

CHAPTER II

LITERATURE REVIEW

2.1 Perception

2.1.1 Definition of Perception

The word “perception” comes from the Latin verb “percipio”, which means “to receive”. Perception is the main stage of the human relationship with the surrounding environment. With human perception, information from the outside world can be received by the brain and processed into information. Basically, perception is the processing of information that everyone goes through in knowing the surrounding environment by hearing, seeing, receiving and feeling. In the large Indonesian dictionary (KBBI), perception is a direct response (acceptance) of something, where the stages of a person knowing several things with the five senses (Talino et al., 2018). What is meant by a response is a person's reaction or opinion after seeing, feeling or listening to something that is around them.

As the word of Allah swt. in AL-Quran surah AL-Sajdah verse 9 which reads as follows:

ثُمَّ سَوَّاهُ وَنَفَخَ فِيهِ مِنْ رُوحِهِ ۗ وَجَعَلَ لَكُمُ السَّمْعَ وَالْأَبْصَارَ
وَالْأَفْئِدَةَ قَلِيلًا مَّا تَشْكُرُونَ

“Then, He perfected it and breathed into it His (created) spirit. He made hearing, sight, and conscience for you. How little you give thanks.” (QS. AL-Sajdah:9)

The verse above describes how Allah SWT. created humans by giving perfection to their senses, namely hearing, sight, and heart. These senses give humans the ability to receive stimuli and information from the surrounding environment. Through these senses, humans can experience perception of the world around them. Perception can be interpreted as the human ability to respond to and understand stimulus or information received through hearing, vision, and conscience. Allah SWT. created humans with these perfect senses so that they can

interact with their surroundings and gain a deep understanding of their existence in this world. Perception is the initial stage in the process of human recognition and interaction with their environment, where the senses bestowed by Allah play a role in this process.

Perception is knowledge about an object, event or relationship obtained through gathering information and interpreting a message. According to Leavitt, perception is the view of how someone sees something, while in another sense it is understanding or view, which is how individuals assess or interpret something. this was also stated by Putro & Haryanto (2015) define “perception is a process where people interpret something based on their own experience as a result of stimuli in producing information”. Pramestiya (2013) also states that “perception is a person's opinion about something that he considers true”. That is, perception refers to a person's understanding or view of a particular object.

Based on expert statements, it can be concluded that perception is a person's way of receiving, understanding, and assessing information from the surrounding environment through the five senses. Perception involves personal views and understandings of something based on experience and what is felt or seen.

2.1.2 Aspects of Perception

According to Baron and Byrne, Myers (in Haekal & Widjajanta, 2016), states that there are three components form the structure of perception, namely; (1) Cognitive Component (perceptual component) is the component that relating to knowledge, views, beliefs, namely related things with how people perceive towards the object; (2) Affective Component (emotional component) is a component related to positive or negative feelings about attitudes towards an object. If feeling unhappy is a negative thing, feeling happy is a positive thing; (3) Component conative (behavioral component), is the part that deals with the attitude object's inclinations. It shows how strongly one feels and how one should act on it.

2.1.3 The Factor Affecting Perception

The Factors that influence student perceptions can come from past experiences and events that have occurred. According to Walgito (2003) the factors that influence a person's perception are as follows:

1. Internal factors, is factors related to one's own abilities that come from relationships with mental aspects, intelligence (knowledge), and physicality.
2. External factors, is the stimulus and prominent characteristics of the environment behind the object which is a wholeness or unity that is difficult to separate, including: social and environmental (Ariyantara, 2016).

According to Walgito (2010) the existence of perception requires several conditions that must be met, namely as follows:

1. The existence of objects that are perceived

Objects that exist in the environment can cause a stimulus that hits a person's sensory organs. Stimuli can come from two factors, namely from within the individual who directly hits the receiving nerve that works as a receptor and from outside the perceiving individual.

2. Sense organs or receptors

The sensory device is a tool to receive a stimulus, therefore there must be a sensory nerve as a tool to forward what is received from the sensory device to the center of the nervous system, namely the brain as the center of consciousness, so that perception will be formed.

3. Attention

To create a perception, attention is needed, because attention is the most important step to create perception. Attention is the concentration of a concentration of all individual activities on an existing object.

