



## Chinese University Students' Attitudes and Perceptions in Learning English Using ChatGPT

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### Abstract

Since its release into the public domain, the generative AI tool - ChatGPT has arisen wide attention by its sophisticated capacity to carry out complex tasks. Many educators have researched the advanced tool in offering potential benefits for language teaching and learning. This research is designed for assessing Chinese university students' attitudes towards using ChatGPT to improve their English learning and their perceptions regarding the advantages and disadvantages of ChatGPT. In this study, data were collected from 109 undergraduate Chinese students, using a questionnaire consisting of 5-point Likert scale questions. The findings of the study show that the students believe ChatGPT is an effective tool to support them in learning English but information security should be taken into further consideration. Policymakers, technology experts, researchers, and educators could work together on how ChatGPT and other evolving generative AI tools could be used safely and effectively in English teaching and learning.

**Keywords:** *ChatGPT, Generative AI, English Teaching and Learning, Chinese Higher Education*

### A. Introduction

Large language models have made significant advancements in natural language processing in recent years (Kasneci, et al., 2023). ChatGPT, as one of the developments, has received significant attention and discussion among the media and scholars. It was trained on a more massive data set and can generate human-like texts to answer questions and complete other language-related tasks with high accuracy. Considering ChatGPT can provide immediate and tailored responses to users' questions, many scholars believe it is an engaging way for students to develop their knowledge and language skills, as well as communication and problem-solving abilities (Cotton, Cotton & Shipway, 2023). However, some research mentioned the potential academic issues brought by ChatGPT, including plagiarism, cheating, academic dishonesty, etc. (D'Agostino, 2023; McCue, 2023; Tangermann, 2023). Therefore, understanding students' attitudes and perceptions towards using ChatGPT in learning English can help researchers, technology experts, and policymakers to better adapt it into an effective language-assisting tool with clear instructions to avoid academic issues.

In terms of the application of ChatGPT into higher education, some researchers agreed on its assistance in the development of critical thinking and problem-solving skills (Kasneci, et al., 2023). Additionally, as a platform to supply more learning resources and information on a particular topic, ChatGPT offers adaptive and personalised ways to support and scaffold students (Zawacki-Richter, Marín, Bond & Gouverneur, 2019). Despite ChatGPT's strengths and

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potential in language learning in higher education, some scholars mentioned the Chinese language is not its forte. Rudolph, Tan and Tan (2023) mentioned the Chinese essay translated from English “lacked structure and was grammatically poor” (p. 8). This finding is in line with Jiao et al.’s (2023) research findings that ChatGPT performs completely with high-resource European languages (like English and French), but lags behind significantly on low-resource languages (like Chinese). This deficiency may impact Chinese students who use ChatGPT to support their English learning.

As it is an emerging way to improve language learning, it is necessary to investigate English learners’ attitudes and perceptions towards ChatGPT, so as to help scholars better understand the effectiveness of ChatGPT in language learning. Given there are not many studies focusing on Chinese university students’ attitudes towards ChatGPT, this research aims to employ a questionnaire to discover the following questions:

1. What are the major attitudes of Chinese university students towards learning English with ChatGPT?
2. What are the students perceptions regarding the advantages and disadvantages of ChatGPT?.

## **B. Methods**

### **Samples**

This research focuses on Chinese university students who have already used ChatGPT in their English learning. Based on the demographic information collected, 36.7% of participants are located in Mainland China; 2.75% of students are in Hong Kong, Macao, or Taiwan, while 60.55% of participants are studying overseas. Among the valid responses, there was roughly a similar ratio of females and males (female 53.21% and male 46.79%). All of the students have ever used artificial intelligence software or related technology for learning before.

### **Instrument**

The instrument of this research was a five-point Likert scale questionnaire with two parts (Appendix 1), which was adapted from the questionnaire used by Hasan (2019). For the first part, there are four statements about demographic information in terms of the participants’ gender, whether English major or not, current location, and whether they have used artificial intelligence in learning English; there are sixteen statements in the second part regarding participants’ attitudes towards ChatGPT. The statements were separated into four categories: perceptions or understanding of ChatGPT (6 items), attitudes towards actual practice in using ChatGPT (4 items), perceptions regarding the advantages of ChatGPT (3 items), and perceptions regarding the disadvantages of ChatGPT (3 items).

