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STUDENT'S PERSPECTIVE ABOUT USAGE OF CHATGPT IN HIGHER EDUCATION

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Abstract
ChatGPT, an AI tool that was developed by OpenAI, has experienced a rise in its adoption to higher education due to its versatile application and ease of access. Lot of researches has been conducted on its technological aspects and in pedagogy to assist learning however little is done to evaluate about students perspective of this tool and how extensively they are using it in their study. The current study evaluated student's perspective about usage of ChatGPT in higher education. The objectives of the study were; (a) to evaluate students' perceptive of the effectiveness of ChatGPT as a learning tool in higher education and (b) to explore the influence of ChatGPT on students' engagement and motivation in their coursework. For data collection, survey method was used. A questionnaire was developed. Online survey was used to collect data from respondents by using convenience sampling. Collected data was analyzed using descriptive and inferential statistical techniques (i.e., Mean, SD and sample t-test). This study provides insight into students' perspective and experiences with ChatGPT. It was obvious through the analysis of demographic data that every student in sample was aware of ChatGPT as AI tool and 96.7% of them were using it as an aid to their study. It is helpful in providing clear explanation of difficult concepts and to clarify queries regarding course content. Findings highlight its advantages and disadvantages as viewed by students. ChatGPT is useful AI aid that provides instant responses to students' queries. It is not a replacement to teacher as it is unable to provide real world live examples to clarify abstract ideas. It is an assistance to support the learning. Moreover, further research is necessary to enhance AI use in education, directing to improve learning outcomes well.

1. INTRODUCTION

ChatGPT is a powerful conversational AI model created by OpenAI that generates text responses in natural language conversations that are human-like by utilizing deep learning techniques, namely transformer structures. As an expansion of the GPT-3 (Generative Pre-trained Transformer 3) model, which is well-known for its capacity to comprehend and generate coherent text in response to cues, it was first unveiled in June 2020. Since its launch, ChatGPT has undergone a number of major improvements and upgrades as OpenAI works to improve its

functionality and efficiency. ChatGPT is still one of the top conversational AI models, driving advancements in natural language creation and understanding as of its most recent update in September 2025. The fact that it is still being developed and used indicates how much demand there is for intelligent conversational bots that can have meaningful conversations with users.

Education is one of the many domains where artificial intelligence (AI) has found several applications thanks to recent developments in machine learning (ML) (Zawacki-Richter, Marín, Bond, & Gouverneur, 2019). Universities are expanding their investigation into the application of AI to assist faculty in their research and teaching duties as well as to enhance the student experience. It already has a big influence on education, especially on teaching, learning, and administration (Chen, Chen, & Lin, 2020).

After being made available to the public for the first time in November 2022, the AI chatbot has grown to be one of the most popular consumer apps ever. ChatGPT reached 100 million users in less than two months after its launch. Because of the vast quantity of data that it has been trained on, this refined language model can comprehend user requests and respond with replies that are human-like. ChatGPT has the ability to completely change the way we work and live since it can write essays, summarize texts, and answer queries. With so many features, ChatGPT is a highly adaptable chatbot. Depending on the situation, it may write student essays, compose music, develop and debug computer code, and even provide exam answers. In higher education, ChatGPT in particular has been used for a variety of objectives, including as assignment feedback, facilitating collaborative learning, and customizing learning experiences.

As seen by earlier studies, however, educators have voiced concerns and worries about the use of ChatGPT. Inaccurate information, unfair learning assessments, concerns with academic integrity, and an excessive dependence on AI were the key concerns associated with these hazards. One example is the abundance of media coverage of several instances of misbehavior and dishonesty. Educational institutions have made it illegal to utilize ChatGPT, a relatively new chatbot, due to rising worries about its responsible usage and possible exploitation. Teachers fear that their pupils may become overly dependent on ChatGPT in order to produce appropriate messages quickly, possibly outsourcing their labor to the AI system. In addition, questions have been made about things like plagiarism, false information, and improper reference. To maximize ChatGPT's advantages while limiting its disadvantages, it is imperative to consider the consequences of incorporating it into the educational process.