It can be concluded that the factors that influence perception are factors that come from within the individual and factors from outside the individual. This factor is obtained from several events that have occurred in the past or from an event observed in an object.

2.1.4 Forms of Perception

After individuals interact with the perceived object, the results of perception can be seen in two forms. According to Irwanto, the forms of perception are as follows.

1. Positive perception

It's a perception that is shown in all knowledge (whether known or not), and a response followed by an effort to utilize it.

2. Negative perception

It refers to a state where the individual tends to reject an object because it does not match their personal incongruity. (Darmayanti, 2020).

2.2 Artificial Intelligence

Artificial intelligence (AI) is a field of computer science that aims to create intelligent machines that can perform tasks that would normally require human intelligence. It refers to the simulation of human intelligence processes by machines, including learning, reasoning, and self-correction (Russell & Norving, 2010) AI involves the use of algorithms and mathematical models to enable computers and other systems to learn from data, recognize patterns, and make intelligent decisions. Expert systems, logical reasoning, gaming, knowledge representation, learning, robotics, image vision, writing and speech recognition, human-machine interaction, natural language understanding, multi-agent systems, unconstrained planning, linguistic computing, neural networks, and other fields are some of the many applications of AI (Kleijn et al., 2019). In line with that, Rich and Knight (1991) define AI as the study of programming computers to perform tasks that humans can now do more effectively. Furthermore, Jia, (2009) define AI is the ability of computer devices to communicate naturally with other machines and humans. In other words, AI is a technology that allows machines to mimic the way humans think, such as learning, thinking, and correcting their own mistakes. The goal is to make computers smarter and more useful, and to do the work that humans used to do.

Around the world, schools are using social robots and AI applications as peer learning experts and teaching tools (Vasagar et al., 2017; cited in Edwards et al., 2018). In exploring AI, it is important to consider the benefits, challenges, and potential risks associated with this technology. Dodigovic, (2007) states that artificial intelligence can diagnose some typical errors in foreign language learning, such as writing. In addition, artificial intelligence (AI) has the power to enhance collaborative learning and customize it in various ways. This allows these programs to operate better over time as their algorithms get better and they are exposed to more data.

Natural language processing (NLP), which involves teaching computers to understand and interpret human language, is another important component of AI. It is used in applications such as speech recognition and chatbots, which can understand and respond to human speech. Chatbot systems are AI technologies that are widely used to facilitate teaching and learning endeavors. Answering questions and providing relevant feedback are two ways chatbots, which act as intelligent agents, interact with users. Chatbots perceive and interpret social and emotional cues from users, serving as virtual conversation partners. The size and scope of a chatbot's database determine how effective it is, as a larger database usually results in better performance. With the help of NLP technology, chatbots were created that allow computers to understand, evaluate, and interpret human language (Ngo, 2023).

2.2.1 Generative Pre-trained Transformer (ChatGPT)

It has been demonstrated that using artificial intelligence can simplify a variety of problem-solving processes and human labor. A growing number of Indonesians are interested in using artificial intelligence (AI) due to its potential, influence, and opportunities. ChatGPT is one AI that is popular with the general public, particularly students. ChatGPT, or Generative Pre-trained Transformer, is an AI model developed by OpenAI and produced domestically in the US.

From its initial release in 2018 to the publication of its latest version in 2020, it underwent continuous evolution. It was first created to handle problems related to natural language processing, including entity recognition, sentiment

analysis, and machine translation. However, due to its rapid development, it can now be used for many different things, such as automated writing, chatbots, and image creation. Language models are used in natural language processing (NLP) to generate meaningful and coherent text from given input. Language models come in many forms, and one example is GPT, which is used in ChatGPT.

In its history, ChatGPT has undergone some significant developments. In 2019, OpenAI released the larger and more advanced ChatGPT-2 model, with the ability to generate more stunning and realistic text. In addition, OpenAI released a more advanced ChatGPT-3 model that has higher capabilities in natural language processing, such as the ability to answer questions, write essays, and perform other natural language processing tasks. ChatGPT can answer questions, perform various activities, and interact with users in a text-based conversation format in a short amount of time.