The close-ended statements were based on the five-point Likert scale and the response options were rated as Strongly Disagree=1, Disagree=2, Neutral=3, Agree=4, and Strongly Agree=5. The participants were asked to choose the option which best matched their opinions.

The questionnaire is assigned to Chinese university students via Wenjuanxing, which is a widely used and professional online platform for administering questionnaires, surveys, and evaluation, offering users sophisticated and humanised online questionnaire design, data collection, and analysis capabilities.

**Data Analysis**

The data generated from the questionnaire were analysed using Wenjuanxing and Microsoft Excel. Descriptive statistics were calculated to find out the general tendencies and the spread of scores in the data. The analysis is also on the basis of the rating intervals proposed by Pallant (2005), who correlated the average of each item with the degree of agreement. According to the rating interval, 1.00-1.80 implies strong disagreement; 1.81-2.60 suggests disagreement; 2.61-3.40 indicates moderate agreement; 3.41-4.20 denotes high agreement, and 4.21-5.00 shows strong agreement.

**C. Findings and Discussion**

This study aims to understand what are Chinese university students’ attitudes towards learning English with ChatGPT and what are their perceptions regarding the advantages and drawbacks of it. The findings will be discussed in terms of the four sets shown in the questionnaire.

Based on the rating intervals proposed by Pallant (2005), the descriptive analysis in Table 1 shows that the majority of students have positive perceptions and understanding of ChatGPT

**Table 1.** Participants’ perceptions or understanding of ChatGPT

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	SD
5. I find using ChatGPT to be simple and convenient.	22.02%	13.76%	20.18%	17.43%	26.61%	3.13	1.50
6. I believe ChatGPT can help me learn more effectively.	9.17%	13.76%	20.18%	25.69%	31.19%	3.56	1.30
7. Learning with ChatGPT is enjoyable.	16.51%	18.35%	16.51%	18.35%	30.28%	3.28	1.47
8. I feel that I can easily understand the content provided by ChatGPT.	18.35%	16.51%	15.6%	24.77%	24.77%	3.21	1.45
9. I am willing to invest time and effort to better utilize ChatGPT for learning.	11.01%	18.35%	14.68%	19.27%	36.7%	3.52	1.42
10. I expect to use ChatGPT frequently for learning in the future.	16.51%	18.35%	10.09%	19.27%	35.78%	3.39	1.52

A substantial number of students (M=3.21, indicating moderate agreement) expressed they can understand ChatGPT (18.35% strongly disagreed and 16.51% disagreed). The results show that the majority of students (20.18% not sure, 25.69% agreed and 31.19% strongly agreed) think that ChatGPT can help them learn more effectively (M=3.56), and they are willing to invest the effort to better apply ChatGPT to learning English (19.27% agreed and 36.7% strongly agreed, M=3.52). A good number of students think learning English with ChatGPT is enjoyable

( $M=3.28$ , denoting moderate agreement) and will use it frequently in the future (19.27% agreed and 35.78% strongly agreed,  $M=3.39$ ). The responses varied a lot ( $SD=1.5$ ) in the case of using ChatGPT conveniently (22.02% strongly disagreed and 26.61% strongly agreed,  $M=3.13$ ).

Next set of statements dealt with how participants use ChatGPT to learn English. Table 2 illustrates students' attitudes towards actual practice in using ChatGPT.

**Table 2.** Participants' attitude towards actual practice in using ChatGPT

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	SD
11. I use ChatGPT to increase my interest and motivation in learning English.	17.43%	19.27%	15.6%	18.35%	29.36%	3.23	1.48
12. I use ChatGPT to improve my English communication skills (listening/speaking).	15.6%	19.27%	18.35%	25.69%	21.1%	3.17	1.37
13. I use ChatGPT to improve my English reading and writing abilities (e.g. proofreading).	20.18%	13.76%	17.43%	18.35%	30.28%	3.25	1.51
14. I use ChatGPT to help me gain a deeper understanding of the English language and culture.	13.76%	17.43%	22.94%	14.68%	31.19%	3.32	1.42

As is seen in Table 2, 47.71% of the participants agreed or strongly agreed that ChatGPT increases their motivation in learning English, while 15.6% of people showed a neutral attitude and 36.7% of students do not believe ChatGPT promotes their interest in learning English ( $M=3.23$ ). Additionally, items 12 and 13 showed participants' different views on using ChatGPT to improve specific English skills. Compared to using it to improve communication skills ( $M=3.17$ ), participants are more willing to use it for developing reading and writing abilities ( $M=3.25$ , 18.35% agreed and 30.28% strongly agreed). In terms of using ChatGPT to improve understanding of English cultures, 14.68% of participants agreed and 31.19% of people strongly agreed ( $M=3.32$ , indicating moderate agreement).

