

WHAT MAKES US USE AI? A STUDY ON HIGH SCHOOL STUDENTS' INTENTION TO USE AI TOOLS FOR LEARNING

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ABSTRACT

This study investigates the factors influencing high school students' intention to use artificial intelligence (AI) tools, particularly ChatGPT, for learning purposes. Using the Unified Theory of Acceptance and Use of Technology (UTAUT), the study examines the roles of Performance Expectancy (PE), Social Influence (SI), and Facilitating Conditions (FC) in shaping Behavioural Intention (BI) toward AI usage. A survey was administered to 40 high school students at an international school in Kuala Lumpur, with 34 valid responses from those who had prior experience using ChatGPT. Findings show that Performance Expectancy ($M = 3.63$), Facilitating Conditions ($M = 4.33$) and Behavioural Intention ($M = 3.51$) play more significant roles in shaping students' willingness to adopt AI, while Social Influence ($M = 2.92$) has a smaller effect. While all three predictors had a positive correlation with behavioural intention, Facilitating Conditions showed the strongest relationship ($r = 0.460$), highlighting the importance of access, compatibility, and knowledge in promoting AI adoption. These results suggest that students are more likely to use ChatGPT when they have the necessary resources and support, rather than being primarily driven by perceived usefulness or social encouragement. The study underscores the need for educational institutions to provide the infrastructure and guidance necessary to support responsible and effective AI integration in secondary education.

Keywords: *AI in education, ChatGPT, UTAUT, Behavioural Intention, High School.*

INTRODUCTION

In recent years, the progression of Artificial Intelligence (AI) has become a crucial influence in transforming educational frameworks (Mat Yusof et al., 2023). Tools like ChatGPT are transforming how students interact with learning content, providing instant feedback, personalised responses and support across various academic subjects. This advancement in the role of AI strives

to create a more holistic and technological approach to education. Characterised by its capacity to emulate human cognitive functions such as memory, creativity, analysis and learning, AI tools are revolutionising how humans perceive and interact with technology (Krittanawong et al., 2017). The rise of AI technology is causing a major change in the field of education, where its effects have been well acknowledged. This integration, referred to as AI in education (AIED), is changing education by improving the processes of instruction, learning and decision making for all parties involved, such as teachers, administrators and students (Hwang et al., 2020). However, there are continuous discussions regarding whether AI will improve or degrade student learning, particularly the growth of problem-solving and analytical abilities (Kasneci et al., 2023).

Problem Statement

Despite AI's growing presence in education, there is limited research examining factors influencing high school students' intention to use AI tools such as ChatGPT for learning. There has been progress in acknowledging the advantages of AI in higher education and incorporating it into teaching methods, but the majority of current research focuses on the viewpoints of instructors. As a result, little knowledge exists about how students use and perceive AI for learning (Baidoo-Anu & Ansah, 2023). To close this gap, this research will further investigate what high school students, and their peers perceive about the rising concept of artificial intelligence. Understanding how high school students perceive and adopt these tools is critical for educators and policymakers aiming to integrate AI meaningfully into secondary education.

Research Objectives

This study was conducted based on the following objectives:

1. To examine factors influencing high school students' behavioural intention to use AI tools like ChatGPT
2. To determine the impact of performance expectancy, social influence and facilitating conditions on students' intention to use AI for learning

Research Questions

This study was done to answer the following questions:

1. What factors influence high school students' intention to use AI tools like ChatGPT for learning?
2. How do performance expectancy, social influence, and facilitating conditions relate to behavioural intention?