Studies that explore students' real experiences utilizing ChatGPT in an educational setting are few and far between, despite rising concerns and the necessity for in-depth research. The purpose of this study is to evaluate how students see utilizing ChatGPT in the classroom. It will specifically address how they perceive the effectiveness of tool overall, as well as the advantages they see and its influence on students engagement and motivation in studies.

A variety of perspectives are presented in the collection of papers on ChatGPT's function in education. Firat's (2023) research, which included opinions from academics and students in four different nations, emphasized topics including the development of educational institutions and the requirement for more study on the moral implications of artificial intelligence. Positive opinions and usage intentions were found when Bonsu & Baffour-Koduah (2023) looked at how Ghanaian students felt about ChatGPT, although there was no clear link. Ngo (2023) provided insight on the possible integration of ChatGPT into educational procedures by focusing on the opinions of university students about it. All of these researches contribute to our understanding of ChatGPT's effects in various learning environments.

Through this study, an effort has been made to close the current knowledge gap and advance the field's understanding of artificial intelligence in the classroom. Furthermore, as students are the key consumers and supporters of these technologies, understanding how they see ChatGPT is essential. Education experts,

scholars, and policymakers will find great value in the knowledge this study provides, as it will clarify the consequences of incorporating ChatGPT into classroom environments and provide guidance for the appropriate and sustainable use of this technology.

Objectives of the Study

Following were the objectives of study:

i. To evaluate students' perspective of the effectiveness of ChatGPT as a learning tool in higher education.

ii. To explore the influence of ChatGPT on students' engagement and motivation in their coursework.

Research Questions

The study's research questions were as follows:

RQ 1.1: How do students perceive the impact of ChatGPT on their understanding of course material?

RQ 1.2: What are students' views on the advantages and disadvantages of using ChatGPT as compared to traditional learning resources?

RQ 2.1: How does the use of ChatGPT affect students' interest and participation in their coursework?

RQ 2.2: In what ways does ChatGPT influence students' motivation to complete assignments or engage in classroom discussions?

RQ 2.3: What is the students' perspective of ChatGPT's role in enhancing their overall academic experience and engagement levels?

Literature Review

Artificial intelligence (AI) techniques, such as language models, have the power to transform academic writing by raising its standard and productivity. Various researches have looked at how students feel about using AI-assisted tools for academic writing and how they reflect on it (Dong, 2023). Before ChatGPT was created, Sengupta and Chakraborty's (2020) examined the usage of chatbots in higher education and discovered that they can be a useful tool for raising student happiness and engagement levels. The study also showed that by responding to commonly requested queries, chatbots might lighten the burden of university employees. Additionally, Song & Xiong (2021) looked at how students felt about a chatbot in a language-learning environment. According to the study, learners thought favorably of the chatbot and had a favorable attitude regarding it.

Students stated worries about possible long-term detrimental consequences on their academic writing abilities, nevertheless the advantages. They stressed that in order to guarantee that students keep improving their abilities; they must receive training on how to use AI technologies effectively in their academic writing assignments, **(Carobene, Padoan, Cabitza, Banfi, & Plebani**, 2024). Concerns over the possible drawbacks of depending too much on AI technologies for academic writing have been voiced by certain students (Dong, 2023). They believed that utilizing AI technologies would impair their capacity for critical thought, the evolution of their own writing style, and self-sufficient problem-solving. They appreciate the benefits of AI tools in improving their writing performance and efficiency, (Garrel & Mayer, 2023; Dong, 2023; Song & Song, 2023). They value the individualized feedback and timely support provided by AI tools (Dong, 2023). However, they also recognize the importance of maintaining their own writing style and honing their critical thinking skills (Carobene et al., 2024). According to Winkler and Sollner (2018), when chatbots offered accurate, pertinent information and were easy to use, students' opinions of them were typically favorable.

Additionally, studies have looked at how chatbots affect learning objectives for students, such understanding and knowledge retention. Researchers Ahmad, Abdallah, Abbasi, Abdallah (2023) and Deng & Yu (2023) discovered that university students who engaged with a chatbot had enhanced learning results. The literature also highlights the potential of chatbots to increase student motivation and engagement. According to Følstad et al., (2021), chatbots have the potential to boost engagement levels in online learning settings by offering tailored feedback and help, in addition to fostering social presence.

