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USE OF GENERATIVE ARTIFICIAL INTELLIGENCE (AI) FOR COLLEGE STUDENTS

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Abstract: Background. The development of information technology has been very rapid lately. **Aims.** Artificial intelligence has replaced the function of the human brain in collecting and processing data. This is very useful in making it easier for students to compile scientific papers and complete the final project through reports and theses. Counseling has been carried out for students to understand the important role and obstacles that must be watched out for in using AI technology. **Method.** The method used is a PowerPoint presentation, which is done by the student group and accompanied by a lecturer as a resource person. **Result.** The material presented covered the potential and challenges of using Generative AI (GenAI) in learning in higher education, as well as providing practical and ethical guidance to utilize this technology responsibly. The AI competency framework for students consists of 3 levels. First, I need to understand AI technology; second, I need to use AI responsibly; and third, I need to evaluate AI results critically. Examples of Gen Ai applications: ChatGPT helps create task drafts and provide ideas; Grammarly checks grammar and writing style; DALL-E creates a design or presentation fiscal illustration. The conclusion and hope that can be put forward in this activity is that GenAI is a tool that can enrich the learning process, but it is important to use it ethically and responsibly. With a good understanding, GenAI can be a partner in creating

innovative and effective learning. **Conclusion.** Because ChatGPT offers benefits in accessibility, speed, and originality, it has unquestionably changed the way students approach academic assignments. However, when misused, it can compromise critical thinking and academic integrity

Keywords: Gen AI, student, responsible, critical, partner

INTRODUCTION

According to Haris (2024), the director general of higher education stated that human resource development is the key to the success of efforts towards a Golden Indonesia 2045. In dynamic technological developments and complex future challenges, ensuring that education and learning activities provide adequate provisions for Indonesian children to grow into individuals with character and qualifications is important. One of the crucial issues affecting the world of education and humanity in general is the development of artificial intelligence (AI) technology. Indonesia already has the National Strategic Plan for Artificial Intelligence of the Republic of Indonesia for 2020-2045 as the basis for policies, regulations, practices, and various activities related to the use of *AI* in Indonesia, including in the higher education sector. Nevertheless, the sophistication of *AI* brings harmful excesses, especially when faced with the issue of academic integrity and originality of scientific works. UNESCO, in 2022, published Recommendations on the Ethics of Artificial Intelligence as a manual and practical policy principle, as well as rules and guidelines for the ethical and responsible use of *AI* in the world. Unfortunately, there are no more technical and implementable guidelines for higher education that are in accordance with the context of higher education in Indonesia.

Furthermore, Sri Suning Kusumawardani (2024), Director of Learning and Student Affairs, blamed the Advancement of *Generative AI* provides new opportunities to increase the effectiveness and efficiency of the teaching and learning process in higher education. This technology can create innovative learning content, help personalize learning, and support inclusive learning. Nevertheless, *Generative AI* can also have a negative impact if not used wisely. Risks such as plagiarism and dependence on *Generative AI* reduce creativity and critical thinking qualities that should be the primary goal of learning in college. We need to overcome these challenges well and responsibly.

