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A Study of Using Artificial Intelligence (AI) to Develop Teaching Materials to Boost English Language Learning and Teaching Experience among Language Educators in Chinese Universities

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Abstract

Since the COVID-19 pandemic began, the role of artificial intelligence (AI) has become increasingly prominent. In English language learning, it is gradually being integrated into higher education institutions as a new method of teaching and learning. In China, the Ministry of Education emphasizes the need for all students to be proficient in technology as part of a development plan. As a result, English language learning is now integrated with AI. There is a need for a deeper exploration of how this technology is used to enhance language learning. Gado and colleagues' Artificial Intelligence Acceptance Model, which includes the constructs of Perceived Usefulness, Perceived Ease of Use, and Perceived Social Norms, is considered the most suitable framework for understanding how artificial intelligence is being adopted and implemented in higher education institutions in China. Using a single-site case study method, this research includes classroom observations and semi-structured interviews with five English language lecturers from a selected institution. Thematic analysis is employed to derive the findings. This research can significantly enhance English language teaching in China, enabling more effective use of artificial intelligence in the future.

Keywords: Artificial Intelligence, English Language, Higher Education Institutions

Introduction

The emergence of artificial intelligence has taken the world by storm. Although English is classified as a foreign language (FL) in China according to Kachru's Three Concentric Circles model (Ali et al., 2020; Allen & Mizumoto, 2024; Han, 2021; Lee et al., 2023; Mei et al., 2017; Pan et al., 2021; Zou et al., 2023), the Ministry of Education in China recognizes the

importance of learning English, and relevant English language subjects are introduced at all levels of education in China (Han, 2021; Mei et al., 2017). Chinese students are exposed to various language skills, including reading, writing, listening, speaking, grammar, and vocabulary, particularly in their study of English as a foreign language. The Ministry of Education aims for the new generation to achieve English proficiency as early as possible (Allen & Mizumoto, 2024; Han, 2021; Mei et al., 2017; Pan et al., 2021; Zou et al., 2023). With human-like capabilities, artificial intelligence opens up plentiful ventures and possibilities for Chinese language learners to acquire the English language (Boudouaia et al., 2024; Dou & Song, 2020; Gado et al., 2022; Taskiran et al., 2024).

Significantly, as artificial intelligence is increasingly being integrated into language classroom practices in the realm of English language teaching, the consensus among experts and scholars is that technologies brought by artificial intelligence can significantly boost teacher-learner engagement, achieve personalized instructions, and streamline educators' workload (Gado et al., 2022; Taskiran et al., 2024; Trang et al., 2024). Considering the Education Informatization 2.0 Action Plan and the growth of artificial intelligence, new teaching and learning methods can emerge for English language education in China. There is no doubt that higher education institutions in China are responding to the growing demands for quality language education across the country (Ali et al., 2020; Allen & Mizumoto, 2024; Lau, 2023; Li & Noori, 2024; Trang et al., 2024; Yang et al., 2024), which this makes higher education institutions as one of the direct benefactors of the present research. It is essential for English language lecturers in higher education institutions to recognise the role of artificial intelligence (AI) as a modern teaching tool (Gado et al., 2022; Trang et al., 2024).

Researchers interested in the field of educational technology and language learning are also another group of benefactors of the present research. Since the emergence of artificial intelligence, many scholars have provided theoretical and practical evidence regarding the potential this technology offers in the field of education. (e.g., Boudouaia et al., 2024; Dou & Song, 2020; Gado et al., 2022; Hockly, 2023; Jarvis et al., 2024; Taskiran et al., 2024; Trang et al., 2024). However, the processes of implementing AI by the English language lecturers in the lectures are unclear and currently remain unexplored, especially the use of AI and how it would affect the preparation and conduct of lectures, and the guidance of assigning assignments to the students in higher education institutions (Alakabawy, 2024; Li & Xu, 2020; Wu et al., 2024; Zhang, 2023). This research intends to provide a contextual understanding of how AI is used among English language lecturers in China to deliver lectures in classrooms. Furthermore, this study intends to provide a depiction of the current situation of AI utilisation in Chinese higher education institutions to allow continuous improvement for better lecturing qualities.

Furthermore, English educators can also receive benefits based on the findings of the research. Accordingly, findings of this research would also inform the current methods and steps taken by English language learning (ELL) educators in developing suitable teaching materials, which can be adapted and serve as a guide for future usage. Specifically, since AI chatbots can provide diversified responses, not only can educators seek clarification and generate explanations of specific language topics, but they can also prompt teaching ideas cater to specific language learning needs among Chinese students, generate different language learning tasks and practices for the students, and seek evaluation of students'

performance by comprehending the potential feedback to be given (Jarvis et al., 2024; Taskiran et al., 2024). A guideline and manual for designing ELL teaching materials can be developed through this research, along with specific and effective prompts.