Universities have recently been concerned about the rise of free software like ChatGPT, since more than a million people downloaded it in the first week (Stokel-Walker 2022). One of the first studies to examine the potential effects of this is done by Cotton, Cotton, and Shipway (2023). While they recognize the problems with potential essay generation, they also make it clear that there are advantages to using these technologies in higher education, including the ability to support group projects, increase the use of game-based assessment, and even assist staff with grading. Javaid, Haleem, Singh, Khan, & Kahn, (2023) Javaid et al. (2023) also took into account the possible advantages and mentioned that Chat GPT can serve as a "virtual teaching assistant" to aid students in comprehending ideas and concepts.

The advantages and disadvantages of utilizing large language models like ChatGPT in teaching have been examined in other recent research. For instance, Willems (2023) explored the broader ethical consequences of deploying such models at universities, while Kasneci, Seßler, Küchemann, Bannert, Dementieva, Fischer, & Kasneci, (2023) looked at the possible advantages and disadvantages of ChatGPT for education. Malinka, Perešíni, Firc, Hujňák, & Januš, (2023) explored the educational impact of ChatGPT and questioned whether artificial intelligence is ready to receive a university degree. A critical analysis of ChatGPT and its possible effects on conventional evaluations in higher education was conducted by Rudolph, Tan, & Tan, (2023). Halaweh (2023) concentrated on the conscientious use of ChatGPT in the educational setting and put forth methods to guarantee that the technology is employed in an efficient and morally sound manner. The incorporation of ChatGPT into language courses and programs in higher education is examined by Baskara (2023), along with the possible advantages and difficulties of doing so.

The study by Kostka and Toncelli (2023) investigates how ChatGPT might be used to improve teacher responsibilities in English language instruction. The authors have discovered that ChatGPT is particularly helpful for generating original, human-like answers to queries and conversing with users in a casual way. Ngo (2023) carried up a research with 200 Vietnamese university students as a sample that had previously used ChatGPT for educational reasons. The study's findings indicated that students' opinions of ChatGPT usage were more positive than usual.

Tlili, Shehata, Adarkwah, Bozkurt, Hickey, Huang, & Agyemang, (2023) used a case study to investigate ChatGPT in schooling. Their conclusions offered some recommendations for the safe uptake and application of ChatGPT in the classroom. According to Pavlik (2023), teachers have to instruct students on how to use generative AI effectively. In the same way, Khalil and Er (2023) investigated ChatGPT's uniqueness in content generation. They discovered that ChatGPT could produce unique content that was difficult to tell apart from works authored by humans. The study's conclusions aligned with those of studies conducted by Xu, Su, Zhang, Wu, & Xu, (2024), Zhai (2022), Qadir (2022) and Baidoo-Anu & Owusu Ansah, (2023). Even with ChatGPT's increasing popularity and study, little is known about what it's like for students to use it in a classroom setting. In order to close this gap, the purpose of this study is to evaluate how students feel about utilizing ChatGPT for education, emphasizing the advantages, difficulties, and potential fixes. The results of this study will offer insightful information to researchers, educators, and legislators, promoting a better comprehension of the consequences of incorporating ChatGPT into learning environments and directing the technology's responsible and efficient application.

Method

This was a quantitative research study where data was collected via online survey with a 5-point Likert scale questionnaire. The population of this research study included MS/M.Phil students. of all departments of University of Jhang. Convenience sampling was used. The sample contained MS/M.Phil students depending upon their availability and willingness to participate in research. After collecting the data, it was put into

SPSS to analyze. Descriptive and inferential statistics were used to analyze the data. Results were drawn and were presented in tabular forms.

Findings

During the online survey 120 students responded. 40% students were of age group 18 to 25 years while 50.8 students were of age group 25 to 35 years. Only 9.2 % students were above 35 years of age. Approximately one third of respondents were male and two third were female.