METHOD

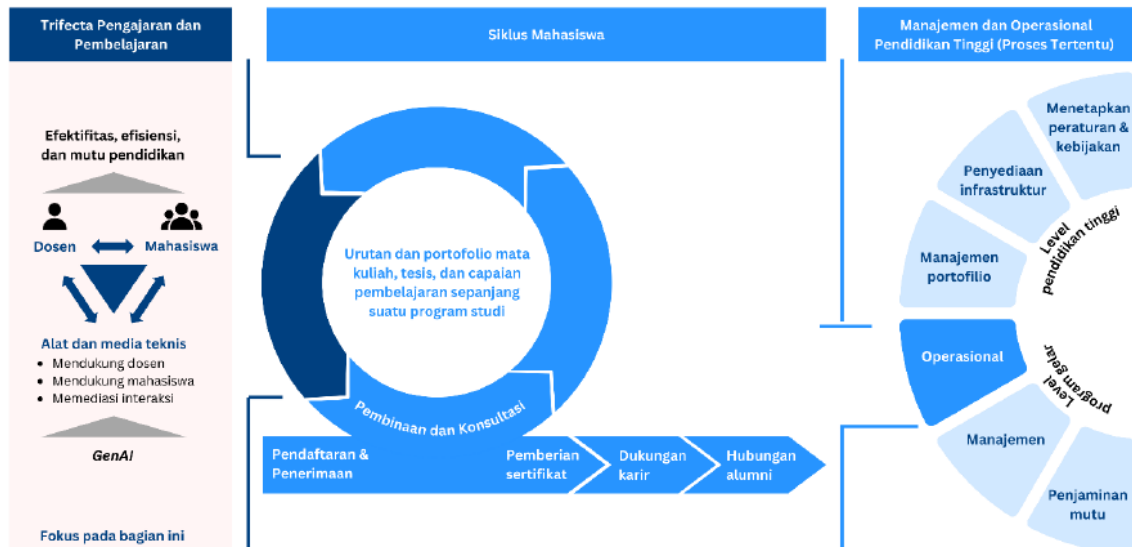
Counseling on Gen AI was carried out for students in the seventh semester ahead of the final thesis preparation project. Presentations were made by student groups with the

concept of students, by students, and for students who were accompanied by lecturers as resource persons. Presentations used PowerPoint to help clarify understanding.

RESULTS AND DISCUSSION

GenAI has the potential to be widely used in higher education learning.

Utilization of AI Genes in Higher Education



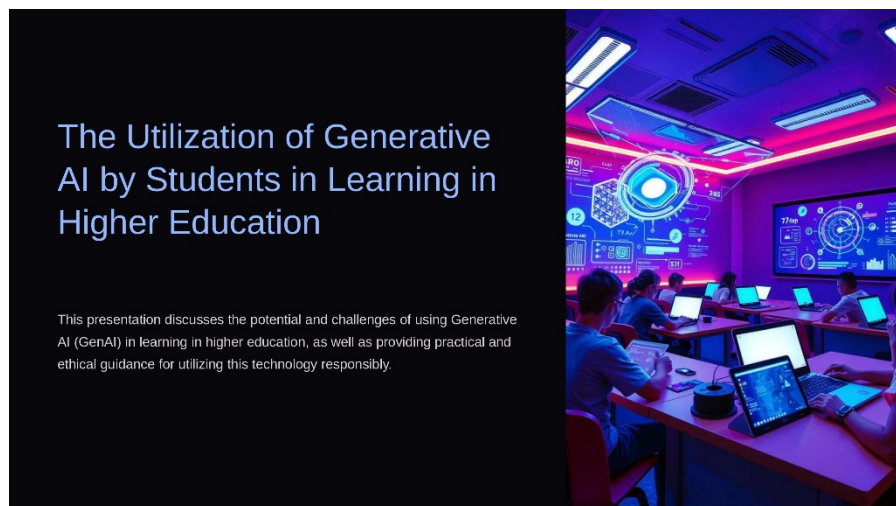
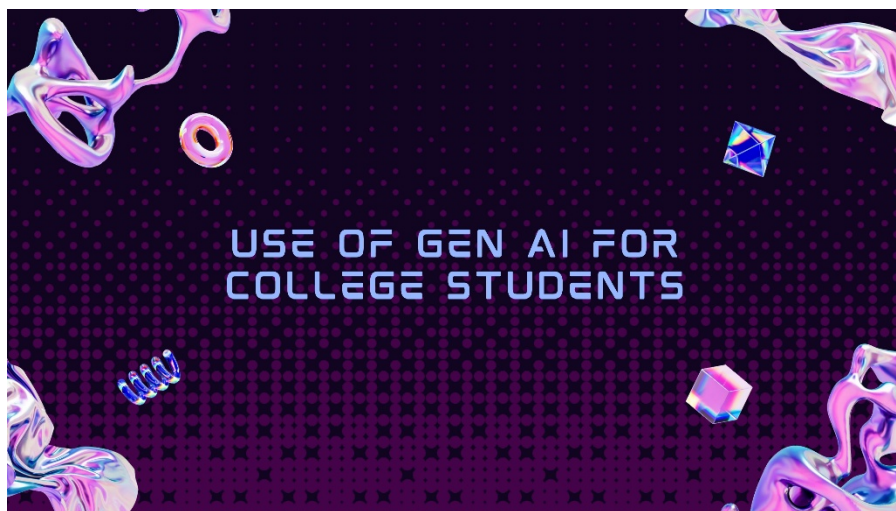
Source: Guide to Generative Artificial Intelligence (Gen AI) in Higher Education Learning.
Figure 1. Potential Utilization of AI Genes in Higher Education