In addition, ChatGPT can generate and understand text in various international languages, including Indonesian. ChatGPT uses a method known as “autoregressive language modeling” to respond to questions and complete tasks. This model repeatedly predicts the next word in a string of text based on the previous words, continuing until the text becomes a cohesive sentence or paragraph. To create results that are relevant to the information requested by the user, the model also considers the context of the input that has been provided (Rachbini et al., 2023). Therefore, one of the key characteristics that ChatGPT has is its ability to maintain a constant “conversational style” and demeanor. This allows for a more natural and real conversation than just answering randomly.

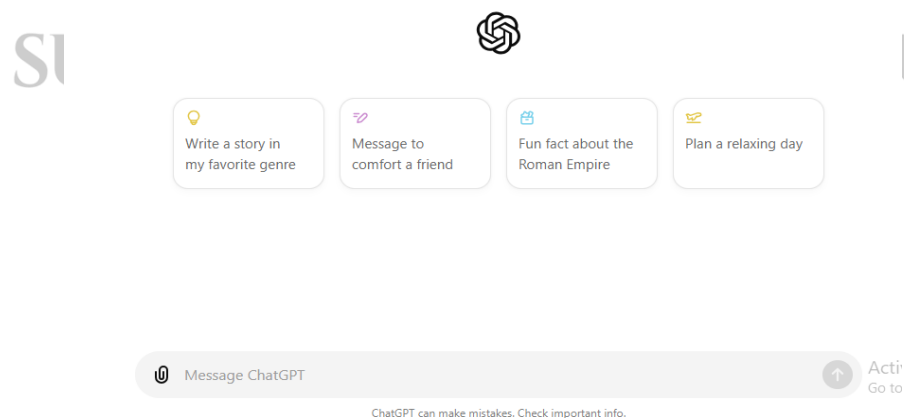


Figure 2 ChatGPT's Main Interface

The emergence of AI technologies such as ChatGPT provides an opportunity to use AI chatbots for education in Indonesia, specifically to develop the skills learners need in the 21st century (Ashari et al., 2022). ChatGPT allows users to identify grammatical and structural errors or mistakes and provide recommendations for sentence creation that match the topic of writing, paraphrase paragraphs, and more (Hasanah & Nurcholis, 2024). With its ability to generate text automatically and responsively, ChatGPT can be a virtual partner for students in exploring ideas, formulating arguments, and composing paragraphs more effectively (Setiawan & Luthfiyani, 2023). Its use in education provides great potential benefits, such as increasing learner engagement, enhancing experiential learning, and improving teaching (Mairisiska & Qadariah, 2023)

2.2.2 The Advantages and Disadvantages of ChatGPT

Since its inception, ChatGPT has become one of the most popular and frequently used AI tools to date. However, like any other technology, ChatGPT has various advantages and disadvantages. Understanding these two aspects is essential to optimally exploiting the potential of these tools and overcoming the challenges that may arise. The advantages of AI ChatGPT are as follows:

1. **Expanding Knowledge and Skills:** ChatGPT offers the ability to expand users' knowledge and skills through text-based interactions. By using ChatGPT, users can access a wide array of information and understand previously unknown topics.
2. **Efficiency and Speed:** One of the key advantages of ChatGPT is the efficiency and speed in providing answers or solutions to questions posed by users. In an increasingly fast-paced and competitive world, having access to this technology can increase productivity and save time. ChatGPT can provide all the answers users need in just a few seconds. This capability was intentionally created to be more responsive.
3. **Flexibility:** ChatGPT has tremendous flexibility in answering different types of questions and topics. From science, math, technology, to everyday life. By learning ChatGPT, users can utilize the sophistication of this technology to help solve various problems at hand.

4. **Effective Communication:** ChatGPT can help users develop better communication skills, especially in writing. By understanding how ChatGPT works, users can evaluate and refine their writing style, as well as create clearer, more cohesive and engaging text.
5. **Able to Use Natural Grammar:** ChatGPT was created to share and provide answers using natural or human-friendly language. The language they use in answering or providing information will be easy to understand. So that users can interact with humans as usual (Suharmawan, 2024).

Although ChatGPT is a very advanced AI model, it is important to understand its boundaries and limitations. The following are some of the main limitations that are the drawbacks of ChatGPT.

