EFL Students: Benefits and Problems: Keywords: extensive reading, reading, reading English, teaching reading. *ENJEL: English Journal of Education and Literature*, 2(01), 76–85. <https://jsr.unuha.ac.id/index.php/ENJEL/article/view/471>
- Flores, E. R., & Lopez, M. (2019). Self-reported summarizing and paraphrasing difficulties in L2 writing contexts: Some pedagogical interventions. *Indonesian Journal of Applied Linguistics*, 9(2), 286–296. <https://doi.org/10.17509/ijal.v9i2.20219>
- Foong, O.-M., & Oxley, A. (2011). A hybrid PSO model in Extractive Text Summarizer. *2011 IEEE Symposium on Computers & Informatics*, 130–134. <https://doi.org/10.1109/ISCI.2011.5958897>
- Galgani, F., Compton, P., & Hoffmann, A. (2014). HAUSS: Incrementally building a summarizer combining multiple techniques. *International Journal of Human-Computer Studies*, 72(7), 584–605. <https://doi.org/10.1016/j.ijhcs.2014.03.002>
- Gambhir, M., & Gupta, V. (2017). Recent automatic text summarization techniques: A survey. *Artificial Intelligence Review*, 47(1), 1–66. <https://doi.org/10.1007/s10462-016-9475-9>
- García-Hernández, R. A., Ledeneva, Y., Mendoza, G. M., Dominguez, Á. H., Chavez, J., Gelbukh, A., & Fabela, J. L. T. (2009). Comparing Commercial Tools and State-of-the-Art Methods for Generating Text Summaries. *2009 Eighth Mexican International Conference on Artificial Intelligence*, 92–96. <https://doi.org/10.1109/MICAI.2009.24>
- Goularte, F. B., Nassar, S. M., Fileto, R., & Saggion, H. (2019). A text summarization method based on fuzzy rules and applicable to automated assessment. *Expert Systems with Applications*, 115, 264–275. <https://doi.org/10.1016/j.eswa.2018.07.047>
- Greathouse, L. (2008). *Comprehension and Critical Thinking Level 4*. Teacher Created Materials.
- Greenleaf, C., Schoenbach, R., Friedrich, L., Murphy, L., & Hogan, N. (2023). *Reading for Understanding: How Reading Apprenticeship Improves Disciplinary Learning in Secondary and College Classrooms*. John Wiley & Sons.
- Gupta, H., & Patel, M. (2020). Study of Extractive Text Summarizer Using The Elmo Embedding. *2020 Fourth International Conference on I-SMAC (IoT in Social, Mobile, Analytics and Cloud) (I-SMAC)*, 829–834. <https://doi.org/10.1109/I-SMAC49090.2020.9243610>
- Gupta, V. (2013). A Survey of Text Summarizers for Indian Languages and Comparison of their Performance. *Journal of Emerging Technologies in Web Intelligence*, 5. <https://doi.org/10.4304/jetwi.5.4.361-366>
- Hahn, U., & Mani, I. (2000). The Challenges of Automatic Summarization. *Computer*, 33(11), 29–36. <https://doi.org/10.1109/2.881692>
- Hikmah, S. (2022). Analisis Kesulitan Menulis Ringkasan Bacaan Pada Tema 8 Subtema 2 Siswa Kelas IV Madrasah Ibtidaiyah. *INOPENDAS: Jurnal Ilmiah Kependidikan*, 5(1), 36–43. <https://doi.org/10.24176/jino.v5i1.7689>
- Housel, D. J. (2015). *Leveled Text-Dependent Question Stems: Summarizing*. Teacher Created Materials.
- Hutagaol, M. (2021). *Analisis Kesulitan Siswa Dalam Menulis Ringkasan di Kelas IV SD Negeri 102047 Ria Baru Tahun Ajaran 2020/2021* [Undergraduate Paper, Universitas Quality]. <http://portaluniversitasquality.ac.id:55555/1417/>
- Jain, R., Bellaney, B., & Jangid, P. (2021). Information Extraction from CORD-19 Using Hierarchical Clustering and Word Bank. *2021 12th International Conference on Computing Communication*
-



- and Networking Technologies (ICCCNT), 1–5.
<https://doi.org/10.1109/ICCCNT51525.2021.9580126>
- Klein, P., Boscolo, P., Kirkpatrick, L., & Gelati, C. (2014). *Writing as a Learning Activity*. BRILL.
- Kopp, K. (2017). *Teaching Social Studies Today*. Teacher Created Materials.
