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Attitude, Intention, and the Use of Artificial Intelligence among Business Management Students in Higher Education Institutions

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Artificial intelligence (AI) has become the forerunner of educational technology in recenttimes. Using AI is essential for business management students in higher education institutions. It helps them better understand business management, engage in problem-solving, promote critical thinking, and explore improved options and strategies. However, understanding the usage of AI and the theoretical suggestions regarding its potential benefits is still inconclusive. The need for better technological proficiency among business management students highlights the lack of research on AI applications in business management. Motivated by the recent advocacy for testing new technology-based theories, this research seeks to assess the understanding and concerns of business management students regarding their use of AI. This study adapted Kereluik et al.'s 21st Century Learning Model and Gado et al.'s AI Acceptance Model. Through distributing surveys using Google Forms and conducting semi-structured interviews, this study aims to clarify the use of AI in higher education institutions, ultimately enhancing existing curricula for the relevant courses.

Keywords: Artificial Intelligence, Artificial Intelligence Usage, Business Management, Business Management Students, Higher Education Institutions

Introduction

Artificial intelligence (AI) is transforming how industries operate and has advanced Industry 4.0, making business organizations and management more competitive than ever (Abdelwahab et al., 2023; Allen, 2020; Bhatia & Panneer, 2019). As every second passes, the benefits offered by AI are increasingly becoming abundant (Bhatia & Panneer, 2019; Singh, 2021). Some of these benefits include providing quick responses based on desired prompts, delivering high-quality and accurate replies, facilitating communication, supporting claims with consistent evidence, promoting deep learning, and assisting with writing complex assignments (Abdelwahab et al., 2023; Allen, 2020; Getchell et al., 2022; Sharma & Pandey,

2024). Many business industries, including Alibaba, Amazon, Apple, Facebook, Google, Netflix, Spotify, and others, use AI to maintain a competitive edge over rival companies (Allen, 2020). Research indicates that 70% of retail and product development companies are increasingly relying on AI to enhance management, production, and distribution (Abdelwahab et al., 2023). This trend also extends to small and medium-sized enterprises (SMEs) (Sroufe, 2020).

Given the significance of AI and its advancements in business management across various sectors, this research focuses on AI and business management students enrolled in higher education institutions (HEIs). The primary objective of this research is to explore the attitudes and acceptance of AI among business management students. By examining these factors, we aim to understand better how effectively these students can integrate AI into their learning processes in higher education.

As many higher education institutions strive to develop AI-competent graduates, the literature emphasises the importance of incorporating AI-based lectures into their curricula. This exposure fosters students' creativity, innovation, and critical thinking (Abdelwahab et al., 2023; Allen, 2020). However, this perceived competence is debatable. Many educators express uncertainty regarding AI's use due to potential risks, such as dealing with inaccurate information, privacy and security concerns, ethical usage of AI, and professional standards related to AI (Getchell et al., 2022).

Implementing effective education is often easier to discuss than execute, leading to educators feeling overwhelmed by teaching students about AI-related knowledge (Abdelwahab et al., 2023; Allen, 2020). Educators face constant pressure to deliver transformative lessons that align with the latest learning trends, which can make the responsibility itself feel overwhelming. This pressure complicates the learning process within educational institutions (Abdelwahab et al., 2023; Allen, 2020; Getchell et al., 2022; Riapina, 2024; Sharma & Pandey, 2024; Sroufe, 2020). Additionally, there is a common stereotype that students can easily understand and use technology, which makes it more challenging to develop their competencies. This assumption undermines the reality that students may not acquire technological knowledge as efficiently as expected (Riapina, 2024; Sroufe, 2020). Scholars such as Allen (2020), Getchell et al. (2022), Riapina (2024), and Sroufe (2020) have argued that it is not far-fetched to state that the current education system has failed to adequately prepare students for the demands of the Industry 4.0 era. Recent reports indicate that many students feel unprepared to use AI in the workplace (Abdelwahab et al., 2023; Allen, 2020).
Existing research on the use of AI in educational institutions generally focuses on various subjects and populations. This research highlights studies on AI applications in fields such as biology (Koć-Januchta et al., 2020), English language learning (Lee et al., 2023), journalism (Trang et al., 2024), psychology (Gado et al., 2021), healthcare and medicine (Yong & Ley, 2023), as well as other arts and science disciplines (Hajam & Gahir, 2024). The populations involved in these studies include young learners, high school students, and university students (Hajam & Gahir, 2024; Koć-Januchta et al., 2020; Lee et al., 2023; Trang et al., 2024; Yong & Ley, 2023). However, the extent to which AI is utilised in business management programs and among higher education institutions remains unclear.

Therefore, this research provides a practical framework for understanding AI use among business management students, emphasizing AI's significance and advantages in assisting them in acquiring essential knowledge before transitioning to real-world situations and workplaces. This study uses a mixed-methods approach to collect relevant data on the use of AI in business management programs. The objective of this research is to assess: (1) the extent to which business management students perceive usefulness (PU), ease of use (PEU), and social norms (PSN) associated with AI in their learning; and (2) explore the concerns business management students have about integrating AI into their education.