In response to the question "Do you know about ChatGPT?" all 120 participants gave a "YES" response, showing that they are aware of ChatGPT. All participants in this study were familiar with ChatGPT. This suggests that the study's population is likely composed of individuals who are already aware of and possibly use ChatGPT, which could be relevant for understanding their responses to subsequent questions. 96.7% of the total indicated they had utilized ChatGPT by selecting "YES." Four participants, or 3.3%, answered "NO," showing that some have not utilized ChatGPT.

Factor-wise analysis of responses is described in tabular form along with descriptive and inferential statistics.

Table 1 Factor 1: Understanding of Course Material

Statements	Frequency	Mean	Std. Deviation	t	Sig. (2-tailed)
ChatGPT helps me to understand complex course materials.	120	3.80	1.14	-.07	.95
ChatGPT helps me to quickly understand new concepts.	120	3.87	.78	1.74	.08
ChatGPT offers concise explanations that help me to understand the assignments.	120	4.13	.73	.55	.58
ChatGPT aids in my comprehension of the main ideas in the texts.	120	4.07	.89	1.9	.057
I trust on ChatGPT to clarify queries about course content.	120	4.13	.73	1.35	.18
ChatGPT facilitates my ability to link abstract ideas with real-world applications.	120	3.87	.97	-.16	.87
ChatGPT provides personalized feedback that increases my knowledge.	120	3.91	.85	.49	.62

Table 1 demonstrated the factor which was about understanding of course material. This table displayed the findings of an online survey conducted to determine how well ChatGPT explains course materials to students. Most of the students agree that ChatGPT helped them to understand complex course materials, to quickly understand new concepts, and comprehend main ideas in texts.

Majority of the students agreed on the statement "ChatGPT offers concise explanations that help me understand assignments" (mean: 4.13), (Research Question 1, Objectives 1; Table 1).

Students agreed that ChatGPT is helpful in clarifying queries about course work. "I trust ChatGPT to clarify queries about course content" (mean: 4.13), (Research Question 1, Objectives 1; Table 1).

The lowest rated statement by students was: "ChatGPT facilitates my ability to link abstract ideas with real-world applications" (mean: 3.87). Overall, the results suggested that students find ChatGPT to be a helpful tool in understanding course materials, mainly in providing concise explanations and clarifying queries.

Table: 2 Factor 2: Advantages and Disadvantages of using ChatGPT

Statement	Frequency	Mean	Std. Deviation	t	Sig. (2-tailed)
ChatGPT helps me understand topics that are not well covered in my textbooks.	120	3.73	.75	-.17	.86
ChatGPT answers my inquiries more quickly than waiting for a professor's response.	120	3.87	1.12	-.53	.59
ChatGPT is more accessible than materials found in physical libraries.	120	3.89	.8	2.1	.04
ChatGPT provide more up-to-date information compared to textbooks.	120	4.07	.62	1.3	.18
ChatGPT helps me find supplementary resources quicker than traditional methods.	120	4.02	.78	.81	.42
I worry about becoming too dependent on ChatGPT for my studies.	120	4.07	.99	.15	.9
ChatGPT lacks the detailed information found in academic journals.	120	3.89	.8	-.03	.98

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Table 2 described the factor advantages and disadvantages of using ChatGPT. (Research Question 2, Objectives 1; Table 2).

Following Advantages of using ChatGPT were acknowledged by students.

- "ChatGPT helps me understand topics that are not well covered in my textbooks" (mean: 3.73).
- "ChatGPT answers my inquiries more quickly than waiting for a professor's response" (mean: 3.87).
- "ChatGPT is more accessible than materials found in physical libraries" (mean: 3.89, $p < 0.05$).
- "ChatGPT provide more up-to-date information compared to textbooks" (mean: 4.07).
- "ChatGPT helps me find supplementary resources quicker than traditional methods" (mean: 4.02).

Disadvantages of using ChatGPT highlighted by students were;

- "I worry about becoming too dependent on ChatGPT for my studies" (mean: 4.07).
- "ChatGPT lacks the detailed information found in academic journals" (mean: 3.89).

Overall, the findings implied that students view ChatGPT as a useful tool that supports their learning, especially when it comes to offering prompt responses, current information, and additional resources. Regarding potential

dependency on ChatGPT and its shortcomings in offering comprehensive information, they are unbiased.