In sum, by understanding the highlighted problems and perceived potential significance of artificial intelligence in the context of English language learning in China, this research can inform language educators' specific experiences and thoughts in integrating artificial intelligence during language lessons. Thus, based on the problems identified and the established aims, the research seeks to achieve the following research objectives:

1. To explore the usage of AI among Chinese English language lecturers in classroom lectures.
2. To explore the views of using AI among Chinese English language lecturers.
3. To explore the views of other concerns faced by Chinese English language lecturers in regards to using artificial intelligence.

The following research questions are listed as follows:

1. What is the usage of AI among Chinese English language lecturers in classroom lectures?
2. What are the views of using AI among Chinese English language lecturers?
3. How do university educators use AI in the designing and development of English language learning teaching materials?

Theoretical and Conceptual Framework

To conduct the research, the researcher intends to utilize the AI Acceptance Model developed by Gado et al. (2022). Specifically, the focus will be on the user behavior component of this model to meet the research objectives. The AI Acceptance Model builds upon three well-established technology-based theories: The Technology Acceptance Model (TAM), the Unified Theory of Acceptance and Use of Technology (UTAUT), and the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2) (Gado et al., 2022; Lau, 2023; Trang et al., 2024). These theories aim to explain how users accept and utilize technology for various purposes. They are based on three core constructs: social influence (SI), facilitating conditions (FC), performance expectancy (PE), and effort expectancy (EE) (Gado et al., 2022; Lau, 2023; Trang et al., 2024). Within these three theories and the constructs mentioned earlier, the common variables used to study people's acceptance of technology include perceived usefulness (PU), perceived ease of use (PEU), and perceived social norms (PSN) (Gado et al., 2022; Lau, 2023; Trang et al., 2024). The three main variables, which also serve as sub-constructs, are explained in the following bullet points:

- PU – This construct informs the extent of usefulness AI can offer, which is also beneficial to the consumers in return.
- PEU – This construct informs the extent to which AI is easy for consumers to use to perform various functions.
- PSN – This construct informs how societal influences, such as the environment and other people involved, can affect the use of artificial intelligence.

In the context of teaching and learning, the researcher expands upon the AI Acceptance Model proposed by Gado and colleagues (2022) among university English language lecturers

using artificial intelligence. The goal is to understand how the model constructs PU, PEU, and PSN. Consequently, a conceptual framework is developed and presented in Figure 2.1.

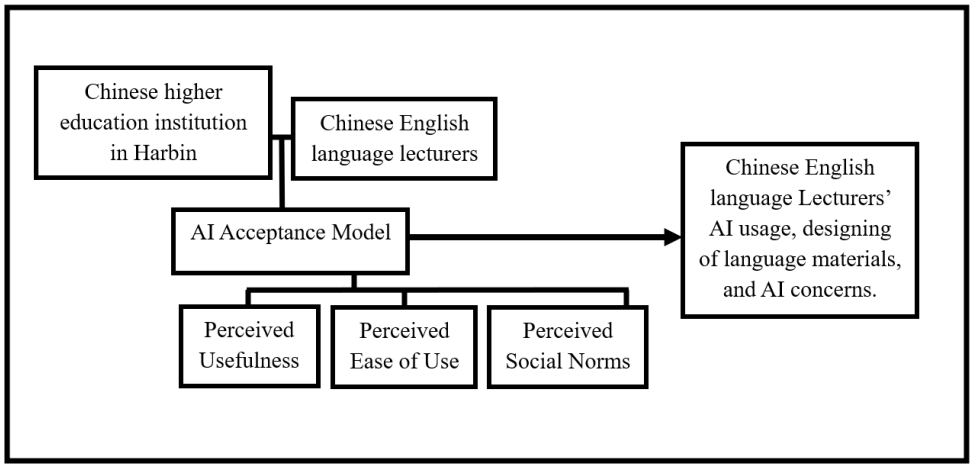

Figure 1. Theoretical Framework of the Research

Methodology

This research design utilizes qualitative inquiries to achieve established research objectives (Creswell & Guetterman, 2019; Edmonds & Kennedy, 2017). In a single-site case study research design, an in-depth investigation of a specific phenomenon takes place. This typically involves employing various qualitative research methods to collect data, aiming to provide a comprehensive and meaningful depiction of the phenomenon, along with rich descriptions (Creswell & Guetterman, 2019; Edmonds & Kennedy, 2017). The single-site case study focuses on a particular location where the phenomenon occurs, with the primary goal of delivering a detailed and insightful description. Additionally, this approach requires an understanding of the dynamics and relationships that exist among individuals, as well as between individuals and their environment (Creswell & Guetterman, 2019; Edmonds & Kennedy, 2017).