- Kumar, K., & Soumya, R. (2015). Text summarization using clustering technique and SVM technique. *International journal of applied engineering research*.
<https://www.semanticscholar.org/paper/Text-summarization-using-clustering-technique-and-Kumar-Soumya/75e816648a6331bec3e1c8294197c195e010c7c0>
- Kumaravel, G., & Sankaranarayanan, S. (2021). PQPS: Prior-Art Query-Based Patent Summarizer Using RBM and Bi-LSTM. *Mobile Information Systems, 2021*, e2497770.
<https://doi.org/10.1155/2021/2497770>
- Kyoomarsi, F., Khosravi, H., Eslami, E., & Davoudi, M. (2010). Extraction-based text summarization using fuzzy analysis. *Iranian Journal of Fuzzy Systems, 7*(3), 15–32.
<https://doi.org/10.22111/ijfs.2010.185>
- Ma'ruf, M. H., & Fitria, T. N. (2021). Pelatihan Penulisan Artikel Ilmiah dari Skripsi dan Tesis Untuk Mahasiswa Serta Cara Publikasinya ke Jurnal Nasional. *ABDAYA: Pengabdian Dan Pemberdayaan Masyarakat, 1*(1), 6–13.
https://www.researchgate.net/publication/355473502_Pelatihan_Penulisan_Artikel_Ilmiah_dari_Skripsi_dan_Tesis_Untuk_Mahasiswa_Serta_Cara_Publikasinya_ke_Jurnal_Nasional
- Mascolo, J. T., Alfonso, V. C., & Flanagan, D. P. (2014). *Essentials of Planning, Selecting, and Tailoring Interventions for Unique Learners*. John Wiley & Sons.
- Moradi, M. (2018). CIBS: A biomedical text summarizer using topic-based sentence clustering. *Journal of Biomedical Informatics, 88*, 53–61. <https://doi.org/10.1016/j.jbi.2018.11.006>
- Naidoo, J., & Dulek, R. E. (2022). Artificial Intelligence in Business Communication: A Snapshot. *International Journal of Business Communication, 59*(1), 126–147.
<https://doi.org/10.1177/2329488418819139>
- Özdemir, S. (2018). The Effect of Summarization Strategies Teaching on Strategy Usage and Narrative Text Summarization Success. *Universal Journal of Educational Research, 6*(10), 2199–2209.
<https://eric.ed.gov/?id=EJ1192722>
- Pattnaik, S., & Nayak, A. K. (2021). Automatic Text Summarization for Odia Language: A Novel Approach. Dalam D. Mishra, R. Buyya, P. Mohapatra, & S. Patnaik (Ed.), *Intelligent and Cloud Computing* (hlm. 395–403). Springer. https://doi.org/10.1007/978-981-15-5971-6_43
- Perkins, R. (2023). *3 Cara untuk Meringkas Jurnal Artikel*. wikiHow. <https://id.wikihow.com/Meringkas-Jurnal-Artikel>
- Rautray, R., Balabantaray, R. C., & Bhardwaj, A. (2015). Document Summarization Using Sentence Features. *International Journal of Information Retrieval Research (IJIRR), 5*(1), 36–47.
<https://doi.org/10.4018/IJIRR.2015010103>
- Reddy, K. K. C., Anisha, P. R., Nguyen, N. G., & Sreelatha, G. (2021). A Text Mining using Web Scraping for Meaningful Insights. *Journal of Physics: Conference Series, 2089*(1), 012048.
<https://doi.org/10.1088/1742-6596/2089/1/012048>
- Rose, M. S. (2001). In Defence of Summarization. *International Journal of Bahamian Studies, 10*, 29–34.
<https://doi.org/10.15362/ijbs.v10i0.38>



-
- Rozaimie, A., Bashir, M., & Malini, W. (2017). Automatic Hausa Language Text Summarization Based on Feature Extraction using Naïve Bayes Model. *World Applied Sciences Journal*, 35, 2074–2080. <https://doi.org/10.5829/idosi.wasj.2017.2074.2080>
- Sahoo, D., Bhoi, A., & Balabantaray, R. C. (2018). Hybrid Approach To Abstractive Summarization. *Procedia Computer Science*, 132, 1228–1237. <https://doi.org/10.1016/j.procs.2018.05.038>
- Saraswathi, S., & Arti, R. (2010). Multi-Document Text Summarization Using Clustering Techniques and Lexical Chaining. *ICTACT Journal on Soft Computing*, 1(1), 23–29. <https://doi.org/10.21917/ijsc.2010.0004>
- Sari, E. M. P., & Aini, N. (2019). *Writing For Academic Purpose: (A Blended Learning Handout)*. Myria Publisher.