LITERATURE REVIEW

Large language models (LLMs) have made significant advancements in natural language processing (NLP) in recent years (Kasneci et al., 2023). The integration of AI in education has accelerated rapidly in recent years, particularly with the emergence of NLP tools such as ChatGPT, an Artificial Intelligence Generated Content (AIGC) platform that dynamically creates various forms of content, including text, images, and videos, tailored to individualised requirements (Wu et al., 2023). GPT stands for Generative Pre-trained Transformer, and ChatGPT is implemented as a chatbot that may be accessed through several platforms, including a website, a smartphone application or a messaging service (OpenAI, 2022). Empowered by advancements in computational hardware such as Graphics Processing Units (GPUs) and breakthroughs in deep learning algorithms, ChatGPT offer real time assistance in tasks such as writing, research, problem solving, and personalised feedback, prompting researchers and educators to explore their influence on student learning experiences (Faiz & Hazilan, 2024).

Previous studies have highlighted benefits associated with AI tools in various settings. LLMs such as GPT-3.5 for example, help in document drafting and simplified information synthesis, saving time and increasing productivity in healthcare (Cascella et al., 2023). In business and marketing, conversational AI chatbots use NLP and machine learning to identify client needs, solve problems, and facilitate purchases. Businesses can save time while still providing a personalised experience to clients by automating various customer care and sales processes (George & George, 2023). Similarly, the education sector may profit greatly from the integration of AI technologies. AI can help students collect sources and analyse texts more effectively, making it easier to identify patterns or trends that match interests (Zhou et al., 2024). These AI tools can improve teaching and learning not just in universities, but also primary and secondary schools, and even in professional training. Since every student learns differently, LLMs offer a way to create more personalised and effective learning experiences (Kasneci et al., 2023).

Theoretical Framework

The Unified Theory of Acceptance and Use of Technology (UTAUT) was developed by Venkatesh et al. (2003) and is widely used to understand technology adoption. UTAUT expands on the Technology Acceptance Model (TAM) by Davis (1989) by incorporating additional constructs such as social influence and facilitating conditions, making it a comprehensive model for understanding technology adoption in educational settings. The emergence of UTAUT2 incorporates additional variables into UTAUT, namely habits, hedonistic motivation and price value (Tamilmani et al., 2021; Yee & Abdullah, 2021). Strzelecki (2023) applied this framework to examine ChatGPT adoption in higher education. This study adapts key constructs from UTAUT and UTAUT2, which are Performance Expectancy (PE), Social Influence (SI), Facilitating Conditions (FC) and Behavioural Intention (BI), to the high school context.

Performance Expectancy (PE) refers to the perceived usefulness of a technology. Several studies have defined performance expectancy. Yee and Abdullah (2021) define it as the level at which utilising a certain technology can provide advantages to the users in carrying out a specific pursuit. Social Influence (SI) is the degree to which someone thinks that others believe he or she

should use a new system, and Facilitating Conditions (FC) is the availability of resources to support the adoption and usage of a technology (Buraimoh et al., 2023).

Behavioural Intention (BI) is defined as a person's willingness to use a technology in the future. According to Venkatesh et al. (2003), BI reflects the motivational factors that influence an individual's decision to engage in a specific behaviour, in this case, the continued use of ChatGPT for learning. In this study, Behavioural Intention acts as the dependent variable, influenced by the three independent variables, PE, SI and FC. When students believe that ChatGPT is useful for their studies (PE), perceive encouragement or approval from peers and teachers (SI) and have access to necessary tools and knowledge (FC), they are more likely to form a strong intention to continue using ChatGPT as part of their learning process.

METHODOLOGY

Research Design

This study employed a quantitative survey design to investigate the factors influencing high school students' intentions to use ChatGPT for learning. Key constructs examined in this study include Performance Expectancy (PE), Social Influence (SI), Facilitating Conditions (FC) and Behavioural Intention (BI).

Participants and Sampling

This study utilised survey responses from a total of 40 high school students in an international school in the Klang Valley, Malaysia. Purposive sampling, a non-probability sampling method in which participants were selected based on specific criteria relevant to the research objectives, was used. In this research, participants were chosen based on their age and access to ChatGPT. To be included in the final analysis, participants had to be 14 years old and older and had to indicate that they had used ChatGPT before. The screening question "Have you used ChatGPT before?" was included in the demographic section of the questionnaire. Only those who responded "Yes" were included in the analysis of usage behaviour and intention-related variables.

