

Futuristic Education: Utilizing ChatGPT as a Support Learning Tool

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Abstract

ChatGPT has grown in popularity among educators over the past few months. The way we teach and learn could be completely changed by the implementation of artificial intelligence (AI) technology in schools. Therefore, the main goal of this study is to determine in-depth public perceptions of ChatGPT use in Chinese educational programs, particularly for college students. Moreover, it also aims to examine how using ChatGPT affects writing performances. The foundation of this study is the technology acceptance model and the connectivism learning theory. Mixed methods will be used in questionnaires and in-depth interviews to identify the most prevalent issues with Chat GPT use on the university campus, and to suggest inclusive education initiatives that can support a secure and productive learning environment for WKU students. Besides, 200 respondents, including students, professors, and staff at WKU, will make up the sample. This study is beneficial for professors who teach writing at Wenzhou Kean University because it demonstrates how to use Chat GPT correctly to enhance students' own writing abilities. Furthermore, the future application of Chat GPT in China's educational system will greatly benefit from the findings of this study.

Keywords: ChatGPT, Futuristic Education, Writing Ability, College Students, College Professors

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Introduction

Background of the Research

In recent years, artificial intelligence (AI) has become increasingly popular in the field of education. The use of AI technology in education has the potential to revolutionize the way we teach and learn. Moreover, it has already had influenced educational practices worldwide, including in the Global South and in newly emerging educational models like MOOCs, blended learning, flipped classrooms, and more (Zhang & Aslan, 2021). Among the many AI technologies, Chatbot leads to creating a system that can recognize questions and, with the help of domain-specific ontologies and natural language processing techniques, provide students with the answers (Clarizia et al., 2018). So far, ChatGPT is the world's most advanced chatbot. Unlike other chatbots, it can write convincing articles, solve problems in various disciplines, and generate effective computer code.

ChatGPT has taken the world by storm. Two months after its launch, it reached 100 million active users, breaking the previous record for the fastest user growth. Even though it is not very mature, enough to cause the attention of all walks of life, especially education industry. As it can already handle challenging exams and offer seemingly convincing responses. One research assessed ChatGPT's performance on the US Medical Licensing Examination. Three standardized tests of expert-level knowledge known as the USMLE are necessary. ChatGPT performed at or close to the 60% accuracy passing mark in all three tests (Kung et al., 2023). Therefore, lots of schools have taken measures against ChatGPT, like the University of Hong Kong (HKU). HKU calimed that ChatGPT and all other AI-based tools are temporarily prohibited from being used for coursework, classwork, and assessments (*About ChatGPT | HKU Teaching and Learning*, 2023). However, "ChatGPT is a phrase predictor, it's a system that has memorised a billion books so that it can guess what comes after the question you ask it. Everything it says is essentially a rehash of something that has been said before, by a human. It's not remotely intelligent" (Milmo & editor, 2023). While ChatGPT occasionally corrects its errors, it also sometimes exhibits overconfidence in its incorrect responses (Azaria, 2022). Therefore, it is not strong enough to systematically generate novel concepts and produce academic papers, mathematical arguments, or successful experiments.

While ChatGPT is not currently available in mainland China, it is only a matter of time before similar software appears in China. Traditional education is being pushed into a corner and educational reform needs to catch up with the development of technology. ChatGPT could be a big opportunity for education to reform itself. Currently, many American college professors, department chairs, and administrators are beginning to overhaul their classrooms in response to these dramatic changes. Redesign their courses to include more oral exams, group work and handwritten assessments (Huang, 2023). As a Sino-American cooperative university, Wenzhou-Kean University should also thoughtfully embrace ChatGPT as a support learning tool that can unleash creativity, provide personalized tutoring, and better prepare to get used to futuristic education. Therefore, this research topic will focus on the potential of ChatGPT in education and explore the various ways in which ChatGPT can be used to improve the efficiency of teaching and learning. Besides, it will also research the challenges associated with the use of ChatGPT in education, and try to find potential solutions to these challenges.

The purpose of this study is to comprehensively figure out the overall opinion on ChatGPT use in Chinese education programs, especially for college students. Also, the study aims to analyze the influence of using ChatGPT in writing performances.