- Sarwadnya, V. V., & Sonawane, S. S. (2018). Marathi Extractive Text Summarizer Using Graph Based Model. *2018 Fourth International Conference on Computing Communication Control and Automation (ICCUBEA)*, 1–6. <https://doi.org/10.1109/ICCUBEA.2018.8697741>
- Schaffer, F. (2012). *Summarizing, Grades 5–6*. Carson-Dellosa Publishing.
- Schneider, J. (2023). *Melting the ice: Engaging and educational ice-breaker activities for every learning session*. Hachette UK.
- Shah, P., & Desai, N. P. (2016). A survey of automatic text summarization techniques for Indian and foreign languages. *2016 International Conference on Electrical, Electronics, and Optimization Techniques (ICEEOT)*, 4598–4601. <https://doi.org/10.1109/ICEEOT.2016.7755587>
- Sihabuddin. (2019). *Terampil Berbicara dan Menulis Untuk Mahasiswa, Guru, Dosen, dan Umum*. Araska Publisher.
- Smith, J. L. (2004). *Reading First Activities, Grade K*. Teacher Created Resources.
- Soni, V., Kumar, L., Singh, A. K., & Kumar, M. (2020). Text Summarization: An Extractive Approach. Dalam M. Pant, T. Kumar Sharma, R. Arya, B. C. Sahana, & H. Zolfagharinia (Ed.), *Soft Computing: Theories and Applications* (hlm. 629–637). Springer. https://doi.org/10.1007/978-981-15-4032-5_57
- Suprihati, S., & Fitria, T. N. (2021). Pelatihan Penulisan Karya Ilmiah (Tugas Akhir dan Skripsi) Bagi Mahasiswa D3 dan S1 Di Provinsi Jawa dan Luar Jawa. *Jurnal Inovasi Dan Pengabdian Kepada Masyarakat*, 1(1), Article 1. <https://doi.org/10.47232/jptm.v1i1.91>
- Susar, F., & Akkaya, N. (2009). University students for using the summarizing strategies. *Procedia - Social and Behavioral Sciences*, 1(1), 2496–2499. <https://doi.org/10.1016/j.sbspro.2009.01.440>
- Uddin, Md. N., & Khan, S. A. (2007). A study on text summarization techniques and implement few of them for Bangla language. *2007 10th international conference on computer and information technology*, 1–4. <https://doi.org/10.1109/ICCITECHN.2007.4579374>
- Utomo, M. S., Wibowo, J. S., & Wahyudi, E. N. (2022). Text Summarization Pada Artikel Berita Menggunakan Vector Space Model dan Cosine Similarity. *Dinamika Informatika : Jurnal Ilmiah Teknologi Informasi*, 14(1), 11–24. <https://doi.org/10.35315/informatika.v14i1.9163>
- Vaishali, P. K., Kalpana, B. K., & Mahender, C. N. (2022). A Survey on Automated Text Summarization System for Indian Languages. Dalam D. J. Hemanth, D. Pelusi, & C. Vuppapapati (Ed.), *Intelligent Data Communication Technologies and Internet of Things* (hlm. 921–941). Springer Nature. https://doi.org/10.1007/978-981-16-7610-9_67
-



- Verma, P., & Verma, A. (2020). Accountability of NLP Tools in Text Summarization for Indian Languages. *Journal of scientific research*, 64(01), 258–263. <https://doi.org/10.37398/JSR.2020.640149>
- Willis, J. (2008). *Teaching the Brain to Read: Strategies for Improving Fluency, Vocabulary, and Comprehension*. ASCD.
- Yeasmin, S., Tumpa, P. B., Nitu, A. M., Palash, M., Uddin, Ali, E., & Afjal, M. (2017). Study of Abstractive Text Summarization Techniques. *American Journal of Engineering Research (AJER)*, 6(8), 253–260. <https://www.semanticscholar.org/paper/Study-of-Abstractive-Text-Summarization-Techniques-Yeasmin-Tumpa/0b0e357469dff229093d4c047e0842f5c6736a53>
- Zamzam, M. A. (2020). Sistem Automatic Text Summarization Menggunakan Algoritma Textrank. *MATICS*, 12, 111–116. <https://doi.org/10.18860/mat.v12i2.8372>