Instrument and Ethical Considerations

The survey questionnaire used in this study was adapted from Strzelecki (2023), which examined students' perceptions and acceptance of ChatGPT in higher education. This study provided validated survey items for measuring Performance Expectancy, Social Influence, Facilitating Conditions and Behavioural Intention, ensuring the reliability and validity of the constructs. All construct items were measured using a 5-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

Only a subset of the original items was adopted to maintain brevity and relevance for this study's specific research scope. This research serves as an initial exploratory study into high school

students' usage of ChatGPT, thus, a shorter version of the questionnaire was necessary to enhance response rates while capturing the key constructs effectively. According to DeVellis (2016), adaptation of validated survey instruments is a common and ethically accepted practice, particularly when refining existing models to suit a specific study's scope. The adapted questionnaire was reviewed to ensure clarity and relevance to the research objectives.

The questionnaire was distributed to eligible students via an online platform. At the beginning of the questionnaire, informed consent was obtained from all participants as they were explicitly informed that their participation was voluntary and that they could choose not to participate without any consequence. It was also ensured that participants were aware of the study's purpose and their rights, and their confidentiality was maintained by keeping the participants anonymous, and any collection of personal details was securely stored and prevented from any unauthorised access.

Data Analysis

The collected data was analysed using descriptive statistics to develop an understanding of students' perceptions of ChatGPT in education. Demographic data and Likert-scale responses were summarised to provide an overview of students' perceptions. Measures such as mean and standard deviation were computed to assess central tendencies and variability in responses. To interpret the mean scores from the 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree), the Table of Interpretation by Bringula et al. (2012) was employed. Table 1 below displays the ranges used for verbal interpretation.

Table 1: Table of Interpretation

Weight/Scale	Mean Range	Verbal Interpretation
5	4.51 – 5.00	Strongly agree
4	3.51 – 4.50	Agree
3	2.51 – 3.50	Moderately agree
2	1.51 – 2.50	Slightly agree
1	1.00 – 1.50	Disagree

Basic correlation analysis was conducted on the means to examine the relationships between the independent variables Performance Expectancy, Social Influence and Facilitating Conditions to the dependent variable Behaviour Intention.

FINDINGS AND DISCUSSION

The data analysis was conducted using descriptive analysis to examine participants' demographic characteristics and their responses to the survey items. All responses were processed and cleaned

using Microsoft Excel. Responses from students who answered “No” or left the answer blank to the question “Have you used ChatGPT before?” were excluded from further analysis, including frequency counts, percentages, means and standard deviations.

Demographic Findings

A total of 40 responses were collected from high school students aged 14 and above at an international school in Kuala Lumpur. After filtering for students who had used ChatGPT, 34 valid responses were included in the final analysis. Among the respondents, 57.5% were male (n = 23) and 42.5% were female (n = 17). The participants ranged from 14 to 18 years old. The majority were aged 15 years old (mean = 2.28) with a standard deviation of 1.09, showing moderate variation in age.

Descriptive Statistics

The analysis for the descriptive statistics includes the mean and standard deviation for each item to indicate the central tendency and variability of responses. These statistics help to summarise how students generally perceive the usefulness, social encouragement, access and intent to continue using ChatGPT in their studies.