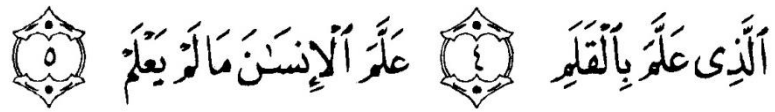
1. **Limited Knowledge:** ChatGPT has limited knowledge that only covers data up to September 2021. Therefore, ChatGPT may not have the latest information or be able to answer questions about events that occurred after that date.
2. **Factual Errors:** ChatGPT may produce answers that are inaccurate or contain factual errors. It is important to always verify the information provided by the model with a trusted source. In terms of answer accuracy, this robot is trained to understand many things sourced from ChatGPT trained on a very large data corpus, but if the data used for training is not representative or inaccurate, ChatGPT will extract the wrong patterns from the data and produce inaccurate predictions. ChatGPT was unable to clarify user questions. So far, ChatGPT will guess the user's intentions. ChatGPT is also sensitive to tweaks to the phrasing in the question, so with different phrasing, ChatGPT answers may differ and even be inaccurate.
3. **Not Able to Think Critically:** This model lacks critical thinking skills and cannot differentiate between facts and opinions. Therefore, you should be careful when relying on the answers generated, especially if your question involves opinion or interpretation.

4. **Inconsistent:** Sometimes, ChatGPT may provide different or conflicting answers depending on how you ask the question. It's important to ask questions in several different ways to ensure you get consistent answers. ChatGPT is unable to evaluate the relevance or accuracy of information/references. ChatGPT also cannot display quotes and their sources in the text.
5. **Limited creativity and originality:** ChatGPT's responses are based on patterns it learns from text datasets. Therefore, ChatGPT will most likely not be able to produce unique and original content or ideas.
6. **Requires a stable internet network.** ChatGPT requires a stable internet network. To access it, you need an internet network. Make sure your internet network is stable so the robot can work optimally. Because, if the internet network is bad, this chatbot will display a lot of bugs and will not be able to provide the answers you expect. (Getahun, 2023).
7. **Dependence on Technology:** users who rely too much on AI tools may fail to develop their own writing and critical thinking skills. This can ultimately make it difficult for them to think and attempt to learn independently.
8. **Possible Plagiarism:** If users do not give credit or cite sources properly, AI-generated content may lead to unintentional plagiarism.

Despite its drawbacks, GPT Chat has the potential to revolutionize the way we write by providing various benefits. As with any tool, users should carefully consider the advantages and disadvantages before incorporating it into their writing process.

2.3 Writing

In learning English, especially English as a foreign language, there are skills that cover four important aspects that EFL students must master. These four aspects are: reading, listening, writing, and speaking. One of the important aspects is writing skills. In the Al-Quran, Surah Al-'Alaq verses 4-5 read:



"Who taught by the pen. Taught man that which he knew not"(Al-Alaq:4-5)

This verse emphasizes the importance of learning through writing because writing is the main means of conveying and storing knowledge. This verse suggests that Allah teaches humans various knowledge through the kalam, or pen, which is the main tool for writing. By writing, students can organize and express their ideas, as well as store the knowledge they have acquired. In an EFL context, writing helps students to practice and master grammar, vocabulary, and sentence structure in English, all of which are important for language proficiency. Writing can also reflect critical and creative thinking skills. By mastering writing skills, EFL Students can express their ideas better and communicate effectively in English.

In line with that, experts define writing is an activity that a person does to produce a writing. According to Tarigan (2013), writing is a language skill that is used to communicate with others indirectly, not face-to-face with others. The ability to write is part of language skills that have an important role in human life, because language skills are always applied in everyday life to communicate with others, both oral and written communication. With writing activities, a person can convey ideas and ideas to achieve a goal. Meanwhile, according to Cahyani writing is a person's ability to use language symbols to convey something in the form of ideas or ideas to other people or readers using written language (Mudrikah, 2015).

Based on the definitions above, it can be concluded that writing is an activity that involves the use of written language to convey ideas, ideas, or messages to readers, either directly or indirectly. It is part of the language skills that are important in communicating in everyday life, allowing individuals to interact with others and achieve certain communicative goals.