Research Questions

1. What are students' and teachers' views on using ChatGPT as a learning support tool?
2. Does the benefits of using ChatGPT outweighs its disadvantages?
3. To what extent does using ChatGPT enhance students' learning skills?
4. Is there a significant difference in test performance with the help of ChatGPT and without using ChatGPT?

Research Objective

1. To figure out the general view of using ChatGPT as a learning tool among students and teachers in college.
2. To analyze the benefits and drawbacks of ChatGPT.
3. To explore the level of improvement of the learning ability of students who use ChatGPT.
4. To determine the significant difference in test performance using ChatGPT and without using ChatGPT.

Hypothesis

This study tested the hypothesis in the null form: There is no significant difference in test performances with the help of ChatGPT and without using ChatGPT.

Theoretical Framework

The Connectivism Learning Theory and the technology acceptance model serve as the foundation for this study. These theories provided explanations for the variables in this research.

The first theory is the technology acceptance model. It is thought there are 2 factors that affect students' acceptance of technology. According to a person's intention to utilize new technology is mostly influenced by two factors: (1) perceived ease of use and (2) perceived usefulness. Fred Davis defined perceived usefulness (PU) as the extent to which a person believes that employing a certain technology would enhance their ability to accomplish their job. It refers to a person's perception of the technology's utility for their intended use (Davis 1989).

According to Davis, perceived ease of use (PEOU) is the extent to which a person perceives that utilizing a given system would be free from effort (Davis 1989). This can be interpreted in this study that Young people who think ChatGPT is too difficult to play or a waste of time are less likely to adopt the technology, while young people who think ChatGPT provides necessary mental stimulation and is easy to learn are more likely to want to use ChatGPT. The figure below illustrates the final version of TAM and external variables indicating the element that may influence an individual's attitude, such as social influence (Davis 1989). People will have the mindset and intention to use the technology once these items (TAM) are in place. Yet, because each individual differs, the perception may vary based on age and gender.

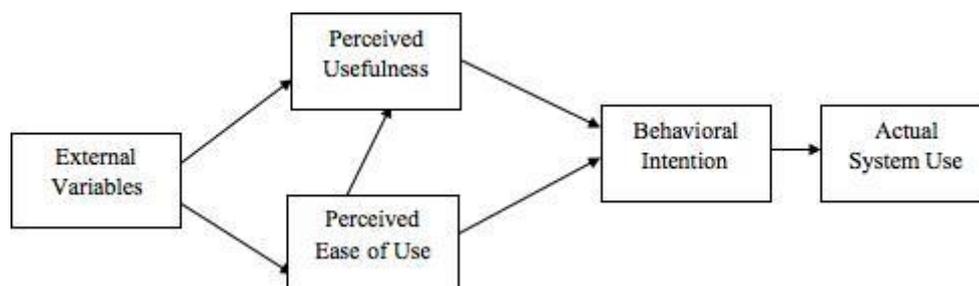


Figure 1: The final version of TAM (Venkatesh & Davis,1996)

The second theory appropriate in this study is the Connectivism Learning Theory of George Siemens and Stephen Downes. Connectivism is an emerging learning paradigm, that claims that students can effectively combine ideas, theories, and general knowledge through technology and network. Downes (2005) states acknowledged that technology plays a significant role in the learning process and that staying connected all the time allows us to make decisions about our learning. Connectivism encourages learning that takes place in environments other than a person, such as social media, online communities, or knowledge databases. ChatGPT is an emerging AI technology that provides users with comprehensive knowledge and information that can be used as a learning tool. From this theory, two terms—nodes and links—have been used to explain how we gain and connect the information in a network. Students are seen as “nodes” that can be connected to another object. While “links” help students make and maintain connections to form knowledge. As Downes (2005) states: "at its heart, connectivism is the thesis that knowledge is distributed across a network of connections, and therefore that learning consists of the ability to construct and traverse those networks". To be specific, using technology such as ChatGPT leads to a path to a broader knowledge field and makes it more efficient for learning and gaining knowledge.