Establishing the Bounded System

For this research, based on the objectives and established conceptual framework, the researcher identifies a bounded system related to achieving the research aims:

- Spatial boundaries – Only classrooms in which English language lectures are held will be selected.
- Temporal boundaries – English language courses offered for one semester at selected Chinese higher education institutions.
- Participant boundaries – Only current English language lectures from selected Chinese higher education institutions are included.
- Thematic boundaries – This research examines the conduct of English language lectures regarding the use of artificial intelligence.

Research Participants

This study has chosen a higher education institution located in Harbin, Heilongjiang, China. This university is recognised as one of the leading higher education institutions in the country, specialising in science and technology, along with other academic programs that are known for their high quality. In addition, this Chinese higher education institution specializes in science and technology, integrating AI into all lectures, practical sessions, and tutorials. The

researcher has identified specific schools alongside selected ESP courses. To achieve the three established research objectives, five English language lecturers (N=5) have been purposefully selected for this study.

Research Instruments

Classroom Observations

Classroom observations are a common qualitative inquiry in education research, focusing on understanding the dynamics and interactions between lecturers and students within a fixed environment. This involves understanding how educational practices, including lesson material usage and pedagogical skills, are implemented throughout the research period. In this research, the researcher acts as a non-participant observer during the lecture sessions, ensuring that their presence and interference are kept to a minimum. Additionally, the researcher utilizes personal observation notes taken during the classroom sessions as a source of information for further data analysis.

In addition to the personal classroom observation notes, this study adopted Bielefeldt's (2012) technology-integrated classroom observation guide. In this guide, Bielefeldt specifies key aspects to observe during the session, including (1) teacher roles, (2) learning activities, (3) technologies utilized by both teachers and students, and (4) the duration of technology use.

Semi-Structured Interviews

In qualitative research, semi-structured interviews serve as a method for exploring participants' beliefs, views, and opinions regarding a specific phenomenon of interest. These interviews also provide insights into the pedagogical practices and skills exhibited in classroom settings. The questions used in semi-structured interviews are usually open-ended, enabling participants to share detailed insights about the phenomenon. This research adheres to the conceptual framework outlined in the previous chapter, which is based on the Artificial Intelligence Acceptance Model developed by Gado and colleagues (2022). Specifically, the interview questions are structured around three key constructs: Perceived AI Usefulness, PEU of AI, and PSN.

Data Collection

The data collection takes place over one semester at a selected higher education institution in Harbin, China, from late September to late February. The researcher conducts a minimum of two non-participant classroom observations for each English language lecturer, resulting in a total of up to 10 classroom observations over the semester. In addition to personal classroom observation notes, Bielefeldt's (2012) technology-integrated classroom observation scale is utilized throughout the process. For each lecturer, the researcher follows this procedure: each lecturer is observed twice over a two-week period according to their schedule, leading to a total of 10 weeks dedicated to the classroom observations.

As for the semi-structured interviews, the researcher follows the interview questions developed from the constructs of Gado and colleagues' (2022) AI Acceptance Model, as well as the interview protocol established by Ruslin et al. (2022). These semi-structured interview sessions will take place at the end of the semester, after all classroom observations have been completed.

The researcher aims to address several ethical considerations. Firstly, all information related to the institution, participants, and data will be kept confidential. Pseudonyms will be assigned to the English language lecturers, and the name of the institution will not be mentioned anywhere in the thesis. For classroom observations, no details of the recorded sessions will be included in the thesis, including screenshots and any other identifying information. This approach ensures the confidentiality and privacy of the English language lecturers and their students are maintained.

Data Analysis

Braun and Clarke's thematic analysis is used to analyse the data. The six steps in Braun and Clarke's thematic analysis are as follows: (1) be familiar and try to understand as much data obtained as possible, (2) identify all potential initial codes as the first step of initial analysis, (3) categorize all these initial codes by presenting them in suitable categories, (4) revise the newly formed categories into refined categories, (5) organize these categories and finalize them into proper themes, and (6) report these themes.