Table: 3 Factor 3: Student's interest and Participation

Statements	Frequency	Mean	Std. Deviation	t	Sig. (2-tailed)
ChatGPT makes me more involved in my coursework.	120	3.98	.89	.52	.6
ChatGPT inspires me to explore topics outside the coursework.	120	3.84	.97	-.13	.89
ChatGPT makes learning more collaborative and engaging.	120	3.98	.84	-.48	.63
I am more likely to participate in classroom debates after using ChatGPT.	120	3.91	.95	.4	.69
ChatGPT helps me to be attentive during study hours.	120	3.91	.79	.72	.48
ChatGPT makes learning more pleasurable.	120	3.87	.87	.25	.8
I am more involved in my coursework due to the help provided by ChatGPT.	120	3.11	1.07	-.18	.86

Table 3 describes the student's interest and participation in course work due to usage of ChatGPT. The influence of ChatGPT on students' involvement and participation in coursework is not statistically significant, but overall the results indicate that students perceive it to be a useful tool. (Research Question 1, Objectives 2; Table 3).

Table 4 Factor 4: Student's Motivation

Statements	Frequency	Mean	Std. Deviation	t	Sig. (2-tailed)
Using ChatGPT enhances my motivation to complete assignments.	120	3.71	1.01	1.17	.24
I am more likely to finish my homework on time when I use ChatGPT.	120	3.62	1.13	-.09	.93
ChatGPT helps me to concentrate on my assignments.	120	3.78	.82	.03	.98
Using ChatGPT reduces my delay on assignments.	120	4.00	.85	.48	.63
ChatGPT helps me to create and accomplish study goals.	120	3.56	1.05	-.44	.66
ChatGPT provides the inspiration I need to work on challenging tasks.	120	2.84	1.17	-1.9	.06
ChatGPT encourages me to go	120	3.40	1.23	.12	.90

over and revisit my class notes.

Table 4 describes how ChatGPT influence students' motivation to complete assignments or engage in classroom discussions. (Research Question 2, Objectives 2; Table 4).

The results showed that Students agree about following statements:

- "ChatGPT helps me to concentrate on my assignments" (mean: 3.78).
- "Using ChatGPT reduces my delay on assignments" (mean: 4.00).

Students were neutral about:

- "Using ChatGPT enhances my motivation to complete assignments" (mean: 3.71).
- "I am more likely to finish my homework on time when I use ChatGPT" (mean: 3.62).
- "ChatGPT helps me to create and accomplish study goals" (mean: 3.56).
- "ChatGPT encourages me to go over and revisit my class notes" (mean: 3.40).

1. The statement with the lowest mean score was:

- "ChatGPT provides the inspiration I need to work on challenging tasks" (mean: 2.84).

Overall, the results suggested that ChatGPT had a positive impact on students' productivity and study habits, but the impact on motivation was less clear.

Table: 5 Factor 5: Academic Experience and Engagement Level

Statement	Frequency	Mean	Std. Deviation	*t*	Sig. (2-tailed)
ChatGPT has improved my overall educational knowledge.	120	3.73	.94	-.56	.57
ChatGPT enhances my interest in the topic I study.	120	3.73	.84	.55	.58
The use of ChatGPT has improved my ability to perform well educationally.	120	3.58	1.14	.02	.98
ChatGPT has helped me to improve my study habits.	120	3.71	1.04	-.63	.53
I feel more ready for exams when I use ChatGPT.	120	3.40	1.07	-1.04	.29
ChatGPT has helped me to enhance my research abilities.	120	3.58	.81	-.05	.96
Using ChatGPT has improved my interaction with the virtual course content.	120	3.91	.85	.87	.38

Table 5 described students' academic experience and engagement level while using ChatGPT in studies. (Research Question 3, Objectives 2; Table 5).

The results showed that Students agreed about following statements:

- "ChatGPT has improved my overall educational knowledge" (mean: 3.73).
- "ChatGPT enhances my interest in the topic I study" (mean: 3.73).
- "ChatGPT has helped me to improve my study habits" (mean: 3.71).
- "Using ChatGPT has improved my interaction with the virtual course content" (mean: 3.91).

