CHAPTER II
REVIEW OF RELATED LITERATURE

A. Theoretical Description

1. Artificial Intelligence (AI)

a. Definition of Artificial Intelligence (AI)

Artificial Intelligence (AI) is a form of technological development. It focuses on helping solve cognitive problems (intelligence) such as human intelligence. It can be used for personal learning and pattern recognition. AI is created from the adoption form of human intelligence. However, AI still has weaknesses and cannot replace human intelligence.[15] It is undeniable that AI can be able to assist and remote administrative functions in higher education institutions. That is as managing student data in enrollment, student assessment data, and lecture scheduling data. This can help the administrative system in educational institutions be more efficient and save time.[16]

AI can be defined as a theory or study in computer science disciplines that deal with solving cognitive problems (intelligence).[17] Cognitive problems can be in the form of learning processes. In addition, AI can be interpreted as an array of theories used to guide and development of computer systems by utilizing artificial intelligence (cognitive function). Problems in visual depiction, voice identification, voting, and becoming a translator of language to other languages are examples.[18] AI is a combined system that receives input. Then, the input or incoming data will be processed into an algorithm system. AI has assisted humans

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[15] Tira Nur Fitria. "Artificial Intelligence (AI) Technology in OpenAI ChatGPT Application: A Review of ChatGPT in Writing English Essay." *ELT Forum: Journal of English Language Teaching* 12, no. 1 (March 31, 2023): 45. https://doi.org/10.15294/elt.v12i1.64069.

[16] Abrar Mohammad Ali. "An Intervention Study on the Use of Artificial Intelligence in the ESL Classroom: English Teacher Perspectives on the Effectiveness of ChatGPT for Personalized Language Learning." *CULTURE-LANGUAGES-MEDIA*, June 4, 2023: 49.

[17] Lijia Chen, et.al. "Artificial Intelligence in Education: A Review." *IEEE Access* 8 (2020): 75265. https://doi.org/10.1109/ACCESS.2020.2988510.

[18] Lijia Chen, et.al. "Artificial Intelligence in Education: A Review." *IEEE Access* 8 (2020): 75267. https://doi.org/10.1109/ACCESS.2020.2988510.

in tutoring human decision-making and also helps solve tasks related to cognitive function.[19]

b. Types of AI for Writing Skills

In the AI category, it can be divided into 3 AI types. First, AGI stands for Artificial General Intelligence. Second, ASI stands for Artificial Super Intelligence. Third, ANI which stands for Artificial Narrow Intelligence. All of the AI types above have different levels of ability. AI is included in AGI which can adapt to new environments and displays cognitive abilities like humans.[20] AI for writing skills can be categorized into several types as follows:

1) Chatbot

Chatbot is the development part of AI technology that emphasizes responding to answers in the text form to input entered.[21] Chatbot can also respond and receive input in audio or text form. It can provide an interactive dialogue with Chatbot users. In addition, the Chatbot can also provide responses, comments, and new topics from questions or input entered by Chatbot users.[22] The first Chatbot-based applications are Eliza, Parry, and Alice. Then, came the second generation of Chatbots such as Apple Siri, Microsoft Cortana, and Google Assistant.[23] In 2023, Quillbot will become one of the Chatbot that are widely used by academics. Quillbot is an application

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[19] Tim Büthe, et.al. "Governing AI – Attempting to Herd Cats? Introduction to the Special Issue on the Governance of Artificial Intelligence." *2022* 29, no. 11 (November 4, 2022): 1723. https://doi.org/10.1080/13501763.2022.2126515.

[20] Abrar Mohammad Ali. "An Intervention Study on the Use of Artificial Intelligence in the ESL Classroom: English Teacher Perspectives on the Effectiveness of ChatGPT for Personalized Language Learning." *CULTURE-LANGUAGES-MEDIA*, June 4, 2023: 10.

[21] Shu-Chiao Tsai. "Chinese Students' Perceptions of Using Google Translate as a Translingual CALL Tool in EFL Writing." *Computer Assisted Language Learning* 35, no. 5–6 (July 4, 2022): 6. https://doi.org/10.1080/09588221.2020.1799412.

[22] Hea-Suk Kim and Na Young Kim. "Effects of AI Chatbots on EFL Students' Communication Skills." *KOREAN JOURNAL OF ENGLISH LANGUAGE AND LINGUISTICS* 21 (August 2021): 716. https://doi.org/10.15738/kjell.21..202108.712.

[23] Shu-Chiao Tsai. "Chinese Students' Perceptions of Using Google Translate as a Translingual CALL Tool in EFL Writing." *Computer Assisted Language Learning* 35, no. 5–6 (July 4, 2022): 6. https://doi.org/10.1080/09588221.2020.1799412.

used as a paraphrasing tool (language accuracy checker).[24]

2) ChatGPT

ChatGPT is a kind of AI technology in the NLP model that has been developed by OpenAI. It has the type of Generative Pre-trained Transformer Architecture (GPT-3). The specialty of ChatGPT is can respond by more creative response. It can reject inappropriate assumptions, reject unfavorable questions, and display more varied responses.[25] ChatGPT applications in the 2023 era starting from Tome.app, ExcelFormulaBot.com, Copy.ai, Resume.io, Canva AI, GitHub Copilot, and ChatGPT. While in the field of education, ChatGPT-based AI includes ClassPoint AI, PowerPoint Speaker Coach, SlidesAi.io, Education CoPilot, Gradescope, and Formative AI.[26]

3) SEO Writing Assistant

SEO writing assistant is an AI writing tool that can provide facilities to users. This SEO writing assistant can paraphrase, summarize, and develop paragraphs in writing. In addition, the SEO writing assistant also provides tips on automatic reading and keyword placement in question. Keywords are available such as advertising, content marketing, social media, and others. Thus, SEO writing assistance can also be applied to assisting students in writing various types of texts and journal articles.[27]

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[24] Eka Yuni Kurniati and Rahmah Fithriani. "Post-Graduate Students' Perceptions of Quillbot Utilization in English Academic Writing Class." *Journal of English Language Teaching and Linguistics* 7, no. 3 (December 15, 2022): 440. https://doi.org/10.21462/jeltl.v7i3.852.