Table 2: Descriptive Statistics of Findings

Construct	Code	Items	Mean	St. dev.
Performance Expectancy	PE1	<i>I believe that ChatGPT is useful in my studies.</i>	3.82	1.06
	PE2	<i>Using ChatGPT increases my chances of achieving important things in my studies.</i>	3.38	1.07
	PE3	<i>Using ChatGPT helps me get tasks and projects done faster.</i>	4.21	1.15
	PE4	<i>Using ChatGPT increases my productivity in my studies.</i>	3.12	1.15
Social Influence	SI1	<i>My family and friends think I should use ChatGPT.</i>	2.79	0.84
	SI2	<i>People I look up to (like teachers or older students) believe that I should use ChatGPT.</i>	2.91	0.97
	SI3	<i>People whose opinions I value prefer me to use ChatGPT.</i>	3.06	0.78
Facilitating Conditions	FC1	<i>I have the resources necessary to use ChatGPT.</i>	4.29	0.76
	FC2	<i>I have the knowledge necessary to use ChatGPT.</i>	4.26	0.75
	FC3	<i>ChatGPT is compatible with technologies (devices) I use.</i>	4.44	0.70
Behavioural Intention	BI1	<i>I intend to continue using ChatGPT in the future.</i>	4.09	0.83
	BI2	<i>I will always try to use ChatGPT in my studies.</i>	3.15	1.13
	BI3	<i>I plan to use ChatGPT frequently.</i>	3.30	1.09

Performance Expectancy

In response to the statement "I believe that ChatGPT is useful in my studies," the research findings showed a mean score of 3.82. This suggests that a majority of respondents agree with the statement. The relatively high average implies that many students recognise the use of ChatGPT in supporting their academic work. This agreement can be due to the high use of ChatGPT for various school tasks, such as generating ideas, clarifying concepts, helping with writing assignments, and providing quick explanations of topics. Overall, students think of ChatGPT as a helpful and reliable educational tool that enhances their learning experience and contributes positively to their academic performance. Other studies have found similar findings of ChatGPT being beneficial in an educational setting, albeit alongside some disadvantages. According to Oranga (2023), in order to maximise the benefits of ChatGPT while mitigating its disadvantages, it is essential to use it as a tool. Rasul et al. (2023) states that using ChatGPT and other large language models (LLMs) in higher education presents various advantages and challenges.

For the statement "Using ChatGPT increases my chances of achieving important things in my studies," the research showed a mean score of 3.38. This result indicates that respondents moderately agree with the statement. The findings suggest that a fair number of students believe that using ChatGPT provides them with a moderate advantage in accomplishing significant academic goals. This could include getting a clearer understanding of subjects, improving the quality of their assignments, or enhancing their study efficiency. Although the level of agreement is not as strong as in other areas, it still reflects a positive view among users that ChatGPT contributes meaningfully to their educational progress by helping them access useful information, learn new concepts, and stay on track with their academic responsibilities.

In response to the statement "Using ChatGPT helps me get tasks and projects done faster," participants reported a mean score of 4.21, showing clear agreement. This indicates that many students believe ChatGPT significantly improves their efficiency in completing school-related tasks. It is especially helpful for simple projects and smaller academic writing assignments, as it provides quick ideas, structured content, and useful suggestions. Overall, the findings suggest that ChatGPT is seen as a time-saving tool that supports students in managing their academic workload more effectively, and many respondents seem to agree. Studies agree that respondents have said that they agree with ChatGPT reducing time spent on projects and work. Related findings from Rasheed et al. (2024) regarding AI use among teachers indicate that ChatGPT may considerably cut down on the amount of time required to finish routine work like lesson planning, grading, and other administrative duties.

For the last statement "Using ChatGPT increases my productivity in my studies," the mean score was 3.12, indicating that participants moderately agree. This suggests that while students recognise the potential benefits of ChatGPT in enhancing their academic productivity, the extent of this impact varies, with some experiencing moderate improvements in their efficiency and workflow. Studies agree with the notion that ChatGPT increases productivity. Firaina et al. (2023) states that the use of ChatGPT in learning holds promising potential for improving productivity and efficiency in the educational process. Salmaan (2023) reports that the results of his study show that the use of ChatGPT has a positive effect on student productivity. However, many of these studies share a common discussion on whether over reliance on ChatGPT may become an issue in

the future. According to Rasheed et al. (2024) one of the most worrying issues in AI in education is the risk of being overly reliant on such tools.