2.3.1 ChatGPT as AI Writing Tool

According to Chaffee et al., the writing process contains six key aspects. The six aspects are: developing ideas, identifying focus, organizing thoughts into diverse thinking patterns, drafting, revising, editing, proofreading, and collaborating (Bibi & Atta, 2024). English writing can be difficult, especially for students who learn English as a foreign language or second language, especially for students who are new and still have little experience and knowledge of English. Therefore, writing is one of the most challenging aspects for students and teachers. This is also stated by Hidayati (2018), is one of the most difficult aspects of teaching English writing is helping students improve their language skills; therefore, efforts to help students improve their English writing skills involve feedback and direction from the instructor. Teachers, as instructors, guide students in their writing and provide feedback on their writing. However, this can be laborious and time-consuming, especially for larger and more diverse groups of students. Writing in English can be difficult and often not easily understood by students, so it can be difficult to engage them all and motivate them. As a result, students may feel dissatisfied or bored with writing exercises, which can hinder their development.

In this era of technological advancement and information openness, many tools are developed based on AI that are useful for students who want to learn skills and get a better experience. One of the existing tools is the AI writing tool, where this tool is easily accessible to everyone, especially students, to develop writing skills in English. An AI writing tool is a set of artificial intelligence programs that aim to produce high-quality text more effectively and efficiently. One of the AIs that can be used as a tool for students who need feedback and personalized instruction in writing is ChatGPT. Students can ask questions, seek advice, or request assistance in completing complex tasks. Using GPT Chat as a writing tool can provide various benefits for its users, especially those who have difficulty writing or need help producing quality text (Arhelo, 2023).

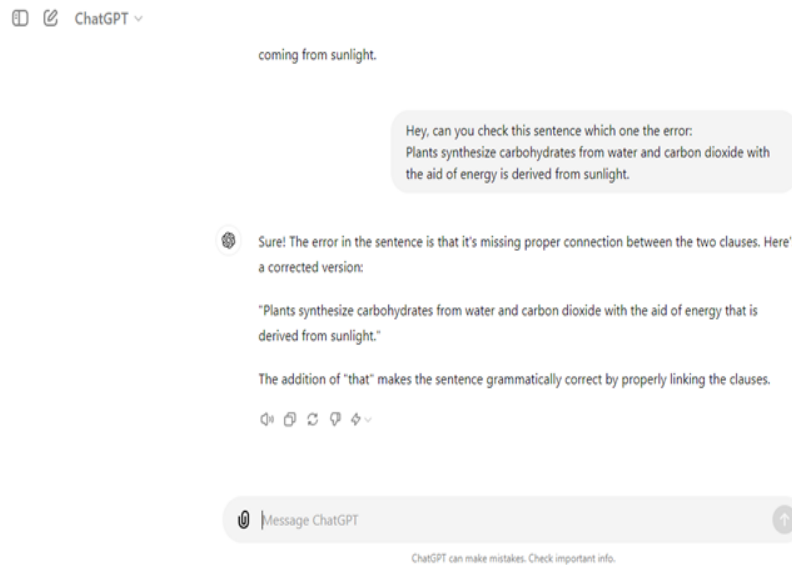


Figure 3 ChatGPT Response to Analyze The Writing

ChatGPT can be used to provide feedback and evaluate student writing. ChatGPT can help you identify and correct sentence structure errors by making suggestions. In the example above, ChatGPT observes that the original sentence lacks a proper connection between the two clauses. To make the sentence grammatically correct, ChatGPT suggests adding a conjunction to connect the clauses properly.

Clearly, ChatGPT can make suggestions for improving sentence structure in order to make writing more clear and effective. This includes corrections for grammatical errors such as word usage and tenses, as well as suggestions for dealing with sentences that are too long or ambiguous. ChatGPT can also evaluate the consistency and coherence of writing. It can also make suggestions for vocabulary enrichment and idea development if a section of writing appears to be underdeveloped. ChatGPT can help students with independent learning by providing early feedback and gradually improving their writing skills. The steps for using ChatGPT are as follows: enter the text to be analyzed, request analysis or feedback from ChatGPT, review and apply the feedback.