Students were neutral about following statements:

- "The use of ChatGPT has improved my ability to perform well educationally" (mean: 3.58).

- "ChatGPT has helped me to enhance my research abilities" (mean: 3.58).
- "I feel more ready for exams when I use ChatGPT" (mean: 3.40).

Overall, the results suggested that ChatGPT had a positive impact on students' academic experience, particularly in improving their overall knowledge, interest in the topic, and interaction with virtual course content. However, the impact on performance, research abilities, and exam readiness was less clear.

Table: 6 Summaries of Factors

N	Statements	Frequency	M	SD	t	Sig. (2- tailed)
1	Understanding of Course Material	120	.01	1.05	.09	.93
2	Advantages and Disadvantages of using ChatGPT	120	.19	.82	1.64	.1
3	Student's interest and Participation	120	.01	.93	.05	.96
4	Student's Motivation	120	.03	1.12	.23	.82
5	Academic Experience and Engagement Level	120	-.04	1.3	-.36	.72

Table 6 described the results of all 5 factors.

The mean of factor "Understanding of Course Material" was (.01), standard deviation was (1.05) and the result of t-test was (.09). ChatGPT has a negligible impact on students' understanding of course material. The mean difference is close to zero, and the p-value is high, indicating no significant difference.

The mean of factor "Advantages and Disadvantages of using ChatGPT" was (.19), standard deviation was (.82) and the result of t-test was (1.64). ChatGPT has a slight advantage in terms of its benefits and drawbacks. Although the p-value is not significant, it's the closest to significance among the five factors.

The mean of factor "Student's interest and Participation" was (.01), standard deviation was (.93) and the result of t-test was (.05). ChatGPT has a negligible impact on students' interest and participation. The mean difference is close to zero, and the p-value is high, indicating no significant difference.

The mean of factor "Student's Motivation" was (.03), standard deviation was (1.12) and the result of t-test was (.23). ChatGPT has a slight positive impact on students' motivation, but it's not statistically significant.

The mean of factor "Academic Experience and Engagement Level" was (-.04), standard deviation was (1.3) and the result of t-test was (-.36). ChatGPT has a slight negative impact on academic experience and engagement level, but it's not statistically significant.

Conclusion

The research study regarding student's perspective about usage of ChatGPT has given insightful and meaningful results, providing enough evidence that helps in viewing usage of AI tools in higher education. Through statistical analysis of various tables, the study demonstrates about the student's awareness regarding AI tools and how they are using it as an aid to their studies.

It was obvious through the analysis of demographic data that every student that participated in survey was aware of ChatGPT as AI tool and 96.7% of students were using it as an aid to their study. Through this we can conclude that students are well aware of AI tools and they

are using these tools to facilitate their learning. Researcher's main focus was on ChatGPT and its usage in higher education. ChatGPT is found helpful in providing clear explanation of difficult concepts and to clarify queries regarding course content. ChatGPT is useful AI aid that provides instant responses to students' queries and thus enhances their learning and ability to understand difficult concepts. It is not a replacement to teacher as it is unable to provide real world examples to clarify abstract ideas. It is an assistance to support your learning.

The study also highlighted the advantages and disadvantages of usage of ChatGPT. The most important advantages of using ChatGPT are that it provides detailed explanation of topics, provides quicker response, easily accessible, provides up to date information and is a source to provide supplementary details to a topic. While some of its disadvantages are also highlighted that student becomes too much dependent on ChatGPT and it can't provide enough detail that can be found in academic journals. It derives information from already existing data set rather than creating new one. Only human mind is capable to produce new ideas. It can be concluded from results that ChatGPT had a positive impact on students' productivity and study habits, but the impact on motivation was less clear. The results also suggested that ChatGPT had a positive impact on students' academic experience, particularly in improving their overall knowledge, interest in the topic, and interaction with virtual course content. However, the impact on performance, research abilities, and exam readiness was less clear.

It can be concluded from research that students are well aware of existence and usage of ChatGPT as AI tool and they are extensively using it in their studies. It is facilitating them in understanding course material, increasing students' productivity, enhances students' academic experience while impact on motivation is not clear from results. Although it has few disadvantages but its advantages are more than this. Its advantages can be enhanced by its proper use and policies regarding its usage.