The *research questions* of this research are thus displayed in the following:

1. What is the extent of PU of AI in learning for business management students?
2. What is the extent of PEU of AI in learning for business management students?
3. To what extent do business management students perceive the influence of social norms (PSN) on their use of AI in learning?
4. What are the business management students' user behaviour (UB) towards using AI in learning?
5. What is the relationship between the independent variables (PU, PEU, and PSN) and the dependent variable using AI?
6. What are the business management students' concerns about AI learning?

The *research hypothesis* for this proposed study is as follows:

H1: There is a significant relationship between business management students' PU and the use of AI.

H2: There is a significant relationship between business management students' PEU and the use of AI.

H3: There is a significant relationship between business management students' PSN and the use of AI.

This research aims to benefit three key groups: business organisations, higher education institutions, and business management students, as it addresses the growing need to integrate AI into business management education in response to Industry 4.0. For business organisations, it is essential to collaborate with all employees and staff to reskill, reshape, and teach them the necessary AI-related knowledge and skills that can enhance organisational performance (Abdelwahab et al., 2023; Allen, 2020; Sroufe, 2020). Recognising that AI can improve organisational performance through creativity, innovation, problem-solving, data computation and analysis, and enhanced communication is the first step toward acknowledging the changes brought by Industry 4.0 and the dynamics of our constantly evolving times (Abdelwahab et al., 2023; Allen, 2020; Getchell et al., 2022; Sharma & Pandey, 2024).

However, the responsibility for this development does not rest solely with business organisations. According to the existing literature, this responsibility is shared with business and management faculties in higher education institutions. Current findings emphasise the need for these institutions to integrate AI learning into their curricula, reflecting the ongoing trends in education (Allen, 2020; Sharma & Pandey, 2024). As Kovoor-Misra (2020) argues, adapting to essential and beneficial trends in business and education is crucial for individuals to remain relevant in an ever-changing society.

The current literature regarding AI learning is arguably inconclusive on the effectiveness of how business curricula incorporate AI (Abdelwahab et al., 2023; Allen, 2020). This research aims to fill the existing gap in the current literature. There are existing studies that can assist in teaching AI-related content and skills to business faculty. This knowledge can then be transferred to business organisations, as these faculties are actively developing coursework and curricula that integrate AI learning (Allen, 2020; Sharma & Pandey, 2024).

Moreover, business management students are the primary group that will shape future organisations through their knowledge and skills in AI. This proposed research is crucial for understanding the extent of these students' AI knowledge and their usage of AI for business management tasks. The data collected will provide valuable insights into what needs to be addressed urgently in AI education. It will also highlight the need for collaboration between business organisations and academic institutions to enhance students' learning experiences. Student survey responses will help identify specific topics that require instruction and support, along with misinformation, privacy and security, AI ethics, and professional standards for AI usage (Getchell et al., 2022).

At last, this research can facilitate the reformation and revision of existing business management curricula in higher education institutions, allowing for the integration of tailored AI-related content that meets students' learning needs and fosters an ideal campus learning environment (Sroufe, 2020; Young-Ferris & Voola, 2023).

Theoretical Background

To achieve the research objectives, this study proposes utilising Kereluik et al.'s 21st Century Learning Model, as endorsed by Abdelwahab et al. (2023), along with the AI Acceptance Model introduced by Gado et al. (2022).

Kereluik et al.'s 21st Century Learning Model

In Kereluik et al.'s 21st Century Learning Model, the core of this learning model centralises the learning of a particular technology around the targeted learners. It encompasses three types of knowledge for learners to be successful in using technology, which is (1) foundational knowledge, (2) meta-knowledge, and (3) humanistic knowledge (Abdelwahab et al., 2023). Effective strategies can be developed to further promote technology learning by showcasing the existing knowledge among learners. This research focuses on business faculties teaching AI-related knowledge and skills to management-specialised students. The following lists the specific details that technology learners need to acquire in their respective knowledge areas, as summarised by Abdelwahab et al. (2023).

- Foundational knowledge includes learners' digital literacy and their fundamental understanding of core content related to technology use.
- Meta knowledge refers to learners' ability to solve problems and develop critical, innovative, and creative thinking skills simultaneously.
- Humanistic knowledge refers to learners being ethical and emotional when using technology while recognising its cultural significance in the workplace and other contexts.

Therefore, using Kereluik et al.'s 21st Century Learning Model, measuring business management students' understanding and use of AI is deemed achievable, as the model allows understanding of specific technology knowledge and skills. These three types of

knowledge can be transformed into appropriate items for further investigation through suitable research inquiries.

Gado et al.'s (2022) AI Acceptance Model

With the recent rapid development of AI, Gado et al. (2022) believed that a more specific theory was necessary to measure people's acceptance and use of AI in different fields. By drawing their expertise in teaching psychology and understanding of the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT), Gado et al. (2022) extended the nature of these two theories by establishing the AI Acceptance Model, including the perceived ease of use, perceived usefulness, perceived knowledge, and perceived social norm. Gado et al. (2022) indicated that incorporating these four aspects. However, they are still in the early stages of solidifying their theoretical foundation, is adequate for investigating and exploring intentions and attitudes toward using AI. Gado et al. (2022) later operationalised the four components of the AI Acceptance Model based on the following.