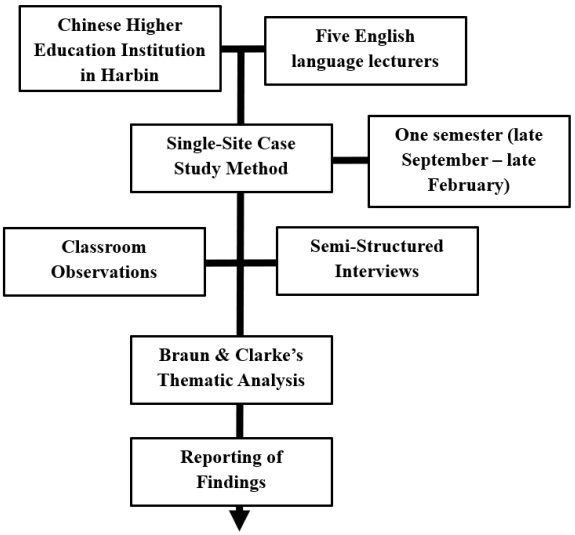

Figure 2. Data Collection & Analysis Procedures

Findings

The researcher used pseudonyms to identify the English language lecturers involved in the study. Each lecturer was assigned a pseudonym following the format "ELL X," where "X" represents their designated number. In this case study, the five English language lecturers were referred to as ELL 1, ELL 2, ELL 3, ELL 4, and ELL 5. Specifically, ELL 1, ELL 2, and ELL 4 taught English for Business Communication, while ELL 3 and ELL 5 taught English for Science and Technology.

Findings from the Classroom Observations

The classroom observations were guided by Bielefeldt's (2012) technology-integrated classroom observation guide, which this guide informed the (1) teacher roles, (2) learning activities, (3) technologies used by teachers and students, and (4) technology use time. In this section, the researcher provides the findings obtained for each English language lecturer observed.

Lecture Observation – ELL 1

All lecture sessions from ELL 1 were conducted in a classroom. The first lecture lasted for about 92 minutes; the second lecture lasted for about 100 minutes, as the lecturer spent an additional 10 minutes explaining certain concepts before ending the lecture. During the observed lecture sessions, ELL 1 was using both English and Mandarin; however, English was predominantly used as the primary means of communication. WPS Presentations were used to deliver the lectures in both sessions observed. The first lecture had some graphics, but the second lecture had more notes, and there were no graphics present. The students generally came to the lectures with their digital devices and printed notes as learning materials.

Generally, in both lectures, ELL 1 initiated discussions by giving cases based on the topic of the day, and ELL 1 walked around to facilitate the discussions. Students were also asked to present the findings of their discussions in class. Furthermore, in the last 20 minutes, ELL 1 was seen discussing the assignments with the students. During the question-and-answer session, a student asked for clarification on a certain concept covered in class. ELL 1 responded with *"I think you can look back at the third topic. Also, I thought you could use AI? I think you can expand the ideas from there."* This showed that ELL 1 was not giving any direct answers to the student. Instead, the lecturer believed the student could use previously learned topics and AI to expand on the requested concept.

Lecture Observation – ELL 2

Both lecture sessions from ELL 2 were conducted in a classroom. The first lecture lasted approximately 85 minutes, while the second lecture lasted about 90 minutes, indicating that ELL 2 fully utilized the lecture time during the observed sessions. In both observed sessions, ELL 2 used a mix of English and Mandarin to conduct the lectures while engaging with the students. WPS Presentations and Word Documents were utilized as teaching materials. WPS Presentations served as the slides to present lesson content, while Word Documents provided additional tasks for discussions. The Word documents included suggested answers that were presented at the end of the discussion sessions. Generally, students were present with their digital devices and printed notes, and they were seen making notes throughout. Artificial intelligence was not mentioned in the lectures. The interaction between the lecturer and students was limited to lectures, discussions, presentations, and feedback.

Lecture Observation – ELL 3

Lecture sessions for ELL 3 took place in a science laboratory. The first lecture lasted for about 85 minutes. As for the second lecture, it lasted for about 110 minutes, as ELL 3 spent additional time explaining certain concepts to the students. During the lecture, ELL 3 used a mix of English and Mandarin Chinese to present the material, but predominantly used English. WPS Presentations were utilized to deliver the lectures, which included numerous explanations and graphics. The students used their digital devices and printed notes as learning materials during the lectures. As ELL 3 presented the laboratory content, the students took notes and engaged in discussions. The students were also involved in sharing their discussion answers with the lecturer, and feedback was given to the students by the lecturer. In both observed lecture sessions, ELL 3 did not mention the use of AI.