Table 3 presents data regarding the responses of the participants regarding their perceptions of the advantages of ChatGPT.

**Table 3.** Participants' perceptions regarding the advantages of ChatGPT

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	SD
15. I think ChatGPT can help me improve the quality of my learning.	19.27%	12.84%	16.51%	23.85%	27.52%	3.28	1.47

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	SD
16. I believe ChatGPT can provide me with more learning opportunities.	14.68%	18.35%	17.43%	25.69%	23.85%	3.26	1.38
17. I think ChatGPT can help me enhance my learning abilities.	11.93%	22.02%	14.68%	21.1%	30.28%	3.36	1.41

Table 3 demonstrates that the majority of the participants expressed moderate agreement on the statements relating to the advantages of ChatGPT (M=3.28 for item 15, M=3.26 for item 16, and M=3.36 for item 17). Students showed relatively more positive attitudes towards ChatGPT enhancing learning abilities (30.28% strongly agreed and 21.1% agreed). In terms of ChatGPT’s function in providing learning opportunities, only 49.54% of participants agreed and strongly agreed on using ChatGPT as a tool to explore more learning opportunities, while 17.43% of people were unsure and 33.03% of students disagreed and strongly disagreed. It is noticeable that in item 15 (M=3.28), 19.27% of participants strongly disagreed with using ChatGPT to improve learning quality, and the responses varied a lot in this case (SD=1.47). More specific reasons leading to this result requires further research.

Finally, in Table 4, participants responded to the statements regarding the disadvantages of ChatGPT.

**Table 4.** Participants’ perceptions regarding the disadvantages of ChatGPT

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	SD
18. I think ChatGPT may have issues with plagiarism or information leakage.	24.77%	7.34%	24.77%	27.52%	15.6%	3.02	1.40
19. I think ChatGPT’s responses may contain some inaccurate information.	18.35%	12.84%	16.51%	35.78%	16.51%	3.19	1.36
20. I think ChatGPT is not helpful for my English learning.	38.53%	33.03%	28.44%	0%	0%	1.90	0.81

As is seen in Table 4, participants’ attitudes varied regarding the disadvantages of ChatGPT, but they agreed on the effectiveness of ChatGPT in learning English. In terms of the issues with plagiarism or information leakage, people’s attitudes varied; some people agreed or strongly agreed (43.12%) while 32.11% of the students held the opposite opinion, and 24.77% of the responses showed an unsure attitude. For item 19, more people (52.29%, a total of strongly agree and agree) thought ChatGPT may give some inaccurate information (M=3.19). In the final statement, the majority of respondents (38.53% strongly disagreed and 33.03% disagreed) recognised ChatGPT is helpful for their English learning while 28.44% of people held a neutral attitude and thought the effectiveness of ChatGPT deserves further discussion (SD=0.81).

It is also noticeable that the participants' current location seems to have an influence on their attitudes towards using ChatGPT to learn English.

**Table 5.** Participants' current location relating to their attitudes towards ChatGPT

Statement	Current Location	Number	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean
5. I find using ChatGPT to be simple and convenient.	Mainland China	40	27.5%	17.5%	27.5%	15%	12.5%	2.68
	Hong Kong/ Macao/ Taiwan	3	0.00%	0.00%	0.00%	66.67%	33.33%	4.33
	Other Countries	66	19.70%	12.12%	16.67%	16.67%	34.85%	3.35
10. I expect to use ChatGPT frequently for learning in the future.	Mainland China	40	15%	20%	17.5%	22.5%	25%	3.22
	Hong Kong/ Macao/ Taiwan	3	0.00%	0.00%	0.00%	33.33%	66.67%	4.67
	Other Countries	66	18.18%	18.18%	6.06%	16.67%	40.91%	3.44
13. I use ChatGPT to improve my English reading and writing abilities (e.g. proofreading).	Mainland China	40	30%	15%	20%	25%	10%	2.7
	Hong Kong/ Macao/ Taiwan	3	0.00%	0.00%	0.00%	0.00%	100%	5
	Other Countries	66	15.15%	13.64%	16.67%	15.15%	39.39%	3.5
14. I use ChatGPT to help me gain a deeper understanding of the English language and culture.	Mainland China	40	20%	17.5%	30%	10%	22.5%	2.98
	Hong Kong/ Macao/ Taiwan	3	0.00%	0.00%	0.00%	66.67%	33.33%	4.33
	Other Countries	66	10.61%	18.18%	19.70%	15.15%	36.36%	3.48