- Perceived usefulness (PU) – This aspect is defined as the degree to which individuals and consumers of AI believe that using AI is beneficial.
- Perceived ease of use (PEU) – This aspect refers to the extent to which AI consumers and individuals believe they have the ability, autonomy, and control over AI for various uses.
- Perceived social norm (PSN) - Refers to how AI influences consumers and individuals to utilise AI for various purposes.

Conceptual Framework of the Research

In the previous section, we discussed the key aspects that can be leveraged to achieve the research objectives. These aspects include Gado et al.'s concepts of perceived usefulness, perceived ease of use, and perceived social norms, along with Kereluik et al.'s foundational knowledge, meta-knowledge, and humanistic knowledge from the 21st Century Learning Model. The AI Acceptance Model proposed by Gado et al. (2022) is utilised to explore the actual usage of AI through quantitative research methods. On the other hand, the 21st Century Learning Model assesses business management students' concerns regarding their knowledge of using AI. The framework outlined by the two discussed theories is illustrated in Figure 1.

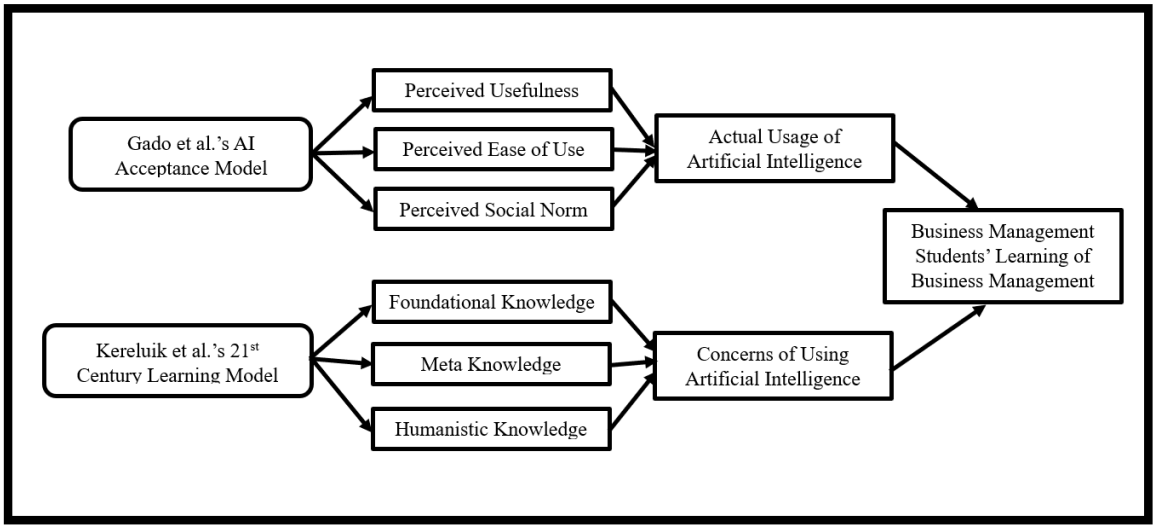

Figure 1 Conceptual Framework of the Study

Methodology

Research Design

This research uses a sequential explanatory mixed-methods design, incorporating specific sampling methods, instruments, and procedures for data collection and analysis. This design uses both quantitative and qualitative inquiries sequentially, starting with quantitative inquiries before proceeding to qualitative inquiries (Creswell & Guetterman, 2019; Edmonds & Kennedy, 2017; Tay & Phang, 2022). In this design, blending two inquiries helps compensate for each other's weaknesses (Creswell & Guetterman, 2019; Edmonds & Kennedy, 2017). Therefore, the mixed-method research design is the most suitable for the current research objectives. This approach enables both the investigation and measurement of how well business management students understand the use of AI, as well as an exploration of their learning experiences related to AI.

Research Population and Sampling

For the purpose of this proposed research, final-year business management students from a local higher education institution in China will be selected. The rationale for selecting these students is that they are at the end of their undergraduate studies and have learned and acquired much knowledge related to business management before participating in the workforce society. These students are also the current generation to be exposed to the use of AI, such as ChatGPT and Gemini, making them one of the many who have been exposed to AI before entering the workforce. Research participants will be recruited using the simple random sampling (SRS) method, wherein every research participant will be selected randomly to eliminate selection bias (Creswell & Guetterman, 2019; Edmunds & Kennedy, 2017). Using Krejcie and Morgan's sample size calculation formula (Mohammadi, 2023), at least 365 participants are required to achieve maximum results for the proposed research.

To explore the perceptions and concerns of business management students on the use of AI, we conducted interviews using a purposive sampling method. This approach involves selecting participants from the first research objective for a follow-up session. Purposive sampling is a technique in which researchers intentionally choose participants who meet specific criteria relevant to the research (Campbell et al., 2020; Creswell & Guetterman, 2019; Edmunds & Kennedy, 2017). In this study, a total of seven students were purposively selected for the follow-up session.