Lecture Observation – ELL 4

All lecture sessions of ELL 4 were conducted in a classroom. The first lecture lasted about 90 minutes, and the second lecture lasted about 115 minutes. In the second lecture, ELL 4 further explained concepts and discussed assignments, specifically addressing students' questions about assignment writing. In addition to the discussions and lecturing, ELL 4 used a mixture of English and Mandarin during the lecturer-student interaction. However, for most of the time, the sessions were conducted using English. WPS Presentations were utilized to effectively deliver the lecture content, which included graphics for student reference. Students used digital devices and printed notes as references while listening to ELL 4 in class. Throughout the lecture sessions, there was no mention of the use of artificial intelligence. The students only interacted with the lecturer via listening, discussing, and giving feedback.

Lecture Observation – ELL 5

Both lecture sessions from ELL 5 were conducted in a science laboratory. In both lecture sessions observed, they ended around 90 minutes, which meant that ELL 5 fully utilized the time available to deliver the lectures. During the lecture, ELL 5 used a mix of English and Mandarin Chinese to deliver the lessons. However, English was predominantly used throughout the lecture. ELL 5 explicitly instructed the students to use English instead of responding in Mandarin Chinese. For example, *"You should speak English, not Mandarin."* During the lectures, WPS Presentations were used, and students generally sat in the laboratory listening to ELL 5 deliver the lecture content. ELL 5 facilitated classroom discussions by presenting situations on the whiteboard. ELL 5 was observed walking around and supporting students during discussions before asking them to make presentations in the lecture. Towards the end of each lecture, ELL 5 was seen following up with the assignments given to the students, using questions like *"How's everyone's progress?"* ELL 5 also reminded the students about the deadlines and told them to make good use of the resources to complete the assignment. There was no mention of AI in either of the lectures observed.

Findings from the Semi-Structured Interviews

In this section, the main themes were based on Gado et al.'s (2022) AI Acceptance Model. Each main theme was discussed in detail, along with specific sub-themes illustrated by quotations from the interviewed English language lecturers.

English Language Lecturers' Perceived AI Usefulness

In the AI Acceptance Model, PU refers to the extent an AI consumer's beliefs of AI's usefulness and benefits it can offer (Gado et al., 2022). One of the sub-themes that were identified was that the English language lecturers believed AI had helped them to explain terminologies better. As these lecturers were involved in English for Specific Purposes courses, the following displayed quotes show how AI has been helpful in explaining terminologies.

> *"AI can explain a few things. Last week we talked about lateral communication, I think. At least I could translate before giving explanations in the class."* (ELL 2)

> *"Explaining? Yeah, explaining. You can ask a question on ChatGPT and it'll give you a long and detail(ed) explanation. It's not that I don't*

> *understand. Rather, it saves a lot of time to recall and how to explain,"* (ELL 5)

From the responses, it can be seen that all five English language lecturers have used AI chatbots with the purpose of giving explanations. Across five English language lecturers, AI was used for lecture preparations, regardless of the specific ESP courses they taught.

Another sub-theme that emerged within the theme of PU is that English language lecturers were able to create case studies for students to practice and apply their knowledge. The following are quotes taken from some of the lecturers. From the responses, it can be seen that the lecturers believed additional practices were necessary, as students required more practice to strengthen their knowledge and language proficiency. They also believed that the more practices they could generate by using AI, the better it would be for the students.

> *"I can create a case study for students to apply what they (have) learned. There is (are) so many things to learn in one semester, (and) I don't want them to learn without doing. We have practices, of course. But when we have ChatGPT to make more practices, why not? The more, the better,"* (ELL 3)

English Language Lecturers' Perceived Ease of Use of AI

The AI Acceptance Model defines PEU as the extent to which an AI consumer's beliefs of AI being able to use for different purposes are based on the consumer's ability, autonomy, and control (Gado et al., 2022). In the present study and based on the five English language lecturers' responses, it could be seen that they perceived AI as being easy to use. The following quotes are drawn from the lecturers' response:

> *"It's straightforward, right? All you need is to open the website, type your questions, and there you go. It's easy,"* (ELL 1)