[25] Thi Thuy An Ngo. "The Perception by University Students of the Use of ChatGPT in Education." *International Journal of Emerging Technologies in Learning (iJET)* 18, no. 17 (September 14, 2023): 6. https://doi.org/10.3991/ijet.v18i17.39019.

[26] "7 Best AI Tools For Teachers Everyone NEEDS To Use In 2023 - ClassPoint Blog," May 22, 2023. https://blog.classpoint.io/best-ai-tools-for-teachers/.

[27] Rachel Baker. "16 Best Writing Tools in 2023: Everything Writers Need to Succeed." Semrush Blog. Accessed November 25, 2023. https://www.semrush.com/blog/writing-tools/.

4) Perplexity.ai

Perplexity.ai is almost the same as ChatGPT, namely writing AI tools in the form of Chatbot. It can include reference sources taken in the paper. Then, it also suitable for writing journal articles or research and type of GPT-4 that has a good AI system. In this matter, the feature of Perplexity.ai also can provide a follow-up feature of questions, which makes search easier and quick.[28]

From 4 the types of AI above, the focus of this study is ChatGPT. It caused of ChatGPT has been selected by the researcher to investigate and explore.

2. **ChatGPT**
   a. **Definition of ChatGPT**

ChatGPT is the most advanced AI-based tool. ChatGPT was developed and pioneered by the GPT-3 architecture. GPT is a Generative Pre-Trained Transformer. The ChatGPT system is organized by a dialogue data training system. It can provide relevant and suitable conversational contextual responses. The dialogue displayed is a form of interaction. It is forth between the user and the input of the entered text data.[29]

ChatGPT was precisely developed in November 2020. GPT stands for Generative Pre-Trained Transformer under the OpenAI production. OpenAI developed a system in ChatGPT that can produce text dialogue responses similar to human responses (expressive responses).[30] In the education field, ChatGPT is widely used by learners and educators. It

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[28] Rachel Baker. "16 Best Writing Tools in 2023: Everything Writers Need to Succeed." Semrush Blog. Accessed November 25, 2023. https://www.semrush.com/blog/writing-tools/.

[29] Sarang Shaikh, et.al. "Assessing the Usability of ChatGPT for Formal English Language Learning." *European Journal of Investigation in Health, Psychology and Education* 13, no. 9 (September 21, 2023): 1938. https://doi.org/10.3390/ejihpe13090140.

[30] Mark Bedoya Ulla, et.al. "To Generate or Stop Generating Response: Exploring EFL Teachers' Perspectives on *ChatGPT* in English Language Teaching in Thailand." *Learning: Research and Practice*, September 18, 2023: 5. https://doi.org/10.1080/23735082.2023.2257252.

causes of ChatGPT can be used as an interlocutor, content creator, teaching tutor, assistant, and evaluator.[31]

b. **Terms In ChatGPT System**

ChatGPT is composed of a program and terms that have been around since 2002 and developed in 2020. There are terms programming language, algorithm, etc. [32] Specifically, several basic terms contained in the ChatGPT system are:

1) Programming Language

The programming language is a system code. It is formed in a sort of way to respond to incoming text input precisely. The programming language examples are C + +, Java, Perl, Scheme, and BASIC. These programming languages have been designed with the right type of syntax and are also precise in semantics. These examples are a form of high-level programming language in computers. Thus, it was created with a high-level programming language in ChatGPT.[33]

2) Algorithm

According to the Oxford Dictionary, the algorithm is a set of rules that must be followed when solving a programming problem. In other words, the formula algorithm of ChatGPT is structured to produce the answers expected by the user.

In algorithmic systems, there are two types of data search strategies. First, a linear search strategy. This linear search strategy is to process data in a linear or straight line. The data search is searched alternately by paying attention to the line (linear), so it is called linear data search.[34] Second, a binary search. This binary search uses a two-digit approach. Where binary means two. According to the Oxford Dictionary, binary means a

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[31] Mark Bedoya Ulla, et.al. "To Generate or Stop Generating Response: Exploring EFL Teachers' Perspectives on *ChatGPT* in English Language Teaching in Thailand." *Learning: Research and Practice*, September 18, 2023: 1. https://doi.org/10.1080/23735082.2023.2257252.

[32] John M Zelle. *Python Programming: An Introduction to Computer Science*. I. I. Wartburg College Printing, 2002. p.2.

[33] John M Zelle. *Python Programming: An Introduction to Computer Science*. I. I. Wartburg College Printing, 2002.p.4.

[34] John M Zelle. *Python Programming: An Introduction to Computer Science*. I. I. Wartburg College Printing, 2002. p.226.

form of system code in a computer that uses only the number 0 and the number 1.[35] This binary search strategy is more sophisticated and relevant if used to conduct data searches in the data search function. It can work properly.[36]

The ChatGPT algorithm is the latest version. The types of algorithms in ChatGPT range from genetic algorithms to machine learning algorithms, and dynamic programming algorithms. There are types of data structures in ChatGPT. Arrays, linked lists, stacks, queues, trees, and graphs are the standard data structure examples. ChatGPT can also be used to test cases and validate algorithms or data structures. It is for appropriate data programs.[37]

3) NLP (Natural Language Processing)

NLP is part of the ChatGPT programming language which functions as a system tool. It can produce natural language such as humans. ChatGPT can produce expressive text responses like human language. Thus, NLP functions as text generation, sentiment analysis, text classification, language translation, and answering questions. These 5 functions play an important role in the success of the NLP system.[38]

4) APIs (Application Programming Interfaces)

APIs system serve as software that functions as a tool to connect data in ChatGPT various data sources. APIs are a form of contemporary software development component. This API has presented various means

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[35] Hornby A.S. "Oxford Advanced Learner's Dictionary of Current English." In *The Dictionary*, 35. Oxford University: Oxford University Press, 2010. p. 132.