Research Instruments

Two research instruments are used to achieve the established objectives for this research. These instruments consist of an adapted survey and semi-structured interviews.

Lau's (2023) Technology Perception and Acceptance Survey

In the previous research conducted by Lau (2023), the researcher examined the use of Google Classroom as a form of teaching and learning material among secondary school teachers in Malaysia. The research was conducted not long after the COVID-19 pandemic became an epidemic across the globe, and Lau (2023) utilised the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2) as the driving theoretical framework to conduct the study, having the theory's aspects of PU, PEU, and PSN, which is similar to the present research.

Driven by Lau's (2023) latest findings of her research, the survey questionnaire distributed by the research was deemed significant, as many secondary school teachers showed high perceptions concerning the usefulness, ease of use, and social norm of utilising Google Classroom for teaching and learning amidst the pandemic and epidemic. Lau's previously developed survey questionnaire was also statistically tested and piloted for validity and reliability. Accordingly, she reported that all factors within the questionnaire had Cronbach's Alpha of above 0.89, indicating that all the items were suitable and highly reliable for field surveys. As for the validity, Lau (2023) reported that the survey had high convergent validity (AVE = 0.67) and low discriminant validity (0.86) based on the Heterotrait-Monotrait Ratio performed. Generally, Lau's (2023) survey was valid, making it sufficient for the present research. The 15 questions from Lau's (2023) research are adapted to the present research, with the following adjustments made while retaining the five-point Likert scale. The revised questionnaire was distributed to business management students at the chosen institution.

1. The demographic data from Lau's (2023) research is changed from secondary school teachers to business management students, focusing on the gender, years of study, and the institution where the participants study.
2. All items in Lau's (2023) have their terminologies revised – this means that instead of using *Google Classroom*, they are changed to AI, and examples are modified as *ChatGPT* and *Google Gemini* instead.

Semi-Structured Interviews

As for the semi-structured interviews, the interview question incorporates four major topics according to Kereluik et al.'s 21st Century Learning Model to explore during the semi-structured interviews. The interview questions aimed to explore the four major parts: foundational knowledge, meta knowledge, humanistic knowledge, and an additional section focusing on the challenges faced by business management students regarding using AI.

Data Collection and Data Analysis

For each research objective, one research instrument will be used. Accordingly, for the first research objective, a Likert-scale survey will be distributed to the 365 participants identified for this proposed research. This survey intends to measure the participants' extent of understanding towards the use of AI. The second research objective serves as a follow-up to the first research objective. Hence, semi-structured interviews will be conducted to prompt and explore the participants' concerns about learning using AI.

Once the business management students are identified, the researcher will distribute the surveys through Google Forms. The use of online surveys helps ensure anonymity among the participants, and the participants can attempt and complete the surveys at any given time and location (Creswell & Guetterman, 2019; Edmunds & Kennedy, 2017). All responses submitted by the participants are recorded and stored in Google Forms, allowing the researcher to download them as an Excel sheet for further analysis.

Data analysis for the surveys recorded includes using the Statistical Package for Social Sciences (SPSS) version 25. This is to identify the descriptive statistics obtained from the demographic data and Likert-scale responses, which are mean, mode, median, frequency, and percentage; inferential statistics, which is the use of linear regression, will be used to conduct

hypothesis testing and determine whether there is a relationship between students' understanding of AI and students' use of AI.

As for the second research objective, semi-structured interviews will be used. The semi-structured interviews consist of questions that are not entirely rigid and typically open-ended to prompt further responses from the research participants (Creswell & Guetterman, 2019; Edmunds & Kennedy, 2017). This also allows researchers to capture more authentic sharing of opinions and thoughts from the participants (Creswell & Guetterman, 2019; Edmunds & Kennedy, 2017). Accordingly, the semi-structured interviews will be conducted one-to-one, wherein the participants who consent to participate in the interview sessions will be invited to join an online meeting on Google Meet. The interview sessions will then be recorded and transcribed while retaining the interviewees' anonymity.

Finally, to analyse the data from the interview sessions, Braun and Clarke's thematic analysis will be used (Tay & Phang, 2022; Wei & Cao, 2024). Braun and Clarke's thematic analysis is well-established and widely used by many scholars during the analysis of texts (Tay & Phang, 2022; Wei & Cao, 2024). Accordingly, Braun and Clarke's thematic analysis involves the following steps: (1) identify the codes in the textual transcripts, (2) identify the potential themes by grouping related codes together, (3) categorise the codes to develop suitable themes, (4) finalise the themes gathered from the analysis, and (5) report the finalised themes. The entire thematic analysis is also conducted through the use of ATLAS.ti, which is a qualitative software that is efficient in identifying relevant themes based on the codes established through the transcriptions.

Furthermore, the use of ATLAS.ti also allows researchers to visualise data, wherein the researchers can produce mind maps that inform the branches of codes and categories that form the main theme to be discussed further in the research. Hence, ATLAS.ti is deemed necessary in the present research to achieve the research objective established.