English Language Lecturers' Perceived Social Norms towards AI

The PSN in the AI Acceptance Model refers to the degree to which an AI consumer believes that others influence their usage of AI for various purposes (Gado et al., 2022). According to the responses from English language lecturers, one sub-theme identified was their belief in the necessity of using AI to enhance lesson delivery. The responses indicate that the lecturers were influenced by their peers and colleagues to adopt artificial intelligence in their teaching. They motivated one another with the shared goal of making lecturing easier and believed that using AI would significantly benefit their careers. The following exemplifies the quotes taken from the lecturers:

> *"Some are using it. ChatGPT can do a lot. I'm sure you know Science is not easy, but if we can make things easier, it will be great. If others are using it, I think I should too,"* (ELL 3)

> *"Some are using it. We have access to them, so why not? Lecturing and learning will be easier. Who knows? I may be the one influencing them to use AI."* (ELL 5)

When the five English language lecturers were asked if the institution and the faculty encouraged them to use AI, the following shows their responses:

> *"Yes, but we are warned to be very careful not to overuse it. We are reminded to be experts in teaching, so we cannot keep relying on them,"* (ELL 2)

> *"Yes, but at the same time, we are revising the policies of using AI. Students can use it. We can use it… but some parts of using AI are still blurry. I hope I won't end up too dependent, I hope,"* (ELL 4)

All five lecturers of English acknowledged AI due to institutional requirements. Simultaneously, the responses indicated that lecturers were conscious of not misusing AI. They were encouraged to leverage their teaching expertise to provide accurate information to students.

Other Findings from the Semi-Structured Interviews

As the researcher noticed that not all of the lecturers, except for ELL 1, mentioned the use of AI, the researcher further asked this question during the interview session, *"Why did you not mention AI during your lectures?"* Based on the question, the researcher quoted the following from the lecturers' responses. For ELL 1, who was the only one who mentioned AI, the response received was as shown in the following.

> *"(It's) merely for guidance. As you have pointed out, the students need to expand their ideas. I think that's all. I think there's nothing else to talk about it," (ELL 1)*

As for the remaining four lecturers who did not mention AI at all throughout the lecture sessions observed, the following are quotes from their responses.

> *"I don't think it's necessary. Also, I only use AI for preparations, so I don't think I need to mention it in the class,"* (ELL 2)

> *"Uhm… No, (it's) not needed. I don't think any part of the lecture need(s) me to mention,"* (ELL 3)

> *"The students already know about it. They can just do it on their own, so there's no need for me to mention it,"* (ELL 4)

> *"We all know about AI. I believe some are using it even in the class. Since everyone knows, there is no need to mention it,"* (ELL 5)

The semi-structured interviews also included asking the English language lecturers about their concerns about using AI during lectures. The primary concerns involve plagiarism and a lack of genuine English language learning. Students may rely on AI to obtain answers, and there would be no meaningful learning in the course they had enrolled in. The following informs the responses from the lecturers:

> *"Plagiarism, definitely. I'm sure you are aware how well ChatGPT can produce a piece of essay for you. Students can just ask ChatGPT in a way to produce an essay without the machine thinking it is plagiarising. It's hard to differentiate the blacks and whites, so we can only rely on our senses to judge,"* (ELL 3)

> *"They won't do their research. This is an English class, but think about it, how can they use English if they rely on AI for answers? We are not an English-speaking country, and this is going to make it worse. So, I always urge the students not to be too dependent on AI,"* (ELL 4)

At the same time, when the lecturers were asked whether their jobs would become obsolete in the future, all five English language lecturers were firm that their positions would not be obsolete, citing that AI's capabilities were not comparable to human capabilities. At the same time, the English language lecturers also pinpointed the perceived flaws of artificial intelligence, such as the inability to provide hands-on tasks (ELL 3), providing repetitive input (ELL 4), and giving an accurate picture analysis (ELL 5).

> *"Definitely not. As accurate as AI can be, in science, we hate lots of calculations and also human interpretation. Even if we upload our experiments as photos on AI, are you sure it can analyse them clearly for us?"* (ELL 5)

Discussion & Conclusion

Discussion of the AI Usage in Classroom Observations

From the classroom observations, it can be confirmed that there is a presence and a blend of teacher-centred and student-centred learning throughout the semester. With a total of 10 classroom observations conducted, it can be asserted that the lecturing method is similar across the five lecturers despite teaching two different English for Specific Courses, which are English for Business Communication and English for Science and Technology.

The use of WPS Presentations and Documents in lecture classrooms for explanations and transmission of content knowledge to the students is unidirectional, and students are passive learners in all sessions. The unidirectional and passive nature of learning has reinforced a teacher-centred approach (Li & Xu, 2020; Wu et al., 2024; Zhang, 2023). This style of learning persists even in contemporary higher education in China (Alakabawy, 2024; Allen & Mizumoto, 2024; Dou & Song, 2020; Li & Xu, 2020).