Social Influence

Overall, items for the Social Influence (SI) construct from the questionnaire received the lowest mean scores. The statement “My family and friends think I should use AI” had a mean score of 2.79, which shows moderate agreement. This proposes that students are not receiving strong encouragement from close figures such as parents or peers to use ChatGPT. On one hand, teachers and students may recognise the potential benefits of AI instruments for learning and efficiency. On the other hand, concerns about academic trustworthiness or overreliance on such apparatuses may decrease the probability of suggestions to utilise language models such as ChatGPT. It is likely reflected in students’ states of mind, contributing to a recognition from those they appreciate and believe in for more direction.

The next item “People I look up to (like teachers and older students) believe that I should use ChatGPT”, also received a moderately agreed score, at 2.91. This score suggests that respondents may perceive that influential people in their lives are generally neutral about ChatGPT or see limited value in promoting it. This slight increase in the mean score from the previous item may show that, whereas not highly encouraged toward utilising AI devices, students feel a certain level of acknowledgement or support from people they regard.

Lastly, out of the three statements, “People whose opinions I value prefer me to use ChatGPT” had the highest mean score (3.06). This score indicates a slightly positive tendency, just above the neutral point. Students may believe that important people in their lives, such as mentors, friends who are interested in academics, or encouraging adults, find ChatGPT useful. This agreement would suggest that students feel some acceptance or perhaps subliminal support from persons they respect, even if they are not strongly encouraged to use AI tools. Students may be internalising positive views of AI from their wider, more reliable networks rather than just from traditional authority sources, as seen by the slight increase in the mean score from the first two statements. This shows that while strong AI support is unusual, students are becoming more receptive as trusted and idolised people promote it.

Facilitating Conditions

Items under this construct received the highest overall mean scores, indicating that students feel they are well-equipped and supported to use ChatGPT in their learning. The item FC1 “I have the resources necessary to use ChatGPT” received a mean score of 4.29, suggesting that most students feel they have adequate access to the tools and internet connectivity required to use ChatGPT. This is similar to findings by Ameri et al. (2020) which discovered that access to mobile devices and stable internet are key determinants in students’ adoption of mobile-based learning applications.

The second item, FC2 “I know necessary to use ChatGPT” had a similar mean score of 4.26, reflecting students’ confidence in their ability to use the platform. This is supported by Azizi

et al. (2020) who reported in his study that students' digital literacy and previous experiences with technology can significantly affect the ease or difficulty of adopting blended learning systems.

The highest score in this construct was for FC3 "ChatGPT is compatible with technologies (devices) I use". With a mean score of 4.44, this response suggests that students feel that ChatGPT is easily accessible using their personal devices which can include laptops, tablets or smartphones. Findings by Faqih and Jaradat (2021) also observed that a strong predictor of technology adoption depends on the compatibility with users' existing technology, particularly in educational settings. Overall, findings in this construct reveal that students feel supported in terms of resources, technical knowledge and device compatibility, which are all essential conditions for adopting the use of AI tools like ChatGPT for learning.

Behavioural Intention

The results obtained for behavioural intention showed an overall positive response, with most answers leaning towards supporting the use of ChatGPT. For item B11 "I intend to continue using ChatGPT in the future", the mean is 4.09, leaning towards Strongly Agree. This result may be due to the uprising usage of ChatGPT and the increased inclusivity of AI in many education fields. With the convenience of obtaining simplified and straightforward responses from the OpenAI, students will be more inclined to utilise it in their further studies (Al-Mamary et. al, 2024).