The research obtained ethical clearance and approval from the researcher's degree-awarding institution. Throughout the research process, all participants will remain anonymous. The research instruments, including the survey questionnaire and semi-structured interviews, will not contain identifiers that could disclose the participants' identities. Instead, pseudonyms will be used to protect their anonymity.

Results

Quantitative Findings

Descriptive Statistics

This section presents descriptive findings collected from business management students, focusing solely on their gender and year of study, while ensuring that their identifiable personal information remains confidential. A total of 400 business management students participated in this research. Among them, 206 students (51.5%) are male, while 194 students (48.5%) are female. Regarding their year of study, there are 121 students (30.3%) in Year 1, 87 students (21.8%) in Year 2, 100 students (25%) in Year 3, and 92 students (23%) in Year 4.

Findings

Based on the individual variables discussed—specifically, PU, PEU, PSN, and UB—we can present a table summarising the overall mean for each variable. From Table 1, it is clear that PSN has the highest mean value among the independent variables. Although the other independent variables have similar values, they all reflect agreement with the items and statements. This suggests that social norms strongly influence business management students' use of AI in their learning processes.

Table 1
Summary of the Individual Variables Reported

	Variable	Mean
Independent	PU	3.5380
Independent	PEU	3.5275
Independent	PSN	3.5455
Dependent	UB	3.4933

Multiple Regression Test

For the current research, three hypotheses have been established to examine whether the independent variables—PU, PEU, and PSN—have a significant relationship with the dependent variable, which is UB.

According to Table 2, it can be seen that the model fit of the multiple regression test is suitable for describing the relationship between the independent and dependent variables. Accordingly, when referring to the R Square (R^2) value, the value shown is 0.796, equivalent to 79.6%. This subsequently means that the overall multiple regression test can be best explained by 79.6% of the analysis and statistics made. In addition to the significance value, which is .000, it also means that the overall model is significant for detailed and further analysis.

Table 2
Model Summary of the Multiple Regression Test

Model	R	R Square	Adjusted R Square	Sig. F Change
1	.892	.796	.794	.000

Table 3 presents the results of the ANOVA (analysis of variance) conducted on three independent variables. The findings indicate that the ANOVA test is significant, with an F-value of 514.280 (degrees of freedom: 3, 396) and a significance value of P = .000, which is less than the significance level of .005.

Table 3
ANOVA Table

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	372.486	3	124.162	514.280	.000
	Residual	95.606	396	.241		
	Total	468.092	399			

The relationships between the independent variables—PU, PEU, and PSN, and the dependent variable, UB, are clearly outlined by the tested coefficients. This information is detailed in

Table 4 below. Specifically, for the relationship between PU and UB of AI, an increase in PU leads to an increase in UB by 0.013, with a p-value of 0.765. In contrast, for the relationship between PEU and UB, an increase in PEU results in a greater increase in UB by 0.228, with a p-value of 0.000. Finally, the relationship between PSN and UB shows that an increase in PSN corresponds to an increase in UB by 0.675, with a p-value of 0.000.

Table 4
Coefficients of the Multiple Regression Test

Model		Unstandardised B	Coefficients Std. Error	Standardised Coefficients Beta	t	Sig.
1	(Constant)	.251	.088		2.839	.005
	PU	.013	.042	.013	.300	.765
	PEU	.228	.058	.227	3.935	.000
	PSN	.675	.050	.674	13.374	.000

It is important to note that the PU of AI has been found to have no significant impact on the UB of business management students. The p-value of .765 far exceeds the significance threshold of .05, indicating that the relationship between these two variables cannot be established. This suggests that there may be other factors influencing this relationship.

The PSN has the largest and most significant impact on UB compared to other factors. Specifically, the unstandardised B value for PSN is 0.675, considerably higher than the PU at 0.013 and PEU at 0.228. Additionally, the P value for PSN is significant at P = 0.000, less than 0.05. Therefore, while PEU and PSN influence UB, PSN is the most likely factor affecting business management students' behaviour regarding AI.

Figure 2 displays the normal P-P regression plot from the overall multiple regression test. The plot shows that the observed values do not follow the expected line completely, with some observations deviating significantly from it. This deviation can be attributed to the statistically insignificant finding regarding the PU of AI, where the p-value is .765, well above the standard significance level of $p < .05$. However, aside from PU, the remaining observed values appear to align linearly with the expected line. This indicates that PEU and PSN are significantly related to UB.

Based on the findings and results of the multiple regression test, including model fit, ANOVA results, coefficient results, and the generated P-P plot, the following hypotheses can be confirmed:

- The first hypothesis, H1, which proposes a significant relationship between business management students' PU and their behaviour towards AI, is rejected based on an Unstandardized B = 0.013 and P > 0.05.
- The second hypothesis, H2, indicates a significant relationship between business management students' PEU and their behaviour regarding AI, accepted with Unstandardized B = .228 and P < .05.
- The third hypothesis, H3, suggests a significant relationship between business management students' PSN and their behaviour regarding AI, with an unstandardised coefficient of B = .675 and $p < .05$.