REFERENCES

Ahmad M. N, Abdallah SA, Abbasi SA, Abdallah AM. Student perspectives on the integration of artificial intelligence into healthcare services. DIGITAL HEALTH. 2023; 9. https://doi.org/10.1177/20552076231174095

Baidoo-anu, D., & Owusu Ansah, L. (2023). Education in the Era of Generative Artificial Intelligence (AI): Understanding the Potential Benefits of ChatGPT in Promoting Teaching and Learning. Journal of AI, 7(1), 52-62. https://doi.org/10.61969/jai.1337500

Baskara, R. (2023). Exploring the implications of ChatGPT for language learning in higher education. *Indonesian Journal of English Language Teaching and Applied Linguistics*, 7(2), 343-358. DOI: http://dx.doi.org/10.21093/ijeltal.v7i2.1387

Bonsu,E. & Baffour-Koduah, D.(2023).From the Consumers' Side: Determining Students' Perception and Intention to Use ChatGPT in Ghanaian Higher Education. Journal of Education, Society & Multiculturalism,4(1) 1-29. https://doi.org/10.2478/jesm-2023-0001

Chen, L., Chen, P., & Lin, Z. (2020). Artificial intelligence in education: A review. *IEEE Access*, *8*, 75264-75278. https://doi.org/10.1109/ACCESS.2020.2988510

Carobene, A., Padoan, A., Cabitza, F., Banfi, G. & Plebani, M. (2024). Rising adoption of artificial intelligence in scientific publishing: evaluating the role, risks, and ethical implications in paper drafting and review process. *Clinical Chemistry and Laboratory Medicine (CCLM)*, *62*(5), 835-843. https://doi.org/10.1515/cclm-2023-1136

Cotton, D. R. E., Cotton, P. A., & Shipway, J. R. (2023). Chatting and cheating: Ensuring academic integrity in the era of ChatGPT. *Innovations in Education and Teaching International*, *61*(2), 228–239. https://doi.org/10.1080/14703297.2023.2190148

Dong, Y. (2023). Revolutionizing academic English writing through AI-powered pedagogy: Practical exploration of teaching process and assessment. *Journal of Higher Education Research*, *4*(2), 52-57. https://doi.org/10.32629/jher.v4i2.1188

Deng, X., & Yu, Z. (2023). A meta-analysis and systematic review of the effect of chatbot technology use in sustainable education. *Sustainability*, *15*(4), 2940. https://doi.org/10.3390/su15042940

Firat, M. (2023). What ChatGPT means for universities: Perceptions of scholars and students. *Journal of Applied Learning and Teaching*, *6*(1), 57-63. https://doi.org/10.37074/jalt.2023.6.1.22

Følstad, A., Araujo, T., Law, E.LC. *et al.* Future directions for chatbot research: an interdisciplinary research agenda. *Computing* 103, 2915–2942 (2021). https://doi.org/10.1007/s00607-021-01016-7

Halaweh, M. (2023). ChatGPT in education: Strategies for responsible implementation. Contemporary Educational Technology, 15(2). https://doi.org/10.30935/cedtech/13036

Javaid M, Haleem A, Singh RP, Khan S, Kahn IH (2023) Unlocking the opportunities through ChatGPT Tool towards ameliorating the education system. Bench Council transactions on Benchmarks. Stand Evaluations 3(2):1–12. https://doi.org/10.1016/j.tbench.2023.100115

Kasneci, E., Seßler, K., Küchemann, S., Bannert, M., Dementieva, D., Fischer, F., ... & Kasneci, G. (2023). ChatGPT for good? On opportunities and challenges of large language models for education. Learning and Individual Differences, 103, 102274. https://doi.org/10.1016/j.lindif.2023.102274

Khalil, M., & Er, E. (2023). Will ChatGPT get you caught? Rethinking of plagiarism detection. arXiv preprint arXiv:2302.04335, 1-13. https://doi.org/10.48550/arXiv.2302.04335

Kostka and R. Toncelli, "Exploring applications of ChatGPT to English language teaching: Opportunities, challenges, and recommendations," The Electronic Journal for English as a Second Language, Vol. 27, No. 3, 2023. [Online]. Available: https://doi.org/10.55593/ej.27107int