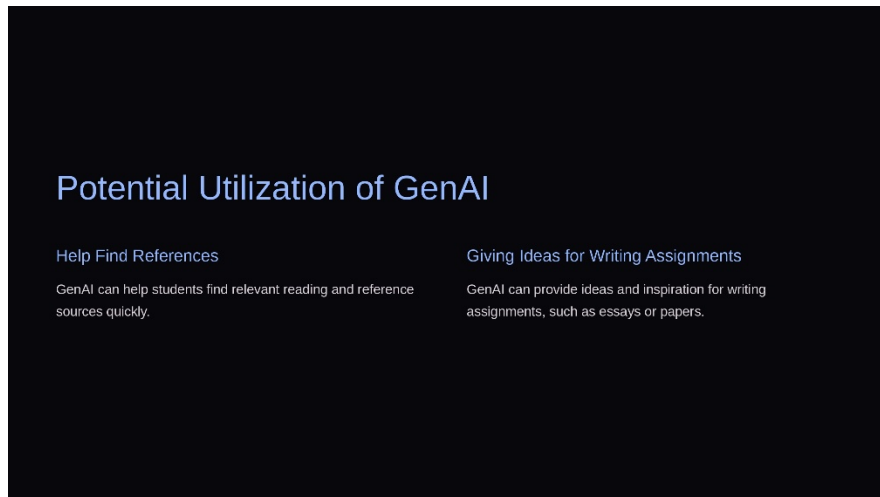
The use of GenAI can be classified as its utilization for the following purposes:

1. Use by students for learning. Students can take advantage of GenAI to gain knowledge faster and more efficiently, and student assignments can be carried out more optimally.
2. Lecturers can use GenAI to enhance the learning process. GenAI can improve the effectiveness, efficiency, and quality of higher education.
3. Use for university administration management. With GenAI, colleges can be managed more efficiently and effectively.



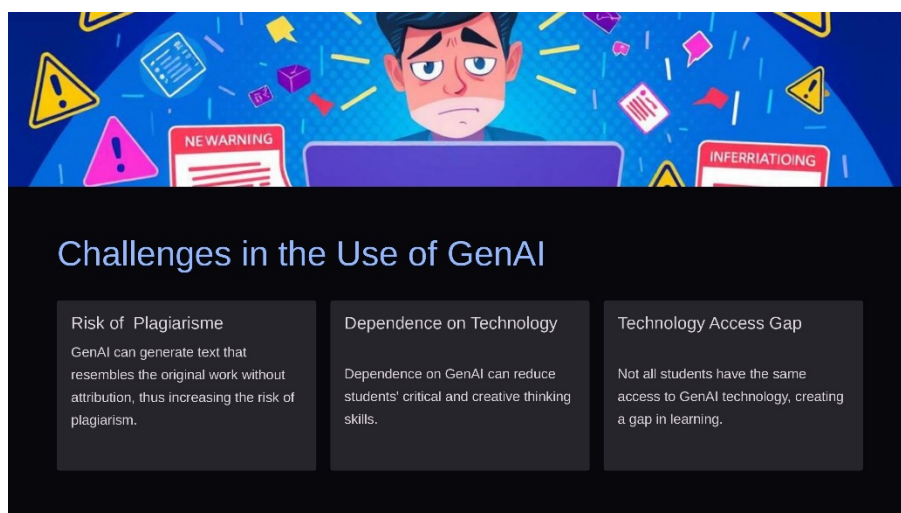
Figure 2. Presentation of the Potential Utilization of AI Genes in Higher Education by Students