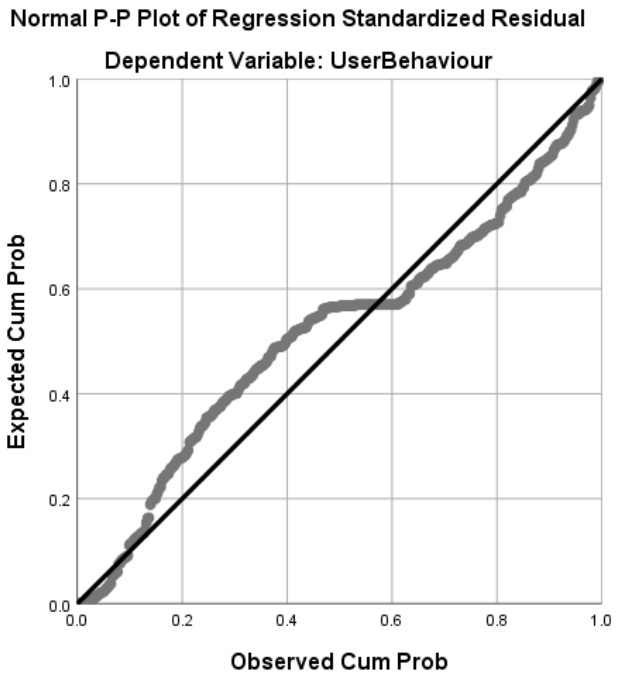

Figure 2 *Normal P-P Plot of Regression Standardised Residuals*

Qualitative Findings

After conducting the interview, all audio recordings are transcribed verbatim. These transcripts are then analysed using ATLAS.ti. Following Braun and Clarke's thematic analysis, the codes are examined, and maps are created to illustrate the themes identified in the interviews. Figure 2 presents the relevant themes derived from the three types of knowledge outlined in Kereluik et al.'s 21st Century Learning Model, along with the concerns regarding the use of AI. Additionally, Figure 4.5 displays the themes related to business management students' concerns about AI.

Kereluik et al.'s Three Types of Knowledge

Six themes emerge from Kereluik et al.'s 21st Century Learning Model (Figure 2). These themes correspond to the model's three types of knowledge: foundational knowledge, meta knowledge, and humanistic knowledge. Each theme is linked to these types of knowledge as presented by Kereluik et al. The following outlines the relationship between Kereluik's model (K), the themes (T), and their corresponding numbers (X).

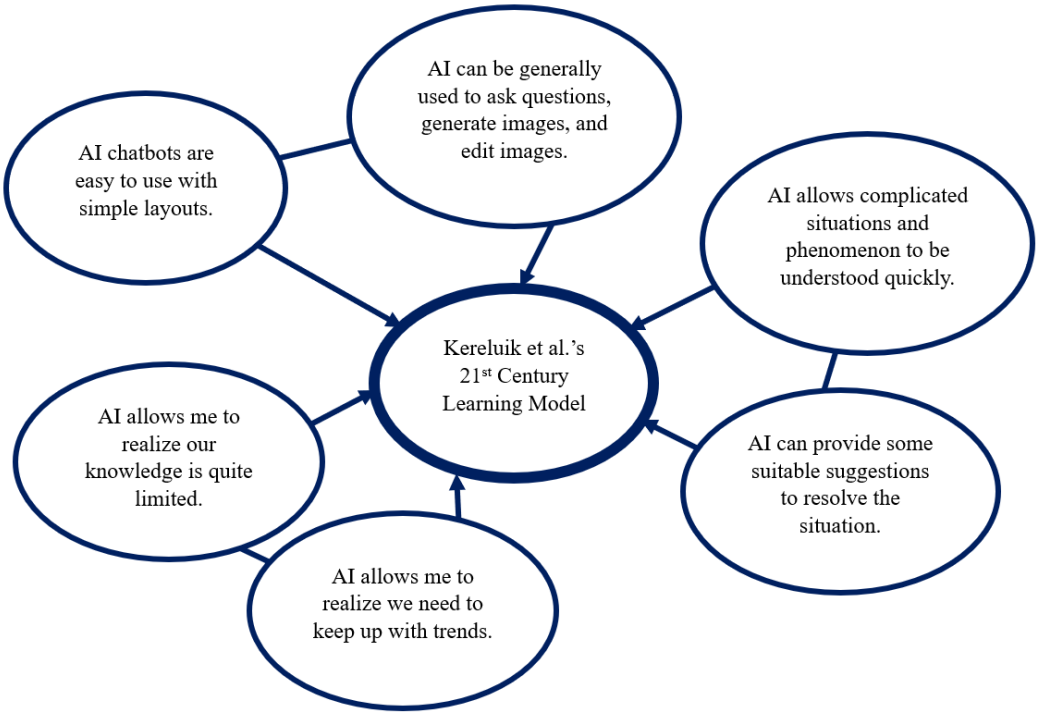

Figure 2 *Themes based on Kereluik et al.'s Three Types of Knowledge*

Foundational Knowledge (KT1)