Malinka, K., Perešíni, M., Firc, A., Hujňák, O., & Januš, F. (2023). On the educational impact of ChatGPT: Is Artificial Intelligence ready to obtain a university degree? https://doi.org/10.1145/3587102.3588827

Ngo, T. T. A. (2023). The perception by university students of the use of ChatGPT in education. *International Journal of Emerging Technologies in Learning (Online)*, *18*(17), https://doi.org/10.3991/ijet.v18i17.39019

Pavlik, J. V. (2023). Collaborating With ChatGPT: Considering the Implications of Generative Artificial Intelligence for Journalism and Media Education. Journalism & Mass Communication Educator, 78(1), 84-93. https://doi.org/10.1177/10776958221149577

Qadir, J. (2022). Engineering education in the era of ChatGPT: Promise and pitfalls of generative AI for education. TechRxiv. Preprint. https://doi.org/10.36227/techrxiv.21789434.v1

Rudolph, J., Tan, S., & Tan, S. (2023). ChatGPT: Bullshit spewer or the end of traditional assessments in higher education?. Journal of Applied Learning and Teaching, 6(1). Advance online publication. https://doi.org/10.37074/jalt.2023.6.1.9

Sengupta, S., & Chakraborty, T. (2020). Use of chatbots in higher education: A study of student engagement and satisfaction. Education and Information Technologies, 25(6), 5147-5165. https://doi.org/10.1007/s10639-020-10171-x

Song, C., & Song, Y. (2023). Enhancing academic writing skills and motivation: assessing the efficacy of ChatGPT in AI-assisted language learning for EFL students. *Frontiers in Psychology*, *14*, 1260843. https://doi.org/10.3389/fpsyg.2023.1260843

Song, X., & Xiong, T. (2021, March). A survey of published literature on conversational artificial intelligence. In *2021 7th International conference on information management (ICIM)* (pp. 113-117). https://doi.org/10.1109/ICIM52229.2021.9417135

Stokel-Walker C (2022) AI bot ChatGPT writes smart essays – should professors worry? Nature, 9th Dec. https://www.nature.com/articles/d41586-022-04397-7. Accessed 12 May 2023. https://doi.org/10.1038/d41586-022-04397-7

Tlili, A., Shehata, B., Adarkwah, M. A., Bozkurt, A., Hickey, D. T., Huang, R., & Agyemang, B. (2023). What if the devil is my guardian angel: ChatGPT as a case study of using chatbots in education. *Smart Learning Environments*, *10*(1), 1-24. https://doi.org/10.1186/s40561-023-00237-x

Von Garrel, J., & Mayer, J. (2023). Artificial Intelligence in studies—use of ChatGPT and AI-based tools among students in Germany. *Humanities and social sciences communications*, *10*(1), 1-9. https://doi.org/10.1057/s41599-023-02304-7

Winkler, R., & Söllner, M. (2018, July). Unleashing the potential of chatbots in education: A state-of-the-art analysis. In *Academy of Management Proceedings* (Vol. 2018, No. 1, p. 15903). Briarcliff Manor, NY 10510: Academy of Management. https://doi.org/10.5465/AMBPP.2018.15903abstract

Willems, J. (2023). ChatGPT at universities – the least of our concerns. http://dx.doi.org/10.2139/ssrn.4334162

Xu, X., Su, Y., Zhang, Y., Wu, Y., & Xu, X. (2024). Understanding learners' perceptions of ChatGPT: A thematic analysis of peer interviews among undergraduates and postgraduates in China. *Heliyon*. https://doi.org/10.1016/j.heliyon.2024.e26239

Zawacki-Richter, O., Marín, V. I., Bond, M., & Gouverneur, F. (2019). Systematic review of research on artificial intelligence applications in higher education– where are the educators? International Journal of Educational Technology in Higher Education, 16(1), 1-27. https://doi.org/10.1186/s41239-019-0171-0

Zhai, Xiaoming, ChatGPT User Experience: Implications for Education (December 27, 2022). https://dx.doi.org/10.2139/ssrn.4312418

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