[36] John M Zelle. *Python Programming: An Introduction to Computer Science*. I. I. Wartburg College Printing, 2002. p.227.

[37] Sean A Williams. "ChatGPT for Coders." In *ChatGPT for Coders Unlock the Power of AI with ChatGPT: A Comprehensive Guide to Efficient and Effective Coding*, 2023.

[38] Sean A Williams. "ChatGPT for Coders." In *ChatGPT for Coders Unlock the Power of AI with ChatGPT: A Comprehensive Guide to Efficient and Effective Coding*, 2023.

applications that are interconnected with system devices in the ChatGPT APIs.[39]

5) IDEs (Integrated Development Environments)

IDEs (Integrated Development Environments) are software tools that serve as applications for providers of comprehensive environments. Such as in coding, testing, and debugging systems. IDEs are equipped with tools such as compilers, debuggers, code editors, and others.[40]

From 5 terms in ChatGPT systems, the terms of ChatGPT focuses on NLP (Natural Language Processing). It caused of as a writing assistant tool, ChatGPT could produce some text responses (languages).

c. **ChatGPT Usability for Students in The Education Field**

ChatGPT has used in various fields, ranging from economics to health, and education. The field of education is the most relevant in using AI tools. Such as ChatGPT technology can help the learning process.[41] According to Williams, there are functions of ChatGPT for students in the education field:[42]

1) As a Writing Assistance

Writing assistance is an AI tool that can provide direction in writing tasks. Writing tasks are such as writing essays, research reports (papers), and other tasks. In writing assistance, there is a complementary tool to check the accuracy and correctness. It can be grammar, vocabulary, and organizing ideas. The technique example is "What recommendations do you have for improving this blog post? "<essay>".

2) As a Language Translation

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[39] Sean A Williams. "ChatGPT for Coders." In *ChatGPT for Coders Unlock the Power of AI with ChatGPT: A Comprehensive Guide to Efficient and Effective Coding*, 2023.

[40] Sean A Williams. "ChatGPT for Coders." In *ChatGPT for Coders Unlock the Power of AI with ChatGPT: A Comprehensive Guide to Efficient and Effective Coding*, 2023.

[41] Sajjad Ali. "Insights into Student Perceptions: Investigating Artificial Intelligence (AI) Tool Usability in Irish Higher Education at the University of Limerick." *Global Digital & Print Media Review* VI, no. II (2023): 49. https://doi.org/10.31703/gdpmr.2023(VI-II).05.

[42] Sean A Williams. "ChatGPT for Coders." In *ChatGPT for Coders Unlock the Power of AI with ChatGPT: A Comprehensive Guide to Efficient and Effective Coding*, 2023.

In language translation, ChatGPT can translate into the desired language. The product type that can be translated is an article or other type of text. It can get a good translation if not translated into other languages in order. From English language to French, from French language to German. That can result in being poorly targeted (translations). The formula for use is: Translate to <desired language> "<text>".

3) As a Digital Tutor

A digital tutor serves as an information provider when there is a question asked textually. In this matter, students can use ChatGPT as a personal learning tool. The using technique example is "What is a ChatGPT?" Explain to a 10-year-old. It included ages to be explained and to provide answers that will be easier to understand for children (10 years old).

4) As a Q&A Session

The Q&A session are question and answer session related to subjects that are not yet known to understand the material.

5) As a Speech and Presentation Assistance

ChatGPT can be used as a student assistant in practicing speech and presentations. ChatGPT can provide feedback from the speech text form that has been sent for ChatGPT evaluation. In addition, students can apply critical thinking in reading speech texts that have been given evaluation or feedback from ChatGPT.

6) As a Digital Storytelling

ChatGPT can present folktales, fairytales, and other types of fictional stories. In this case, students can give requests by giving commands or requests via text. The command or request could use the phrase: "Write a story about the <fictional story title>".

7) As a Summarizing Articles

ChatGPT can help create a learning material summary in class. Thus, important sentences in the material can be grouped and summarized. ChatGPT can perform such commands by using the text sentence of command: Summarize "<article>". For example, summarize "Learning's Biology for Majors I, Module 5: Cell Membranes, Structure of the Cell Membrane".

8) As a Clarifying Topic

In this function, ChatGPT can be used as a tool to classify or provide understanding in a similar context. The case example is distinguishing the effects and affected of sociopaths. In giving commands in ChatGPT, it can use the sentence: "What is the difference between effect and affect?", it can be used to ask other topics.

9) As a Personalized Learning

ChatGPT can be used as a personalized learning material. It is where the students can access the needs of the learning material. In this case, ChatGPT can present such as custom reading materials, interactive quizzes and exercises, personalized feedback and suggestions, interactive and engaging learning experiences. The category in personalized learning Chat GPT can be called LMS (Learning Management System). It aims to provide general feedback directly to students who use it.

10) As a Research Assistance

In research assistants, ChatGPT has functions to present research topics, display lists of keywords, evaluate problem statements, create a bibliography, present outlines, paraphrase content, and help find relevant references. It can be also as summarizing information from the content, providing suggestions in the writing process, and providing drafts in a document. However, it should be re-examining the sources presented by ChatGPT, because the source information is still not precise.