Concerning the foundational knowledge, two themes are found in thematic analysis: "AI can be generally used to ask questions, generate images, and edit images," and "AI chatbots are easy to use with simple layouts." Accordingly, from the responses of the 10 business management students interviewed, the following quotes from the codes directly inform the themes:

> *"ChatGPT is easy to use. All I need is to ask some questions and (it) will generate the answers I want."* – Student 7
>
> *"It is easy… I think we can just ask the AI to edit our photos to look nicer. If I (have) got a nice photo, I can just use the AI to remove the thing(s) I don't want."* – Student 5

The responses show that the students can use AI easily. Given ChatGPT and Gemini's existing layouts and user interface, all the students need to do is type in their questions and obtain the answers. At the same time, editing images is possible because ChatGPT and Gemini currently have an image icon that allows users to click and upload their images. They can proceed to edit the images they upload to the AI. In short, the students can easily navigate the functions of AI.

Meta Knowledge (KT3)

The two identified themes are "AI enables quick understanding of complex situations" and "AI can offer suitable suggestions to resolve issues."

> *"Sometimes I cannot understand the question, so I can just copy (and) paste the question into ChatGPT to find out the answers."* – Student 2

In general, the students can seek answers from AI, such as ChatGPT and Google Gemini. However, from the responses, a possible concern has emerged, wherein students may be

over-relying AI to get answers because the responses from AI are explained rather than having the students explore everything meaningfully.

Humanistic Knowledge (KT 5)

Lastly, the two themes that are found in the thematic analysis are "AI allows me to realize we need to keep up with trends" and "AI allows me to realize our knowledge is quite limited." The following informs the quotes that support the themes identified.

> *"Sometimes I also don't know this (answer) is possible. ChatGPT tells me a lot of things."* – Student 3
>
> *"There are just so many things from AI I never know until I use it."* – Student 5

Based on the student's responses, it can be seen that using AI is seemingly used as a form of resource to gather information. In fact, it has been found that the students believe themselves to have insufficient field-related knowledge, so there is a need for them to get more knowledge from AI. Since "everyone is using it," as Student 1 informs, learning using AI seems to be inevitable from the student's point of view.

Concerns of Using AI

Figure 3 highlights four major themes derived from the concerns of business management students regarding the use of AI. Each theme is identified with the code CTX, where 'C' stands for 'concerns', 'T' represents the theme, and 'X' indicates the theme number.

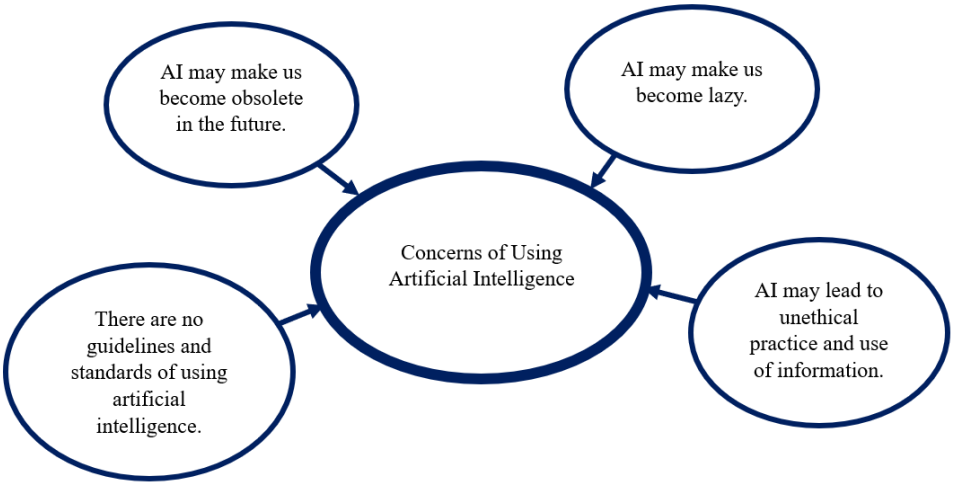

Figure 3 *Illustration of the concerns faced by Business Management students, organized by identified themes* **AI may make us lazy (CT1)**

Firstly, the students are concerned that using AI may lead to laziness.

> *"What if others become lazy? Since AI gives all the answers anyways."* – Student 4
>
> *"I don't know. Maybe we will stop thinking? We will just ask AI to tell us everything so we don't have to do anything."* – Student 4

AI may lead to unethical practices and use of information (CT2)

In the second theme concerning unethical practice and the use of information through AI, the following exemplifies the codes obtained:

"They (other students) may just use AI to complete the assignments. They don't (even) need to do anything." – Student 10
"Those ideas are not their own. They will just say it is their original work anyways." – Student 1

There are no guidelines and standards for using AI (CT3)
In the third theme concerning the lack of guidelines and standards, the business management students informed the following during the interview sessions:
"AI is everywhere, but what about the guidelines? I want to use (it) but I do not know if what I use is exactly correct or not." – Student 2

AI may make us obsolete in the future (CT4)
The fourth theme that informs AI is making business management students obsolete in the future, the following exemplifies the quotes from the students during the interview sessions:
"If AI can answer everything, I wonder if I can get a job in the future." – Student 2
"Even in university we are already using AI to solve assignments, so why wouldn't companies use AI to solve problems instead of hiring?" – Student 3

Discussion and Conclusion
According to the research findings, there is a significant relationship between the independent and dependent variables. Specifically, PEU and PSN significantly influence the UB of business management students towards the use of AI in learning. Unlike PEU and PSN, the PUwas found to be insignificant because the P value exceeded the threshold.