For BI2, a mean score of 3.15 indicates that respondents moderately agree with the statement "I will always try to use ChatGPT in my studies". This finding suggests students acknowledge the tool's utility in providing swift and well-structured responses to their queries. The prospect of enhanced understanding of topics and the potential for creative engagement with learning materials motivate students to use ChatGPT. The provision of personalised responses further enables students to explore diverse subjects and expand their academic scope (Menon et al., 2023). However, the moderate result may also show some hesitance from respondents in completely integrating ChatGPT in their routine academic studies. This uncertainty may be due to school restrictions or social influence within the academic environment. Beyond ethical considerations, students may also advocate for the moderate utilisation of ChatGPT to prioritise the development of their critical thinking skills and competence in executing fundamental academic tasks, as they may wish to avoid becoming overly dependent on this assistive technology (Valova et al., 2024).

For item BI3, "I plan to use ChatGPT frequently", the mean 3.30 indicates a trend towards moderate agreement. This suggests that while students recognise the potential and usefulness of ChatGPT, they do not intend to engage with it excessively. The result implies that students may be using ChatGPT selectively, primarily for specific tasks, rather than relying on it as their main source of support. This measured approach could reflect an awareness of the importance of maintaining their own understanding and problem-solving capabilities.

Correlation Analysis

A Spearman's rho correlation analysis was conducted to examine the relationships between the independent variables Performance Expectancy (PE), Social Influence (SI) and Facilitating Conditions (FC) and the dependent variable Behavioural Intention (BI). Mean scores were calculated for each construct per respondent. The results showed a weak positive correlation between PE and BI ($r = 0.305$) and between SI and BI ($r = 0.230$). Facilitating Conditions had a moderate positive correlation with BI ($r = 0.460$).

According to Schober et al. (2018), the correlation coefficient (r) ranges from -1 to +1, indicating the strength and direction of a linear relationship between two variables. Table 3 shows the general guidelines for interpreting correlation.

Table 3: Interpretation for Correlation

r Value	Strength
0.70 – 1.00	Strong positive
0.40 – 0.69	Moderate positive
0.10 – 0.39	Weak positive
0.00 – 0.09	Negligible
Negative values	Indicate negative/inverse relationships

The results of the correlation analysis revealed only modest associations between the three independent variables and Behavioural Intention. Among the three variables, Facilitating Conditions ($r = 0.460$) showed the strongest positive relation with students' intention to use ChatGPT, suggesting that having the necessary resources, access and support plays a more central role in influencing usage intention than perceived usefulness or social pressure.

The relatively weaker correlations for PE ($r = 0.305$) and SI ($r = 0.230$) may reflect that students are still in the early stages of exploring ChatGPT's usefulness, or they may not yet feel strong peer or teacher encouragement to use such tools. This contrasts with findings from studies in higher education (Strzelecki, 2023), where Performance Expectancy was a stronger predictor. These findings also suggest that accessibility and ease of use might be more immediate concerns for younger users than perceived academic benefit or social approval.

CONCLUSION

Using the UTAUT paradigm, this study investigated the factors influencing high school students' intention to use AI tools for learning. Findings show that Performance Expectancy, Facilitating Conditions and Behavioural Intention play more significant roles in shaping students' willingness to adopt AI, while Social Influence has a smaller, yet still notable, effect. All three predictors had a positive correlation with Behaviour Intention, but Facilitating Conditions showed the strongest

relationship. According to these results, students are more likely to engage with AI tools if they believe this technology will help them succeed academically, and if there are sufficient support networks in place, such as access to reliable devices and materials, and appropriate instructor assistance.

As AI develops and becomes increasingly integrated into educational settings, schools must aggressively address these crucial issues and take proactive steps to support effective adoption. This includes providing training, ensuring access and promoting responsible use. Understanding the key factors that determine students' likelihood to engage with AI can help educators and policymakers design more effective, inclusive and future-ready learning environments.