11) As an Expand on Notes

In the expansion of the notes. It is intended to provide a more detailed and specific explanation. It can ask ChatGPT to explain in more detail about motivations and influences in people's lives as an example. In the request sentence that can be written in ChatGPT: expand on these notes, "Motivation is a concept that explains why people behave as they do".

d. **ChatGPT Drawbacks in Education Field**

The use of ChatGPT in the education field also has several drawbacks. There are some drawbacks and weaknesses in ChatGPT. One of the drawbacks is still there are unknown sources of information (reference). Thus, it can

cause invalid data in a paper or research report.[43] Here are the various weaknesses contained in ChatGPT:

1) Academic Integrity Issues

The issue of academic integrity occurs when a student asks ChatGPT an inappropriate question. Then, inappropriate responses from ChatGPT were cited by students. This can cause problems in academic integrity because students enter inappropriate input.[44]

2) Learning Assessment Becomes Unfair

Student assessment becomes unfair in educational institutions or colleges. It is because still hard to distinguish the results of student essays that are purely done by themselves and the results of student essays with the ChatGPT assistant. It can lead to biased evaluations or unknown original truth of the resulting student papers.[45]

3) Inaccurate Information

ChatGPT can produce inaccurate information. ChatGPT may disclose information or articles that are not accurate in the information source. That can lead to harm between students and teachers in retrieving information from ChatGPT. Therefore, students and lecturers need to be selective and critical in processing information from ChatGPT generated.[46]

4) Over-Reliance on AI

The use of ChatGPT as an education AI tool can be a source of student learning dependence. Students who have a deadline collect assignments and there is no other faster way to complete assignments. It leads the students to use ChatGPT as an idea-finding solution tool. This has

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[43] Abdulhadi Shoufan. "Exploring Students' Perceptions of ChatGPT: Thematic Analysis and Follow-Up Survey." *IEEE Access* 11 (2023): 38805. https://doi.org/10.1109/ACCESS.2023.3268224.

[44] Sarin Sok and Kimkong Heng. "ChatGPT for Education and Research: A Review of Benefits and Risks." *SSRN Electronic Journal*, 2023: 6. https://doi.org/10.2139/ssrn.4378735.

[45] Sarin Sok and Kimkong Heng. "ChatGPT for Education and Research: A Review of Benefits and Risks." *SSRN Electronic Journal*, 2023: 6. https://doi.org/10.2139/ssrn.4378735.

[46] Sarin Sok and Kimkong Heng. "ChatGPT for Education and Research: A Review of Benefits and Risks." *SSRN Electronic Journal*, 2023: 7. https://doi.org/10.2139/ssrn.4378735.

an impact on the lack of critical thinking skills, lack of problem-solving skills, lack of imagination skills, lack of research skills, and lack of decision-making abilities.[47]

5) Potential Bias and Falsified Information in Information Processing

ChatGPT in producing output (information) to students makes misunderstandings. Due to biased information obtained from ChatGPT. It makes students become involved in learning that has non-collaborative discussions with ChatGPT. Thus, it becomes a challenge for many universities to distinguish students' work. It occurs between students who present information and evaluation bias from the use of ChatGPT. Students need to keep checking the source accuracy obtained from ChatGPT.[48]

6) Evaluate Graduate Skill Sets

ChatGPT cannot be used to evaluate the skills and abilities possessed by students as graduate requirements. This is because ChatGPT is designed as an AI tool that provides information from the input entered. In this matter, ChatGPT can be used as a tool to develop student skills in learning, especially adaptive learning. From ChatGPT, students can develop several skills that they want to develop. Graduate skills developed include critical thinking skills, communication skills, problem-solving skills, teamwork skills, digital literacy skills, and global awareness skills. Thus, ChatGPT cannot be used as a tool to evaluate the ability of graduate students. It caused of based on constructivism theory, students must be able to be directly involved in the EFL classroom.[49]

7) Assessing Students' Learning Outcomes

The use of ChatGPT can be one of the problems in assessing student work. It contradicts with constructivist

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[47] Sarin Sok and Kimkong Heng. "ChatGPT for Education and Research: A Review of Benefits and Risks." *SSRN Electronic Journal*, 2023: 6. https://doi.org/10.2139/ssrn.4378735.

[48] Tareq Rasul, et.al. "The Role of ChatGPT in Higher Education: Benefits, Challenges, and Future Research Directions." *Journal of Applied Learning & Teaching* 6, no. 1 (May 10, 2023): 48. https://doi.org/10.37074/jalt.2023.6.1.29.

[49] Tareq Rasul, et.al. "The Role of ChatGPT in Higher Education: Benefits, Challenges, and Future Research Directions." *Journal of Applied Learning & Teaching* 6, no. 1 (May 10, 2023): 49. https://doi.org/10.37074/jalt.2023.6.1.29.

theory. The constructivist theory requires students to learn by having to interact socially with their classmates. ChatGPT causes students to learn passively by relying on the internet network, devices, and ChatGPT application. Thus, it makes a challenge for higher education institutions to assess student learning outcomes. It requires high critical thinking skills in problem-solving, namely assessing student learning. In addition, it can also be a challenge for students to evaluate the effectiveness of group learning activities, and the ability to work collaboratively.[50]

3. **Perception**

   a. **Definition of Perception**

   According to the Oxford Dictionary, perception can be interpreted as an idea, belief, or image in seeing or understanding something.[51] In this case, perception can be interpreted as an assumption and point of view.

   Meanwhile, McDonald interprets perception as a part of a uniquely individual experience. Everyone has a different view of something. In the world of psychology, every human perception is influenced by the mind. Every neural pathway in the human brain is influenced by the human mind and behavior or body. Thus, perception is influenced by human psychics.[52] In a perception, some elements must be met. It is sensory awareness or cognition of experience, personal experience, and understanding that can lead to a response.[53]

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[50] Tareq Rasul, et.al. "The Role of ChatGPT in Higher Education: Benefits, Challenges, and Future Research Directions." *Journal of Applied Learning & Teaching* 6, no. 1 (May 10, 2023): 49. https://doi.org/10.37074/jalt.2023.6.1.29.