According to Gado et al.'s (2022) newly proposed AI Acceptance Model, the findings of this research indicate that business management students generally accept AI as an integral part of their learning experience. As a result, these students actively utilise tools like ChatGPT and Google Gemini to enhance their education. Interestingly, findings from the multiple regression analysis indicate that PU does not significantly relate to the UB of business management students (P = .765). Although the literature reviewed highlights the potential benefits of using AI, such as providing quick responses, delivering accurate and factually correct information, and supporting requests with evidence (Abdelwahab et al., 2023; Allen, 2020; Getchell et al., 2022; Sharma & Pandey, 2024), the current findings suggest that the business management students may be using AI without realising the potential benefits that AI can offer.

The influence of PEU and PSN over the business management students' UB also indicates that they have some control over their use of AI. However, this is likely due to the strong influence of PSN, where their use of AI is primarily affected by the decisions of friends and peers. If business management students are unaware of the benefits of AI, the challenges faced by employers continue to remain unresolved, as employers require graduates with strong technological skills to enhance quality and productivity in the workplace (Abdelwahab et al., 2023; Allen, 2020; Bhatia & Panneer, 2019; Getchell et al., 2022; Sharma & Pandey, 2024).

Moreover, the stereotype that contemporary business management students are inherently technologically competent continues to persist (Abdelwahab et al., 2023; Allen, 2020; Riapina,

2024). The biased view of business management students' technology competence that is assumingly acquired would lead to potential frustration among employers in the future. Hence, while the literature discusses and supports the findings, the existing problems identified are not fully resolved.

On the other hand, qualitative results from this study showed that the business management students' concerns are real, as reflected in their responses. Arguably, the students have real concerns about using AI not only for their studies but also for their future as workforce members. Students' responses in the interview align with the common belief that using AI is easy, as previously suggested by Allen (2020) and Abdelwahab et al. (2023).

Furthermore, students are struggling with using AI in learning. Not only do the students not have proper guidelines to follow, but they are also concerned that their peers may misuse AI to achieve learning goals that are meaningless since there is no real learning. The responses also reflect Getchell et al.'s (2022) concerns about the ethical use of AI, as many would merely rely on AI responses to gather the data and present them without checking.

In summary, it can be seen that previous scholars (e.g., Allen, 2020; Getchell et al., 2022; Riapina, 2024; Sroufe, 2020) have valid concerns: Students understand that AI is useful for obtaining necessary responses, but they lack the proper literacy and knowledge required for the future workforce. Although the students in the interview sessions demonstrated the three types of knowledge outlined in Kereluik et al.'s 21st Century Learning Model, the knowledge displayed by the business management students is still insufficient.

Theoretical Implications

The study's findings theoretically support Gado et al.'s (2022) AI Acceptance Model. The results of the multiple regression analysis indicate that at least two independent variables, PEU and PSN, have an influence on UB, the dependent variable. This implies that two-thirds of the independent variables effectively predict the dependent variable.

However, the main concern identified is that PU does not show a statistically significant relationship with UB. This indicates that there may be other variables influencing this relationship, such as a mediating or moderating variable. This leads to further investigation into how PUaffects UB. Overall, Gado et al.'s (2022) AI Acceptance Model is relevant for assessing individuals' acceptance of using AI.

Practical Implications

This research clearly indicates that AI is widely used among business management students in higher education institutions. Students often turn to AI for assistance in resolving their doubts, questions, and problems related to learning. Tools like ChatGPT and Google Gemini have become integral to their educational experience. However, there is currently a lack of guidelines and standards to help students use AI correctly and ethically.

This research is valuable in assessing the level of acceptance of AI among students in higher education institutions, regardless of their field of study. Overall, the findings can serve as a replicable foundation for future studies exploring AI usage among various groups.

Limitations and Recommendations for Future Research

This research has some limitations that need to be addressed. Firstly, it only includes business management students as participants. This narrow focus means that the responses are one-sided, leading to potentially insufficient data. Therefore, future research should involve a broader range of voices from other stakeholders. The researcher suggests including lecturers, curriculum designers, and business employers as participants. The same survey questionnaires and interview questions can be used to gather their perspectives on the use of AI, allowing for a more comprehensive understanding of the topic.

The research was only able to recruit 10 business management students to gather qualitative data regarding their knowledge of and concerns about using AI. As a result, the qualitative data obtained may not be sufficient. Therefore, future research should consider increasing the number of participants to 30 in order to gather more data and produce more comprehensive findings about their knowledge and concerns regarding AI.

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