Limitations and Further Research

This study has several limitations. Firstly, the sample size was relatively small, with only 34 valid responses included in the final analysis. This limited number of participants reduces the generalisability of the findings and may not fully represent the broader population of high school students. Secondly, the study was conducted in a single international school in Kuala Lumpur, which may limit the applicability of the results to students from different educational backgrounds, school types or regions. Additionally, the study relied on self-reported data, which may be influenced by social bias or inaccuracies in student perceptions. Future research should aim to include a larger and more diverse sample, incorporate qualitative data for deeper insights and include additional constructs from UTAUT2 that may influence behavioural intention and actual usage of AI tools like ChatGPT among high school students.

REFERENCES

- Al-Mamary, Y. H., Alfalah, A. A., Alshammari, M. M., & Abubakar, A. A. (2024). Exploring factors influencing university students' intentions to use ChatGPT: analysing task-technology fit theory to enhance behavioural intentions in higher education. *Future Business Journal*, 10(1), 119.
- Ameri, A., Khajouei, R., Ameri, A., & Jahani, Y. (2020). Acceptance of a mobile-based educational application (LabSafety) by pharmacy students: An application of the UTAUT2 model. *Education and Information Technologies*, 25(1), 419–435. <https://doi.org/10.1007/s10639-019-09965-5>
- Azizi, S. M., Roozbahani, N., & Khatony, A. (2020). Factors affecting the acceptance of blended learning in medical education: Application of UTAUT2 model. *BMC Medical Education*, 20, 367. <https://doi.org/10.1186/s12909-020-02302-2>
- Baidoo-Anu, D., Asamoah, D., Amoako, I., & Mahama, I. (2024). Exploring student perspectives on generative artificial intelligence in higher education learning. *Discover Education*, 3(1), 98.

- Bringula, R. P., Batalla, M. Y. C., Moraga, S. D., Ochengco, L. D. R., Ohagan, K. N., & Lansigan, R. R. (2012). School Choice of Computing Students: A Comparative Perspective from Two Universities. *Creative Education*, 3, 1070-1078. <http://dx.doi.org/10.4236/ce.2012.326161>
- Buraimoh, O. F., Boor, C. H., & Aladesusi, G. A. (2023). Examining facilitating condition and social influence as determinants of secondary school teachers' behavioural intention to use mobile technologies for instruction. *Indonesian Journal of Educational Research and Technology*, 3(1), 25-34.
- Cascella, M., Montomoli, J., Bellini, V., & Bignami, E. (2023). Evaluating the feasibility of ChatGPT in healthcare: an analysis of multiple clinical and research scenarios. *Journal of medical systems*, 47(1), 33.
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS quarterly*, 319-340.
- Demir, K., & Güraksin, G. E. (2022). Determining middle school students' perceptions of the concept of artificial intelligence: A metaphor analysis. *Participatory Educational Research*, 9(2), 297-312.
- DeVellis, R. F., & Thorpe, C. T. (2021). *Scale development: Theory and applications*. Sage Publications.
- Faiz, H., & Hazilan, W. F. (2024). ChatGPT in English as a Second Language Education: A Review. *Global Journal of Educational Thoughts*, 1(1), 34-40.
- Faqih, K. M. S., & Jaradat, M.-I. R. M. (2021). Integrating TTF and UTAUT2 theories to investigate the adoption of augmented reality technology in education: Perspective from a developing country. *Technology in Society*, 67, 101787. <https://doi.org/10.1016/j.techsoc.2021.101787>
- Firaina, R., & Sulisworo, D. (2023). Exploring the usage of ChatGPT in higher education: Frequency and impact on productivity. *Buletin Edukasi Indonesia*, 2(01), 39-46.
- Forman, N., Udvaros, J., & Avornicului, M. S. (2023). ChatGPT: A new study tool shaping the future for high school students. *Future*, 5(6), 7.
- George, A. S., & George, A. H. (2023). A review of ChatGPT AI's impact on several business sectors. *Partners universal international innovation journal*, 1(1), 9-23.
- Hwang, G. J., Xie, H., Wah, B. W., & Gašević, D. (2020). Vision, challenges, roles and research issues of Artificial Intelligence in Education. *Computers and Education: Artificial Intelligence*, 1, 100001.