During the 10 classroom observation sessions, the researcher found evidence of student-centred learning, as indicated by the presence of discussions, student presentations, and interactions between the lecturers and students. In both types of ESP courses, the five English language lecturers presented students with questions, topics, and case studies to spark discussions. The lecturers actively walked around the classroom, providing facilitation and guidance while monitoring the students' conversations. During the students' presentations, the lecturers also provided their feedback for improvement. All of these actions pointed toward student-centred learning, which is listed among the many activities in this teaching and learning approach (Alakabawy, 2024; Allen & Mizumoto, 2024; Dou & Song, 2020; Li &

Xu, 2020). While discussions, presentations, and facilitations are present, the researcher believes that more can be done to enhance teaching and learning in the two ESP courses. The researcher recommends integrating more project-based learning and case studies into the semester for the respective ESP courses. This can be achieved by making minor revisions to the course syllabus and the learning objectives for the ESP courses offered during that semester.

Besides ELL 1, who is the only English language lecturer to mention the use of artificial intelligence, none of the other lecturers discussed AI during the observed classroom sessions. Instead of assuming students know they can use AI for their studies, the researcher believes lecturers should provide guidance and education on using AI ethically to enhance their learning and complete their studies.

Discussion of the AI Usage in Semi-Structured Interviews

Based on the responses, it can be seen that the lecturers did use AI chatbots to prepare for the lectures. According to ELL 3 and ELL 4, these lecturers used AI to create additional practice materials, and this was evident during classroom lectures when the practices were presented for student discussion and presentations.

There appears to be a clear connection between the lecturers' claims of using AI to generate more ideas for explanations and the explanations they actually provide. The classroom observations revealed that the lecturers delivered content effortlessly, demonstrating confidence throughout their teaching. Based on the observations, the researcher believed that the manner of conducting the lectures was authentic, as there was no copy and paste of explanations from the chatbots to the classroom lecture sessions. This aligns with Alakabawy's (2024) claims regarding the lack of authenticity in teaching and learning.

Although the classroom observations revealed a mix of unidirectional lecturing methods and student-centred learning approaches, it appeared to the researcher that AI was not misused by the English language lecturers. Its application was primarily limited to lecture preparation. The researcher believes that a reduced dependency on artificial intelligence is a positive development. However, the researcher agrees with previous studies (e.g., Boudouaia et al., 2024; Hockly, 2023; Jarvis et al., 2024; Li & Xu, 2020; Wu et al., 2024; Yang, 2019) that emphasize the need to explore additional methods and approaches to enhance the quality of teaching through AI.

Discussion of AI Usage Concerns in Semi-Structured Interviews

From the English language lecturers' responses, it is seemingly valid that there may be an abuse of artificial intelligence, particularly plagiarism. Plagiarism is one of the many forms of AI abuse as mentioned by scholars (e.g., Hockly, 2023; Yang, 2019; Yetkin & Özer-Altinkaya, 2024; Zou et al., 2023). However, plagiarism is not the only concern raised among English language lecturers. Although AI chatbots like ChatGPT can respond in accurate English, English language lecturers have mentioned that true language learning does not take place. This is also a valid concern as the students may rely on the chatbots to seek answers and explanations, as highlighted in the literature (Hockly, 2023; Jarvis et al., 2024; Wu et al., 2024; Yang, 2019). According to the lecturers' responses during the interviews, the researcher found that the lecturers did implement student-centred learning, primarily through discussions and

facilitation. However, the extent of this approach was largely limited to the lectures they conducted. The presence of student-centred learning confirmed that the English language lecturers were implementing lectures that allowed students to learn English and specific course contents meaningfully, as adhered to the literature (e.g., Allen & Mizumoto, 2024; Dou & Song, 2020; Li & Xu, 2020; Wu et al., 2024; Zhang, 2023). However, outside the classrooms, students were on their own. How they utilized AI for learning remains a question that requires further research.

Although the concerns of the five English language lecturers are valid and understandable, their worry about their positions becoming obsolete in the future is not among them. In the review of literature, it is already well known that AI offers a variety of benefits (e.g., Dou & Song, 2020; Jarvis et al., 2024; Taskiran et al., 2024; Wu et al., 2024; Zou et al., 2023). However, the absence of a "human touch," as mentioned by ELL 1 in the semi-structured interviews, is crucial for understanding how AI is implemented. In addition to ELL 1's "human touch," ELL 2's claim of AI requiring "human input" also serves as another determinant that informs how AI runs. This subsequently means that more human training is necessary, as Yang (2019) mentioned. This also includes needing English language lecturers to provide the necessary input to maximize the capacity of AI for lecturing.