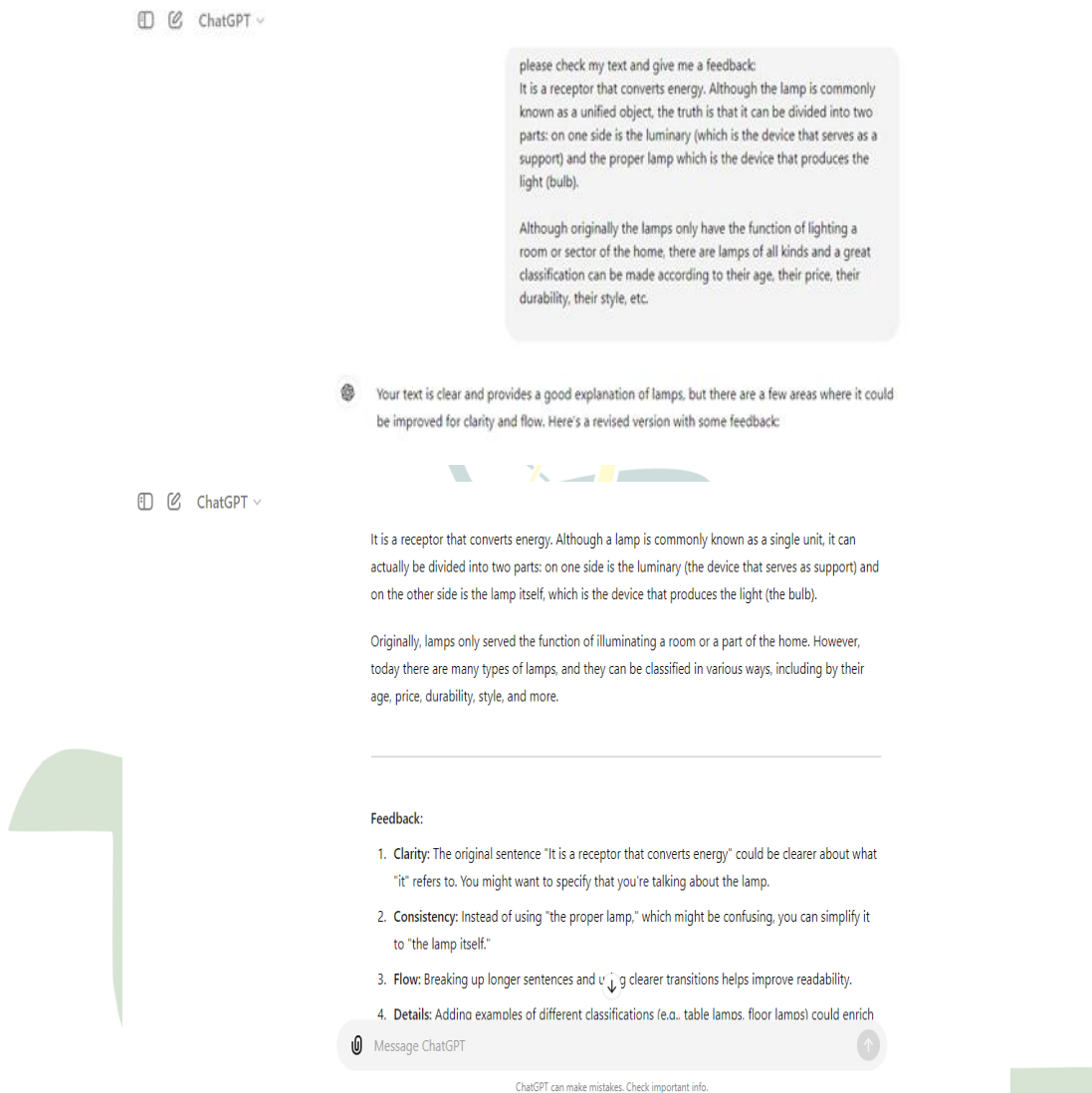


Figure 4 ChatGPT Response Regarding Giving Feedback on Writing

ChatGPT assists students in identifying areas where their writing needs improvement by providing specific and constructive feedback. This enables students to understand their mistakes and learn how to improve their writing so that it is more effective. Here are some of the benefits that can be gained from using GPT Chat as an AI-assisted writing tool:

1. **Productivity and Efficiency:** AI can automate parts of the writing process, thus helping students save time. For example, AI-powered grammar checking tools can quickly find and correct errors, so writers can focus more on content creation.