[51] "Perception Noun - Definition, Pictures, Pronunciation and Usage Notes | Oxford Advanced Learner's Dictionary at OxfordLearnersDictionaries.Com." Accessed October 28, 2023. https://www.oxfordlearnersdictionaries.com/definition/english/perception?q=Perceptions.

[52] Susan M McDonald. "Perception: A Concept Analysis." *International Journal of Nursing Terminologies and Classifications*, November 11, 2011; 3. https://doi.org/10.1111/j.1744-618X.2011.01198.x.

[53] Susan M McDonald. "Perception: A Concept Analysis." *International Journal of Nursing Terminologies and Classifications*, November 11, 2011: 4. https://doi.org/10.1111/j.1744-618X.2011.01198.x.

According to Walker and Avant, it can be concluded that perception is the unique step of an individual or group in seeing events. It requires a process of stimulation, combining memories, and experiences to produce an understanding.[54]

b.   Perception Process

There are processes of creating a perception. Perception also requires stages before it is formed. There are 3 stages of the formation process in the perception are as follows:[55]

1) Selection

In this selection process, every stimulus that enters the human brain is like information that comes alternately. All of the information will be selected one by one. It aims to find one piece of information that needs attention. In the selection process, humans will only select information that is considered interesting. Then, humans will enter into a process of perception alignment. This perception alignment becomes the starting place for misunderstandings in interactions with others. Who come from different cultural, religious, and racial backgrounds. Thus, it can produce diverse perceptions and include various misunderstandings as well.[56]

2) Organization

In the organizing process, the perceptions that have been selected will be categorized in the appropriate place. The perception taken can always be remembered in the mind. It maintains the stability of such perceptions in the brain. These perceptions will appear characteristic. If it is an object, it will look like taste, texture, color, size, etc.

3) Interpretation

The interpretation stage is the stage of giving meaning to something that has been categorized before. It is strongly influenced by different cultures, religions,

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[54] Susan M McDonald. "Perception: A Concept Analysis." *International Journal of Nursing Terminologies and Classifications*, November 11, 2011: 7. https://doi.org/10.1111/j.1744-618X.2011.01198.x.

[55] OU Qiong. "A Brief Introduction to Perception." *Studies in Literature and Language* 15, no. 4 (September 15, 2017): 18. https://doi.org/10.3968/10055.

[56] QU Qiong. "A Brief Introduction to Perception." *Studies in Literature and Language* 15, no. 4 (September 15, 2017): 18–28. https://doi.org/10.3968/10055.

races, and backgrounds. In Western countries greeting a friend with hugs and kisses is common. It is unsimilar with Asian countries, some countries consider it like people are making love. In this interpretation, there can be misunderstandings with others. Thus, the provision of meaning (interpretation) depends heavily on the knowledge and understanding of each individual.

c. Perception Types

Several types of perceptions often appear in human social life. In addition to definitions and processes in perception. Here are 3 types of perception:[57]

1. Person Perception

Person perceptions differ from one another. Person perception comes from each individual's thoughts related to characteristics, qualities, and inner states. This has been mentioned in the process of forming a perception. It is a selection, organization, and interpretation. Every individual has a good perception of people who are considered to have good characteristics. Therefore, perceptions about people depending on each individual will be considered good or bad. This is the same as a student who also has different assessments of lecturers. It starts from how to teach lecturers, assignments given by lecturers, learning media used by lecturers, and how to respond to students who ask. In this case, students have different perceptions of using ChatGPT to help complete the writing task.

2. Situation Perception

The perception of each individual in a particular situation is different. The psycho-social sensitivity of each individual is different and influenced by social factors. Time and atmosphere situations that occur in individuals are felt differently. Students have different perceptions or views about AI in the past and present in the education field. In the past, students had the perception that AI could threaten the role of lecturers in the classroom. Meanwhile, in the present students can

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[57] MARWANA AMBO LELE. "THE STUDENTS' PERCEPTION OF THE MEDIA USED BY TEACHER IN TEACHING ENGLISH (Descriptive Research at the Eighth Grade Students of SMP Muhammadiyah 12 Makassar)." UNIVERSITY MUHAMMADIYAH OF MAKASSAR, 2018: 8-9.

have the perception that AI can help lecturers find ideas or help assess student worksheets. It can be such as checking grammar, checking plagiarism levels, and so on.

3. Social Perception

Social perception is an activity of giving a perception by observing the person in detail. Things that are observed start from the profession, impression, and character possessed by the person. In making these observations are influenced by thoughts, beliefs, emotions, intentions, and desires. In this case, a person can have a good impression and quality because people who have perceptions of the person like their behavior. Likewise, a student who likes lecturers because the way of teaching is good and fun.

d. Students' Perception

Student perception can be interpreted as a view, opinion, and assumption of students related to learning class. Student perceptions of the learning process can be influenced by the level of student satisfaction in the learning system. This can result in students getting satisfaction. It can have a positive impact on students and the surrounding environment. Students can also spread positive perceptions to the surrounding environment. There is a significant relationship between learning environment, student satisfaction, and overall achievement. Thus, the importance of a teacher's creativity in providing learning that utilizes technological developments in the millennial era.[58]

In this study, the student's perception is about the use of ChatGPT in helping complete writing tasks. Student perceptions may include approval or disapproval, reasoning, applicability, and recommendations for the ChatGPT application.

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[58] Raja Nazim Abdullah, et.al. "Students' Perception towards Modern Technology as Teaching Aids." *Asian Journal of Assessment in Teaching and Learning* 9, no. 2 (December 19, 2019): 38. https://doi.org/10.37134/ajatel.vol9.no2.5.2019.