Theoretical and Practical Implications

Theoretical Implications

The current research has highlighted the use of AI in English language lectures at a specific Chinese higher education institution. Despite the development of the Artificial Intelligence Acceptance Model by Gado and colleagues (2022) as an extension of the existing Unified Theory of Acceptance and Use of Technology (UTAUT) and its enhanced version, UTAUT2, exploring AI usage in the context of English for Specific Purposes (ESP) learning within selected Chinese higher education institutions is considered effective. This exploration is particularly valuable for understanding the PU, PEU, and PSN among English language lecturers.

Most studies that use the AI Acceptance Model, UTAUT, and UTAUT2 typically focus on quantitative inquiries, as seen in the research by Gado et al. (2022), Lau (2023), and Trang et al. (2024). In contrast, this study takes a different approach by conducting an in-depth investigation of AI usage among English language lecturers in China. The exploration of the three main aspects of the AI Acceptance Model provides a comprehensive understanding of how artificial intelligence is accepted and utilized for different purposes. This research clarifies much of the ambiguity surrounding the use of AI tools, such as ChatGPT and DeepSeek. It demonstrates that AI offers a variety of beneficial functions and capabilities, is user-friendly, and encourages English language lecturers to incorporate these tools into their teaching. The AI Acceptance Model indicates that while English language lecturers are generally open to accepting AI, the findings show that various challenges persist, particularly regarding ethical usage. AI acceptance in China is clearly evident and growing as individuals embrace it for lecturing and learning.

Practical Implications

The findings from this research provide several practical ways for English language lecturers to utilize AI for various purposes, including lecture preparation, knowledge delivery, reminders, explanation assistance, translation of concepts and terminology, and guidance on

assignments. These insights can help English language lecturers in China effectively use AI to enhance the quality of their classroom lectures.

However, there are more functions that AI can be used to deliver lectures and facilitate learning among the students in Chinese higher education institutions. AI chatbots can be used to evaluate students' work and provide feedback (Gado et al., 2022; Lau, 2023; Trang et al., 2024). This includes leveraging lecturers' expertise to provide constructive feedback, combined with insights from AI chatbots to enhance the comments given to students. This approach will further inform how students can improve in future lectures. This includes the recommendations provided by chatbots (Gado et al., 2022; Lau, 2023; Trang et al., 2024), which English language lecturers can evaluate to determine which suggestions are necessary and beneficial for supporting students' learning processes.

Additionally, AI chatbots can be utilized to create various practice materials, such as quizzes for students (Gado et al., 2022; Trang et al., 2024). These methods can serve as valuable suggestions for enhancing lecturing practices in the future. This suggestion serves as a useful guide for English language lecturers in China, enabling them to continuously monitor student performance throughout the semester.

Recommendations for Future Research

There are several limitations that require addressing in this section. As the present research only utilized three core constructs of Gado and colleagues' (2022) AI Acceptance Model, future research can further delve into the other constructs of the same model, including User Behaviour, Social Influence, Facilitating Conditions, Performance Expectancy, and Effort Expectancy, as outlined and discussed in other theories related to technology by Lau (2023) and Trang et al. (2024). This can be explored through both quantitative and qualitative inquiries.

On the other hand, for future research directions, it is recommended to expand the same research inquiry to other higher education institutions, therefore leading to a multiple-site case study to make detailed comparisons of how AI is used among English language lecturers. This will also allow the utilization of comparative analysis to see the extent of AI usage, further leading to the development of better lecturing guidance to raise the quality of lecturing and learning.

Conclusion

English language learning remains a crucial subject in Chinese higher education institutions. Although this research does not explicitly outline methods for teaching English in specialised courses. However, the surge of AI as a new way of teaching and learning in higher education institutions has received significant attention. Despite this, the current state of lecturing in Chinese higher education institutions has largely gone unexamined, even though similar research has already been conducted. To understand how lecturing occurs in the context of ESP, this research utilises a single-site case study design and recruits five English language lecturers to examine the processes. Through classroom observations and semi-structured interviews, the research objectives have been successfully achieved, along with the findings obtained. In conclusion, the research is significant in improving overall lecturing practices, and

there is plenty of room for AI improvement and implementation in Chinese higher education institutions.

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