Gen AI is useful for helping students find relevant reading sources and references quickly, and It can also provide ideas and inspiration for writing assignments, such as essays or papers.

Challenges in the Use of GenAI



Risk of Plagiarism

GenAI can generate text that resembles the original work without attribution, thus increasing the risk of plagiarism.

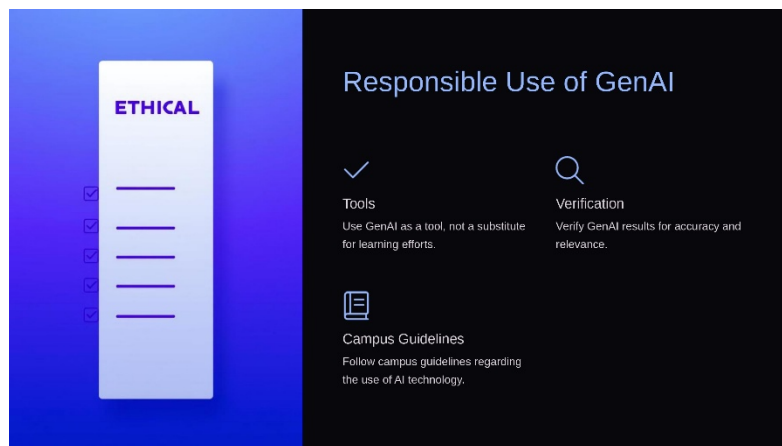
Reliance on technology

Dependence on GenAI can reduce students' critical and creative thinking abilities

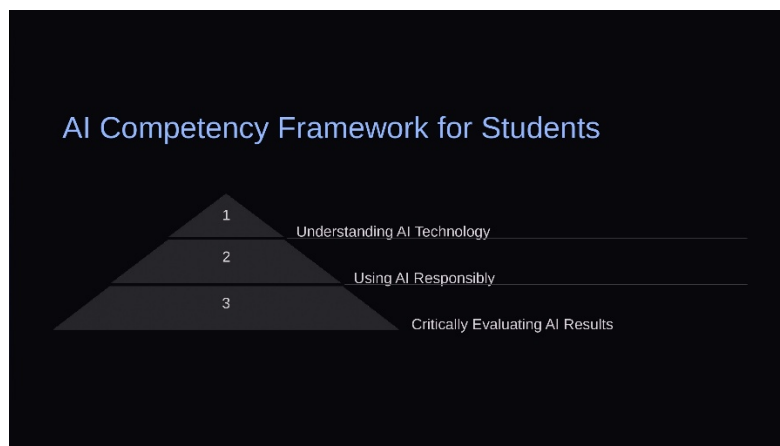
Technology access gap

Not all students have the same access to GenAI technology, creating a gap in learning.

Responsible Use of Gen AI



AI Competency Framework for Students



Help find references and sources of reading.

GenAI can help students find relevant references and literature. One example of the application of GenAI in finding references and reading sources is through applications such as Open Knowledge Maps and Connected Paper. Open Knowledge Maps allow students to explore different interrelated fields of science, visualize the relationships between concepts, and discover new relevant topics. Information obtained from Open

Examples of Gen AI Applications. Knowledge Maps can then be used to prompt on platforms such as Connected Paper. Connected Papers allow students to find scientific articles related to the topic being studied, taking into account the context and relevance to the field of research or learning.

Help provide writing ideas.