4. Writing Task

a. Definition of Writing Task

According to the Oxford Dictionary, writing is the activity of writing books, and articles, especially as a job. It can be defined as an activity of writing, in contrast to reading and speaking. Writing has become a crucial part of scholars (writers) in institutions and other religious institutions.[59] In this matter, writing activities are used for a scholar or student in the EFL classroom.[60] Meanwhile, the definition of "task" is a piece of work that somebody has to do, especially a difficult or unpleasant one. [61]

The writing task is a task that can take the form of writing essays, short stories, articles, and others. It is assessing form in the student's ability at their school or college. There are various types and assessments in writing. That varies according to the level of education taken.[62] The writing task must be taken by a student to get grades in their semester. It is because of the provisions in the education and the research design influenced by the applicable curriculum. Curriculum is a subject that is included in a course of study or taught in a school, or college.[63]

b. Genres of Writing

There are several genres of writing in educational institutions. According to Brown, there are 3 types of writing classified based on the purpose field:[64]

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[59] H. Douglas Brown. *Language Assessment Principles and Classroom Practices*. I. I. San Francisco State University: Pearson Education, 2004. p. 218.

[60] Sri Wahyuningsih. "THE ROLE OF CORRECTIVE FEEDBACK ON ACADEMIC WRITING PERFORMANCE: EFL STUDENTS' PERCEPTIONS." *Edulingua: Jurnal Linguistiks Terapan Dan Pendidikan Bahasa Inggris* 1, no. 1 (June 1, 2020): 13. https://doi.org/10.34001/edulingua.v7i1.1167.

[61] Hornby A S. "Oxford Advanced Learner's Dictionary of Current English." In *The Dictionary*, 35. Oxford University: Oxford University Press, 2010. p.1258.

[62] H. Douglas Brown. *Language Assessment Principles and Classroom Practices*. I. I. San Francisco State University: Pearson Education, 2004.p.220.

[63] Hornby A S. "Oxford Advanced Learner's Dictionary of Current English." In *The Dictionary*, 35. Oxford University: Oxford University Press, 2010.p.359.

[64] H. Douglas Brown. *Language Assessment Principles and Classroom Practices*. I. I. San Francisco State University: Pearson Education, 2004. P.219.

1) Academic Writing

Academic writing is used in the education field. It starts from elementary schools, junior high schools, senior high schools, and colleges. The academic writing examples are papers, theses, dissertations, essays, compositions, journals, short-answer test responses, and technical reports.

2) Job-related Writing

Job-related writing is writing related to work and business. The messages (phone messages), memos (interoffice), letters/emails, job evaluation reports, project reports, schedules, labels, signs, advertisements, announcements, and manuals are examples.

3) Personal Writing

Personal writing is writing intended for personal interests. Personal writing such as letters, emails, greeting cards, invitations, messages, notes, calendar entries, shopping lists, reminders, financial documents, forms, questionnaires, medical reports, immigration documents, diaries, personal journals, and fiction (short stories, poetry).

c. **Types of Writing Task**

According to Brown, there are 4 writing types in the education field. The four writing types have different levels of difficulty. The levels are easy, medium, difficult, and very difficult. The 4 writing types are:[65]

1) Imitative

The imitative stage is the basis of writing. The basics of writing start from writing letters, punctuation, words, and short sentences. The imitative assessment examples are:

a) Tasks in (hand) Writing Letters, Words, and Punctuation.
b) Spelling Tasks and Detecting Phoneme-Grapheme Correspondences.

2) Intensive (controlled)

In the intensive (controlled) stage, students must be able to develop writing skills in producing

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[65] H. Douglas Brown. *Language Assessment Principles and Classroom Practices*. I. I. San Francisco State University: Pearson Education, 2004.p. 219-220.

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vocabulary based on the topic. The intensive stage (controlled) sentences must be written longer. The following are examples of assessment types in the intensive (controlled) stage:

a) Dictation and Dicto-Comp
b) Grammatical Transformation Tasks
c) Picture-Cued Tasks
d) Vocabulary Assessment Tasks
e) Ordering Tasks
f) Short-Answer and Sentence Completion Tasks.

3) Responsive

At this responsive stage, it needs to create paragraphs that are connected between one paragraph and another. Thus, a cohesive and coherent paragraph can be created. The types of responsive writing are narration (description), short report, lab report, summary, and short response to a paragraph. Here are the assessment types in the responsive stage:

a) Paraphrasing
b) Guided Question and Answer
c) Paragraph Construction Tasks

4) Extensive

In the extensive stage, students must be able to create a collection of writings that have been compiled. It can be created such as papers, journals, essays, books, articles, and other written works. Students have to achieve the goal of completing the writing task. The extensive assessment types are the same as at the responsive stage.

d. **Writing Task in EFL Classroom**

Writing tasks in EFL classroom have various types. It is used as a form of assessment by teachers or lecturers. Here are the types of writing tasks in EFL classrooms:

1) Essay

An essay is a short piece of writing by a student as part of a study course. Writing essays in the EFL classroom has become one form of assessment in the curriculum.[66] Writing essays can be used as a result of

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[66] Hornby A.S. "Oxford Advanced Learner's Dictionary of Current English." In *The Dictionary*, 35. Oxford University: Oxford University Press, 2010. p.497.

reflecting students' knowledge in mastery of English. Essays can be argumentative, narrative, descriptive, and expository essays.[67]

2) Book Reviews

Writing a book review can be a writing task in the EFL classroom. Writing a review of this book can be categorized in the review text.[68] General structure in review text: introduction, evaluation, interpretation, and summary. The characteristics of language features in writing book reviews are using present tense, adjectives, long and complex clauses, and metaphors.[69]

3) Analytical Exposition Text

Analytical text exposition is the same as an argumentative essay. This analytical exposition text must have a clear and directed text structure. The structure of the analytical exposition text is thesis, argument, and repetition or conclusion. The 3 structures of these parts must be fulfilled in writing analytical exposition texts.[70]

4) Group Presentation Summary

Group presentation summaries may be included in writing tasks in the EFL classroom. A summary is a short statement that gives only the main points of something, not the details.[71] Group presentation summary is an activity to summarize the results of presentations in the

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[67] Mister Gidion Marue and Marvio B Pantas. "Challenges in Descriptive Essay Writing: A Case of Indonesian EFL Leaners." *International Journal of Innovation*, 12, 8, no. 12 (2019): 88-93. www.ijicc.net.