2. **Customized Learning:** With AI, education systems can customize lessons to meet the needs of individual students. AI algorithms can recommend customized activities, tools, and feedback to help students improve their academic writing by evaluating their learning preferences, strengths, and weaknesses.
3. **Helping to correct writing:** Chatgpt can be used to correct a piece of writing, by correcting spelling, grammar, punctuation, even errors in words or sentences and providing suggestions for improvement.
4. **Helps develop ideas:** In the writing process, students often find it difficult to find creative and new ideas or have difficulty in determining the right words to convey their ideas. With GPT Chat, students can get different ideas that can help broaden their horizons. ChatGPT can be used as a source of inspiration to get new writing ideas and determine the right words. This helps students to speed up the writing process.
5. **Improves Text Quality:** ChatGPT is created by using large and varied input data so that it can produce high quality text. By using ChatGPT as a writing assistant, students can get better results in terms of structure, grammar, sentences, and spelling (Anderson, 2023). This will improve the quality of the generated text and make the text easier to understand.
6. **Translating languages,** ChatGPT can also be utilized as a tool for translating texts. ChatGPT has a wide range of languages including Indonesian.
7. **Paraphrasing Text:** ChatGPT can also create text in a different style, but with the same meaning as the original text entered, besides that students can also ask for synonyms and antonyms of a word to help in paraphrasing the text.

In conclusion, ChatGPT offers many benefits as a writing tool, With ChatGPT EFL students can improve the quality of their writing. Because ChatGPT can provide comments and make recommendations for improvement. However, it still has some limitations that students should be aware. Additionally, ChatGPT may not always consider the broader context of the text being produced

and may still require user attention for editing and revision. Therefore, while ChatGPT can be a valuable tool for students looking to improve their writing, it should not be solely relied upon and should always be used in conjunction with critical thinking and careful consideration of its limitations.

2.4 Previous Study

In writing this research, the researcher studied several previous studies that were related to this research. Researchers found several references from two previous studies as explained below:

1. A thesis conducted by Rahadatul Aisyi in 2023 with the title "EFL Students' Attitude on the Use of Artificial Intelligence in Academic Writing". This study aims to understand EFL students' attitudes about the use of Artificial Intelligence in academic writing. The study used qualitative methods and collected data through semi-structured interviews with ten students from the 2019 academic year program. The findings showed that Artificial Intelligence had a positive attitude towards their academic writing, with overall usage (Aisyi, 2023).

The research conducted by Rahadatul Aisyi in 2023 on "EFL Students' Attitudes towards the Use of Artificial Intelligence in Academic Writing" has several similarities and differences with the researcher's study. In this case, the similarity of the research lies in its purpose, which is the same as understanding the attitudes or perceptions of EFL students towards the use of AI technology. The data collection method used is also similar, namely using a qualitative approach with interview techniques. Meanwhile, the difference in the research lies in the context of the research studied. The researcher more specifically examines the use of AI technology, namely ChatGPT as a writing aid for EFL students.

2. Thesis by Dwi Puja Syaharani in 2023, with the title "Phenomenological Study of the Use of Artificial Intelligence Digital Platforms as Learning Media in the Education 4.0 Era at UIN Suska Riau". This study aims to examine in more detail how the use of the Digital Artificial Intelligence Platform as a Learning Media in the Education 4.0 Era. This research uses qualitative research methods with a descriptive approach and Alfred Schutz's phenomenological theory. The data collection technique used was interviews with 13 informants. The findings show that the popular Artificial Intelligence platforms used by Communication students are ChatGPT, Notion AI, and Perplexity. Furthermore, it appears that the presence of Artificial Intelligence directly contributes to an interactive and interesting learning experience, as well as facilitating accessibility and flexibility as a learning medium. Similarly, students use AI to improve the quality of their learning through technology because of its extensive features and ease of use. Meanwhile, in terms of meaning, AI has had a positive impact on the field of education. (Syaharani, 2024).

The similarity with this study is the same research objective of examining the use of technology such as AI in an educational context, although the focus of the research is different. In this study, the researcher focuses on the use of ChatGPT as a writing aid, while Syaharani's research observes the use of artificial intelligence digital platforms more generally as a learning medium. The research method also uses the same qualitative approach with data collection using interviews although the research subjects are different.