The researcher found the results of all of the statements showed a difference between students located in Mainland China and other places. Table 5 presents four statements (items 5, 10, 13, and 14) that show great relevance between participants' current location and their perceptions of using ChatGPT in learning English. The results show that Chinese university students studying in other countries and other areas in China expressed more positive attitudes and motivation in using ChatGPT compared to students in Mainland China. For instance, in item 13, students overseas presented high agreement on ChatGPT's effectiveness to improve output English abilities ( $M=3.5$ ), while other participants in Mainland China indicated moderate agreement ( $M=2.7$ )

### Discussion

When artificial intelligence is incorporated into education, it is crucial to understand students' attitudes so as to be user-oriented and optimise its functions. The results show that most Chinese university students are familiar with learning English via the assistance of artificial

intelligence, like ChatGPT. They know the purposes of ChatGPT and consider it an effective learning tool.

The results highlight a strong relevance between users' current location and their acceptance of ChatGPT. Generally, Chinese participants studying overseas have more positive attitudes towards employing ChatGPT in learning English. These students are more likely to use ChatGPT to improve their writing and reading skills, as well as understand English cultures. However, some students studying in Mainland China may show a relatively low motivation in using ChatGPT because of its inconvenience.

According to the findings, there are some significant benefits of ChatGPT in learning English. Chinese university students remain motivated to learn English with the assistance of ChatGPT outside the classroom and would like to invest time and energy to learn how to better use it, which greatly enhance their independent-studying and problem-solving abilities. Also, ChatGPT is believed to improve students' learning efficiency and effectiveness.

In terms of the disadvantages, participants agreed on the issues with plagiarism, information leakage and inaccurate responses, but they still strongly believe ChatGPT is helpful for their English learning. As previous studies mentioned (Cotton, Cotton & Shipway, 2023; Kasneci, et al., 2023; Rudolph, Tan & Tan, 2023), these academic issues should not be neglected; the relevant technology is expected to advance and clear instructions and guidelines should be provided in order to prevent the potential academic dishonesty issues.

### **Limitations**

This research is based on a small number of participants; if more data could be included, the reliability and validity of this study could be increased. Additionally, the frequency and familiarity of using ChatGPT can also have some effects on students' attitudes, requiring further discussion.

Another limitation of this study is the quantitative research method cannot completely present participants' attitudes and perceptions of using ChatGPT. Considering this reason, follow-up semi-structured interviews can be conducted to provide more detailed feedback on using the emerging AI tool in English learning

### **D. Conclusion**

ChatGPT is considered a technology capable of combining our social interactions with educational purposes and it revolutionise the way we learn and teach (Rudolph, Tan & Tan, 2023). It is necessary for the students to have a clear understanding of ChatGPT so as to motivate them to employ it as an effective tool for learning languages. To encounter the challenges of ChatGPT, it is significant to realise its limitations and only consider it as a tool to support and enhance learning, rather than as a replacement for human teaching and other authoritative sources. Given there are some mistakes or inaccurate information provided in the responses, students are expected to identify these issues and cultivate their critical thinking ability when using ChatGPT.

The findings of this study may help teachers and technology experts to understand whether English learners are benefiting from ChatGPT. Further research can be done using a mix-method way to examine which specific aspect of learning languages can be combined with ChatGPT to

better satisfy students' needs, as well as considering other perspectives, such as language teachers, curriculum designers, software developers, to give suggestions on how to optimise the functions of ChatGPT in language learning.

Therefore, in line with the findings of Graham (2022) and Stokel-Walker (2022), ChatGPT, as a promising language model, can assist in developing content and practising language skills, but should be used responsibly under the guidelines to ensure the academic integrity.

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