[68]"Writing Tasks at University - The University of Nottingham." Accessed December3,2023.https://www.nottingham.ac.uk/studyingeffectively/writing/writingtasks/index.aspx

[69]"Pengertian dan Struktur Review Text | EF Blog." Accessed December 3, 2023. https://www.ef.co.id/englishfirst/kids/blog/pengertian-dan-struktur-review-text/.

[70] Lala Nurlatifah and Fazri Nur Yusuf. "STUDENTS' PROBLEMS IN WRITING ANALYTICAL EXPOSITION TEXT IN EFL CLASSROOM CONTEXT." *English Review: Journal of English Education* 10, no. 3 (October 30, 2022): 802. https://doi.org/10.25134/erjee.v10i3.6633.

[71] Hornby A.S. "Oxford Advanced Learner's Dictionary of Current English." In *The Dictionary*, 35. Oxford University: Oxford University Press, 2010. p.1495.

EFL classroom. This summary contains the opening, summary, and closing lines.[72]

5) Descriptive Text

Descriptive text has become one of the texts taught and assessed in EFL classrooms. Descriptive text can be used to describe objects, people, places, etc. Description text has only 2 structures, namely identification and description.[73]

6) Recount Text

A recount text is a text that recounts events in the past. Recount text is almost the same as narrative text, but there is no compilation structure in recount text. Text recount has three types. They are telling personal (personal letters, emails), factual events (scientific research reports), and imaginative recounts.[74]

7) Report Text

Report text is the text taught in the EFL classroom. Report text is written to report events in the form of technology, economic problems, parliament, and political parties. The structure of the report text is general classification and description.[75]

8) Song Script

A song is a short piece of music with words that you sing.[76] Then, the script is a written text of a play, film/movie, broadcast, talk, etc.[77] So, a song script is

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[72] "Writing a Summary | UAGC Writing Center." Accessed December 3, 2023. https://writingcenter.uagc.edu/writing-summary.

[73] Ari Hilman. "THE EFFECTIVENESS OF USING INSTAGRAM IN DEVELOPING STUDENTS' DESCRIPTIVE TEXT WRITING." *JALL (Journal of Applied Linguistics and Literacy)* 3, no. 1 (February 26, 2019): 36. https://doi.org/10.25157/jall.v3i1.2619.

[74] Ela Nur Laili and Tatik Muflihah. "THE EFFECTIVENESS OF GOOGLE CLASSROOM IN TEACHING WRITING OF RECOUNT TEXT FOR SENIOR HIGH SCHOOLS." *Journal of Languages and Language Teaching* 8, no. 4 (October 25, 2020): 350. https://doi.org/10.33394/jollt.v8i4.2929.

[75] Soraya Grabiella Dinamika and Ridwan Hanafiah. "SYNTACTICAL ERROR ANALYSIS ON REPORT TEXT." *Journal of Applied Linguistics and Literature,* 4, no. 2 (2019): 120. http://dx.doi.org/10.33369/joall.v4i2.7681.

[76] Hornby A.S. "Oxford Advanced Learner's Dictionary of Current English." In *The Dictionary*, 35. Oxford University: Oxford University Press, 2010. p.1419.

[77] Hornby A.S. "Oxford Advanced Learner's Dictionary of Current English." In *The Dictionary*, 35. Oxford University: Oxford University Press, 2010. p.1327.

writing that contains song lyrics that will be sung by the singer and written by the script songwriter.

9) Scientific Article

The scientific article is one form of writing in the EFL classroom. A scientific article is a type of article that must consist of several parts. The sections start with the title, abstract, introduction, method, result, discussion, and references.[78]

B. Theoretical Framework

It is known that writing skills are difficult skills to master instantly. In writing skills must pay attention to grammar arrangement, pronouns, coherent, and cohesive paragraph construction. It aims to create good and correct writing.[79] 4 types of writing types from the easiest level to the most difficult level in writing. It starts with imitative, intensive, responsive, and extensive types.[80] In addition, students must pay attention to paragraphs with support each other. That causes students to experience problems in completing writing tasks in the EFL classroom. Students can experience some demotivation or lack of motivation. Demotivation such as being not confident, afraid of commitment, fear of making mistakes, and lack of experience in writing.[81]

Therefore, this study is to explore and investigate the perceptions of English students in using ChatGPT in Islamic institution to complete writing tasks. This study is to present the benefits and drawbacks of using ChatGPT as a writing tool in EFL classrooms. The use of ChatGPT certainly contains several benefits and drawbacks according to students' perceptions. Here is a picture of this research framework.

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[78] Mikael Holmgren Caicedo. "The Story of Us: On the Nexus between Metaphor and Story in Writing Scientific Articles." *Culture and Organization* 17, no. 5 (December 2011): 410. https://doi.org/10.1080/14759551.2011.622902.

[79] H. Douglas Brown. *Language Assessment Principles and Classroom Practices*. I. I. San Francisco State University: Pearson Education, 2004. p.218.

[80] H. Douglas Brown. *Language Assessment Principles and Classroom Practices*. I. I. San Francisco State University: Pearson Education, 2004. p. 220.