GenAI can be used to generate relevant writing ideas, and help students develop their writing. One of the GenAI applications that can be used is OpenAI ChatGPT. Students start by entering the general topics they want to write into ChatGPT, ChatGPT will then generate various ideas that can be used as inspiration. Students can choose one of the most interesting and relevant ideas to their interests, then use that idea as a basic framework to develop their writing. Students are cautious about using generative AI because they have doubts about it. Academic integrity is a significant issue, as academic institutions and teachers may view the use of ChatGPT as cheating (Baek *et al.*, 2024).

According to our findings, more than half of the students use ChatGPT for general reasons and write at least once a month, demonstrating its widespread use in American higher education. Given ChatGPT's extensive use, our findings imply that a binary strategy of either utilizing AI or outright prohibiting it in higher education institutions is impractical (Petricini *et al.*, 2023). In education, we must capitalize on artificial intelligence's advantages while acknowledging its limits because it is neither "better" nor "less" than human intellect (Cope *et al.*, 2021). Since institutional policy significantly influences students' usage of ChatGPT, it is important and timely for institutions to create and explain clear regulations regulating its use. At the moment, most students expressed ambiguity about their institution's stance on ChatGPT. Institutions, educators, and researchers should explore ways to ethically integrate generative AI, utilizing its capabilities as a tool to enhance learning. ChatGPT's benefits in helping individuals in need are clear, especially for non-native English users who reported utilizing it more often for writing than native speakers. For those who struggle with writing in English, this kind of help is essential in both academic and professional contexts (Jacob *et al.*, 2023; Tseng & Warschauer, 2023; Warschauer *et al.*, 2023).

Our topic analysis showed that non-native English speakers use ChatGPT to improve their grammar and coherence. Writing anxiety and poor self-efficacy can be experienced by non-native English speakers, who may have trouble generating content that is grammatically accurate and comprehensible (Kara, 2013; Medve & Pavici'cTakac, 2013). Applications of generative AI in the writing process range from planning to editing, and they may enhance not only the final caliber of the output but also raise students' ChatGPT's benefits in helping individuals in need are evident, especially for non-native English users who reported utilizing it more often for writing than native speakers. For those who struggle with writing in English, this kind of help is essential in both academic and professional contexts (Jacob

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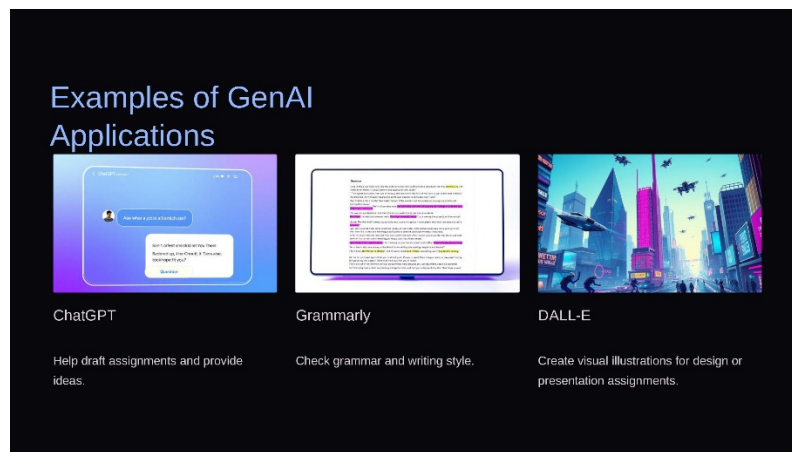
Assist in writing and composing presentations and multimedia.

GenAI can help students create writing, make presentations by providing appropriate design and content suggestions and compiling multimedia content more efficiently. One of the GenAI applications that can be used is Magic Slide, which helps students create initial drafts of their presentations. Students can use prompts such as "Help me make a presentation on 'The Impact of Climate Change on Marine Ecosystems'." Magic Slides will provide slide design suggestions that match the recommended theme and content based on the information entered, so students can quickly put together an interesting and informative presentation.