- 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.
- Krittanawong, C., Zhang, H., Wang, Z., Aydar, M., & Kitai, T. (2017). Artificial intelligence in precision cardiovascular medicine. *Journal of the American College of Cardiology, 69*(21), 2657-2664.
- Mat Yusoff, S., Mohamad Marzaini, A. F., Hao, L., Zainuddin, Z., & Basal, M. H. (2025). Understanding the role of AI in Malaysian higher education curricula: an analysis of student perceptions. *Discover Computing, 28*(1), 62.
- Menon, D., & Shilpa, K. (2023). "Chatting with ChatGPT": Analyzing the factors influencing users' intention to Use the Open AI's ChatGPT using the UTAUT model. *Heliyon, 9*(11).
- OpenAI (2022). ChatGPT. Retrieved from <https://openai.com/blog/chatgpt/> on 8 April 2024.
- Oranga, J. (2023). Benefits of artificial intelligence (ChatGPT) in education and learning: Is Chat GPT helpful. *International Review of Practical Innovation, Technology and Green Energy (IRPITAGE), 3*(3), 46-50.
- Rasheed, K., & ul Ain, S. Q. (2024). ChatGPT and Improvement in Productivity: An analytical Study. *Bulletin of Business and Economics (BBE), 13*(3), 396-402.
- Rasul, T., Nair, S., Kalendra, D., Robin, M., de Oliveira Santini, F., Ladeira, W. J., ... & Heathcote, L. (2023). The role of ChatGPT in higher education: Benefits, challenges, and future research directions. *Journal of Applied Learning and Teaching, 6*(1), 41-56.
- Sallam, M. (2023). ChatGPT utility in healthcare education, research, and practice: systematic review on the promising perspectives and valid concerns. *Healthcare, 11*(6), 887. MDPI.
- Salmaan, A. F. (2023). Analysis of the Effect of ChatGPT on The Learning Productivity of Secondary School Students. *Proceeding International Conference on Education, 175-181*.
- Schober, P., Boer, C., & Schwarte, L. A. (2018). Correlation coefficients: Appropriate use and interpretation. *Anesthesia & Analgesia, 126*(5), 1763–1768. <https://doi.org/10.1213/ANE.0000000000002864>
- Strzelecki, A. (2023). To use or not to use ChatGPT in higher education? A study of students' acceptance and use of technology. *Interactive Learning Environments, 32*(9), 5142–5155. <https://doi.org/10.1080/10494820.2023.2209881>
- Tamilmani, K., Rana, N. P., Wamba, S. F., & Dwivedi, R. (2021). The extended Unified Theory of Acceptance and Use of Technology (UTAUT2): A systematic literature review and theory evaluation. *International Journal of Information Management, 57*, 102269.

- Valova, I., Mladenova, T., & Kanev, G. (2024). Students' Perception of ChatGPT Usage in Education. *International Journal of Advanced Computer Science & Applications*, 15(1). DOI: 10.14569/IJACSA.2024.0150143
- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS quarterly*, 425-478.
- Wu, T., He, S., Liu, J., Sun, S., Liu, K., Han, Q. L., & Tang, Y. (2023). A brief overview of ChatGPT: The history, status quo and potential future development. *IEEE/CAA Journal of Automatica Sinica*, 10(5), 1122-1136.
- Yee, M. L. S., & Abdullah, M. S. (2021). A review of UTAUT and extended model as a conceptual framework in education research. *Jurnal Pendidikan Sains Dan Matematik Malaysia*, 11, 1-20.
- Zhou, X., Zhang, J., & Chan, C. (2024). Unveiling students' experiences and perceptions of Artificial Intelligence usage in higher education. *Journal of University Teaching and Learning Practice*, 21(6), 126-145.