[81] Wen-Chi Vivian Wu, et.al. "Free from Demotivation in EFL Writing: The Use of Online Flipped Writing Instruction." *Computer Assisted Language Learning* 33, no. 4 (May 3, 2020): 4. https://doi.org/10.1080/09588221.2019.1567556.
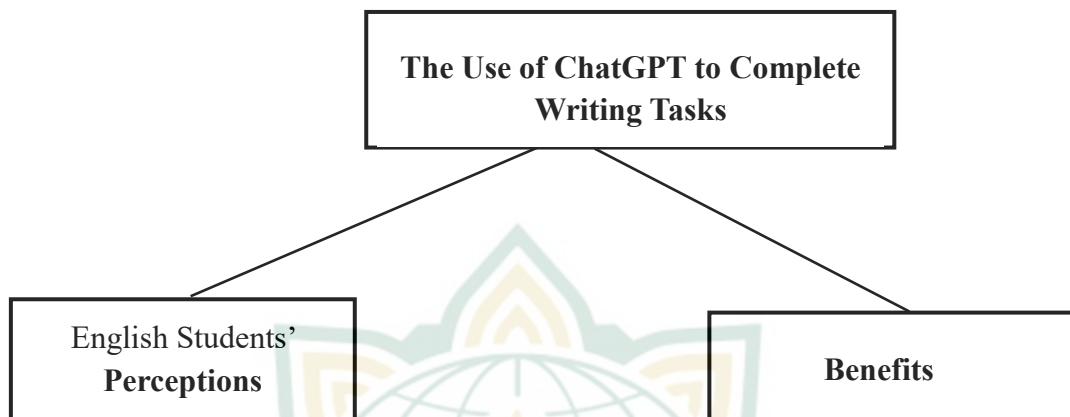
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┌─────────────────────────────────┐
│   The Use of ChatGPT to Complete │
│          Writing Tasks           │
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┌──────────────────────┐          ┌──────────────────────┐
│  English Students'    │          │                      │
│     Perceptions       │          │       Benefits       │
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Figure 2.1. Theoretical Framework of Study

C. Review of Previous Study

In this review of previous studies, 4 journal articles have similarities to the current study. The following is an explanation of previous research reviews:

First, Thi Thuy An Ngo has conducted a study entitled *The Perception by the University of the Use of ChatGPT in Education*. The study successfully investigated that students have several different perceptions from one another in the use of ChatGPT. The student's perception is related to the benefits of using ChatGPT, which is more efficient and displays many broad aspects that can be used in ideas for writing. However, ChatGPT still cannot present a reference source used in explaining a matter. It is necessary to double-check the source of information that has been presented by ChatGPT.[82] The similarities from this study that can be taken are student perceptions of the use of ChatGPT in the educational sphere as a tool for personal learning. Meanwhile, the difference is that the research aspect is not focused on academic writing but on economic aspects and others.

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[82] Thi Thuy An Ngo. "The Perception by University Students of the Use of ChatGPT in Education." *International Journal of Emerging Technologies in Learning (iJET)* 18, no. 17 (September 14, 2023): 4. https://doi.org/10.3991/ijet.v18i17.39019.

Second, research by Abdulhadi Shoufan with the research title *Exploring Students' Perceptions of ChatGPT: Thematic Analysis and Follow-Up Survey*. The result of the study is that students like ChatGPT in the ability to provide interest and motivation. It is very helpful in doing their assignments. However, ChatGPT cannot produce writing as perfectly as humans.[83] The equation that can be taken as a reference is that research focuses on student perceptions of the use of ChatGPT in education aspects. On the other hand, the difference is that the use of ChatGPT is not focused on the use of academic writing tools, but is still common as an auxiliary tool in work, learning, and life.

Third, research by Abrar Mohammad Ali entitled *An Intervention Study on The Use of Artificial Intelligence in the ESL Classroom: English Teacher Perspectives on the Effectiveness of ChatGPT for Personalized Language Learning.* The result of the study is the use of ChatGPT has been able to reduce grammar errors in student writing from the teacher's perspective. In addition, teachers' perspective on ChatGPT is very helpful in the assessment process. It can be an efficient learning tool and assessment of student writing. Teachers also agree that the use of AI tools in ChatGPT is appropriate if used in the scope of education.[84] The similarity of the study that can be taken as a reference source is the use of ChatGPT in ESL classroom. However, the difference in the research is the perspective of a teacher who is used as the main object in the study.

Fourth, research conducted by Tira Nur Fitria entitled *Artificial Intelligence (AI) technology in OpenAI ChatGPT application: A Review of ChatGPT in Writing English Essay*. The results of the study show data that ChatGPT responds textually expressively like humans and can write English essays.[85] The equation that can be used as a reference source is the use of ChatGPT in writing English essays. Meanwhile, the difference from the study does not examine student

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[83] Abdulhadi Shoufan. "Exploring Students' Perceptions of ChatGPT: Thematic Analysis and Follow-Up Survey." *IEEE Access* 11 (2023): 38805. https://doi.org/10.1109/ACCESS.2023.3268224.

[84] Abrar Mohammad Ali. "An Intervention Study on the Use of Artificial Intelligence in the ESL Classroom: English Teacher Perspectives on the Effectiveness of ChatGPT for Personalized Language Learning." *CULTURE-LANGUAGES-MEDIA*, June 4, 2023: 2.

[85] Tira Nur Fitria. "Artificial Intelligence (AI) Technology in OpenAI ChatGPT Application: A Review of ChatGPT in Writing English Essay." *ELT Forum: Journal of English Language Teaching* 12, no. 1 (March 31, 2023): 44. https://doi.org/10.15294/elt.v12i1.64069.

perceptions related to the use of ChatGPT in writing English essays. This is because the study focused on reviewing the use of ChatGPT personally only.

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