Produce learning practice materials. GenAI can create practice questions that are tailored to the learning needs of students. One of the GenAI applications that can be used is QuizBot to create practice questions that are relevant to their study topic. Students can use prompts with the desired topic, for example "Microeconomic Theory." QuizBot will use generative algorithms to generate a collection of questions on the desired topic. These questions can be tailored to the desired level of difficulty or the specific focus needed, such as the application of concepts or case analysis.

Helps understand difficult learning material.

GenAI can explain difficult material concepts in a more understandable way to help students understand the subject matter. One of the GenAI applications that can be used is ChatGPT. Students can start by entering concepts or topics that are difficult to understand, such as "Quantum Theory in Physics." Using ChatGPT, students can submit prompts such as "Please explain in simple terms about 'Quantum Theory in Physics'." ChatGPT will generate explanations that are easier to understand, and break down complex concepts into simpler language. This explanation can include analogies, examples, or illustrations that help students gain a better understanding of the difficult subject matter.



According to our findings, more than half of the students use ChatGPT for general reasons and write at least once a month, demonstrating its widespread use in American higher education. Given ChatGPT's extensive use, our findings imply that a binary strategy of either utilizing AI or outright prohibiting it in higher education institutions is impractical (Petricini et al., 2023). In education, we must capitalize on artificial intelligence's advantages while acknowledging its limits because it is neither "better" nor "less" than human intellect (Cope et al., 2021). Since institutional policy significantly influences students' usage of ChatGPT, it is important and timely for institutions to create and explain clear regulations regulating its use. At the moment, most students expressed ambiguity about their institution's stance on ChatGPT. Institutions, educators, and researchers should explore ways to ethically integrate generative AI, utilizing its capabilities as a tool to enhance learning.

In using Gen AI, there are several things to consider, including:

1. Respect exam laws and regulations It is important to always comply with applicable laws and regulations in the academic and exam context.
2. Reflection on your learning goals: Always think again and set your learning goals so ChatGPT can be more directed and valuable.
3. Use ChatGPT as a writing partner. Use ChatGPT to help in the writing process, whether for brainstorming ideas, drafting drafts, or improving writing.
4. Use ChatGPT as a learning partner. Think of ChatGPT as a tool that can provide explanations, examples, and practice questions to deepen your understanding of the studied material.
5. Iterate and discuss with ChatGPT Use ChatGPT to discuss and iterate on concepts that are difficult to understand. It helps clarify and strengthen understanding.

6. Summarize learning materials with ChatGPT ChatGPT can help summarize learning materials, making them easier to remember and understand
7. Improve your coding skills with ChatGPT. Use ChatGPT to improve your coding skills by asking for code samples, explanations, or debugging assistance.
8. Be aware of the risks when using ChatGPT. Recognize and understand the risks that may arise when using this technology, such as inaccurate information or bias in the data.
9. Read the checklist at the end of this section before using ChatGPT. Be sure to read and understand the checklist provided at the end to maximize the benefits and reduce the risks of using ChatGPT.

CONCLUSION

Because ChatGPT offers benefits in accessibility, speed, and originality, it has unquestionably changed the way students approach academic assignments. However, when misused, it can compromise critical thinking and academic integrity. To encourage the moral and efficient use of AI in education, universities should create rules and execute AI literacy programs. Future studies should concentrate on the long-term impacts of AI-assisted learning and create plans to strike a balance between the use of technology and conventional teaching techniques.

Recommendations for Students

1. This recommendation aims to help students effectively utilize ChatGPT technology in their learning process. By understanding and following these guidelines, students can ensure that they use ChatGPT ethically and productively, whether as a writing tool, learning partner, or coding skill enhancer.
2. It is also recommended that it is important to conduct personal reflection, comply with laws, and academic and ethical regulations, and be aware of the potential risks that exist so that students can maximize the benefits gained from this technology while minimizing the possibility of negative impacts

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