3. The research journal conducted by Thi Thuy An Ngo entitled "Student Perceptions of the Use of GPT Chatting in the World of Education". The aim of this research is to find out how students perceive using ChatGPT for learning, including benefits, barriers and potential solutions. The research instrument used a questionnaire distributed to 200 students through an online survey, and 30 students participated in semi-structured interviews. The findings show that, in general, students have a good opinion of the ChatGPT application. The benefits of ChatGPT, according to students, include saving time, providing information in various fields, providing personalized guidance and feedback, and enlightening ideas in writing. In addition, some barriers to using ChatGPT were also recognized, namely the inability to assess the quality and reliability of sources, the inability to quote sources accurately, and the inability to substitute words and use idioms accurately. To address this issue, some potential solutions can be implemented by verifying ChatGPT responses with reliable sources; using ChatGPT as a reference source or tool; providing usage guidelines; and promoting academic integrity to ensure ethical use of ChatGPT in an academic context (Ngo, 2023).

In similarity, it has the same goal, namely to understand student perceptions of the use of ChatGPT in an educational context. The data collection also uses the same questionnaire and then also involves interviews. However, the main difference lies in the focus studied and the data collection methods used. This study focused more on students' perceptions of the use of ChatGPT as a writing tool in an EFL context, while that study was more general in looking at the use of ChatGPT in education without any specific context. This study used a qualitative approach while that study used a quantitative approach.

4. The research journal conducted by Bingham Liu was entitled "Attitudes and Perceptions of Chinese Students in Learning English Using ChatGPT". This study aims to assess Chinese students' attitudes towards using ChatGPT to improve their English language learning and their perceptions towards the advantages and disadvantages of ChatGPT. The data was collected from 109 Chinese students, using a questionnaire consisting of 5-point Likert scale questions. The findings show that students believe that ChatGPT is an effective tool to support them in learning English, but information security must be considered further. Policymakers, technologists, researchers, and educators can collaborate to explore how ChatGPT and other emerging generative AI tools can be used safely and effectively in English language teaching and learning (Liu, 2023).

The similarity lies in their focus on exploring students' perceptions of ChatGPT use in an educational context, although Liu's research focuses more on Chinese students and English language learning. However, the main differences are in the subjects, methods, and context of the research. In addition, Liu's study emphasizes information security as an important consideration in the use of ChatGPT, whereas this study focused on the benefits and challenges of using ChatGPT as a writing tool and focuses on UINSU EFL students in Indonesia. The research methods used are also different, Liu's research uses a quantitative approach with a Likert scale questionnaire as the main tool for data collection, while this research used a qualitative approach with open-closed questionnaires and in-depth interviews.

5. The research journal by Jurniaty Salmi & Angela Atik Setiyanti in 2023 entitled "Student Perceptions of the Use of Chatgpt in the 4.0 Education Era". This study aims to analyze student perceptions of the use of ChatGPT in the era of education 4.0. The research method used is qualitative with the Technology Acceptance Model (TAM) approach, and data collection done through Google Form. The results of the analysis show that students have a positive perception of the use of ChatGPT in self-development, quality improvement, creativity, time efficiency, and learning productivity. Students are also happy and satisfied, and they are highly motivated to use ChatGPT. However, there are several indicators that need to be considered when developing and implementing ChatGPT, such as access difficulties and challenges to student creativity in writing (Salmi & Setiyanti, 2023)

There are several similarities and differences with this study. The similarity lies in the focus of both to analyze student perceptions of the use of ChatGPT in an educational context, although Salmi & Setiyanti's research emphasizes the era of education 4.0. Then other similarities are the same as using qualitative research methods even though Salmi's research uses the Technology Acceptance Model (TAM) approach with online data collection through Google Form. However, the main difference is in the research context and analysis approach. This study focused on the use of ChatGPT as a writing tool in the context of English language learning, while Salmi & Setiyanti's study is more general in exploring the use of ChatGPT in student self-development and increased learning productivity. Thus, although both have the same focus on students' perceptions of ChatGPT use, the differences in context and analytical approach may result in different findings and provide different insights.

In conclusion, the five studies above show the use of AI in the context of education or learning which has a number of similarities and differences with the research to be conducted. The similarity between the previous studies and the researcher is that they both examine students' perceptions of the use of AI,

especially on AI ChatGPT. Meanwhile, the difference between the previous studies and the researcher lies in the focus of the context and aspects studied. The researcher focuses on the use of ChatGPT as an AI-assisted writing tool among EFL students in UIN North Sumatera. The research method, subject, and place of research also distinguish this research from previous studies.



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