Key Difficulties

Lack of Samples.

The study is facing a group of students in WKU using the bilingual language and has an urgent need for improvement in English. The most important limitation lies in the fact that the ChatGPT was developed by the American research lab OpenAI, which is not officially available in China (Yeung & Chang, 2023). Also, as ChatGPT is an emerging new scientific and technological achievement, few WKU students have experienced using ChatGPT as a tool.

Availability of Data.

Since it is a new topic that there are only a few studies have been conducted in this area. According to Doolan et al. (2007), researchers can get results considerably more rapidly, at a lesser cost, and without subjecting new participants to many of the possible drawbacks of research involvement, in particular, by leveraging an existing data set. Data availability supplies the researcher with approaches and previous research sources and outcomes, which presents an essential role in providing reference and research basis. As ChatGPT is an emerging technology, researchers lack existing data on ChatGPT information and its influences, especially in China. The lack of reference information and materials impacts the study, making the data collection and analysis more essential to current and future studies.

Research Instrumentation.

The researchers could hardly find a validated questionnaire on the topic of ChatGPT. It might affect the validity and reliability of the research, which proves to be the most fundamental and important psychometric properties in data interpretation (Cook & Beckman, 2006). Internal consistency could be influenced since this study has the difficulty in identifying the correlations between its various items to assess the same broad concept yield results that are comparable because we have no standard questions that have been illustrated by the previous research before. Also, the degree to which the scores accurately reflect the variable they are supposed to can be inaccurate which may determine the level of validity.

Methodology

Participates and Procedure

This study obtained approval from the Ethics Committee of Wenzhou Kenan University, All procedures performed were in compliance with required ethical standards. A mixed-method approach, incorporating both qualitative and quantitative methods was employed in this study. Data collection utilized a combination of survey and semi-experimental methods. We gathered sample data from 200 students and 12 professors at Wenzhou Kenan University using the online survey platform, Wenjuanxing. Participants were selected on a voluntary basis through convenient sampling and provided informed consent. After excluding invalid data, the student sample included 39 male (19.5%), 156 female (78%), 5 Other (2.5%), and included 49 freshman, 104 sophomore, 37 junior, 8 senior and 2 graduate students. In the professor sample, there was 7 male (58.33%) and 5 females (41.67%). Included 2 have taught 3-5 years (16.67%), 3 have taught 5-10 years (25%) and 7 have taught 58.33% years (58.33%). Data collection occurred in November 2022, and the administration of the questionnaire took approximately 12-18 min. Additionally, we invited 1 student who obtained A level in the basic English course (ENG1430). These students were divided into several batches for pretest-intervention-posttest.

Measures

1. Student ChatGPT Scale

To assess the current usage of ChatGPT among students, we developed a self-made questionnaire and sought validation from an authoritative professor in the field. The scale consists 15 items (e.g., "Have you ever heard of ChatGPT before?") that reflect the perspectives of students at Wenzhou Kenan University on the benefits, drawbacks, and availability of ChatGPT. In this study, the Cronbach's α coefficient for this scale ranged from 0.85 to 0.93, indicating that the analysis of the internal consistency is effective. This study also employed semi-structured interviews.

2. Professor ChatGPT Scale

Professor ChatGPT is measured through a self-made scale that validated by an authoritative professor in the field. It consists of 17 items (e.g., "Have you ever used ChatGPT as a teaching or research tool?"). These items reflect Wenzhou-Kean University professors' familiarity with ChatGPT and their recognition of it as a teaching tool.

3. ChatGPT Assistance in Reading

To examine the impact of ChatGPT on reading, we employed a semi-experimental research design with pretest-intervention-posttest phases. In the pre-test phase, participants completed a prepared IELTS reading test within 13 minutes without external influence or assistance. During the intervention phase, participants were granted access to ChatGPT to familiarize with reading materials. Participants could use ChatGPT for tasks such as translating reading passages or requesting summaries. In the post-test phase, participants were presented with the same reading questions as in the pre-test, and were required to complete them within 13 minutes. This was aimed to assess the impact of participants' individual review efforts and the use of ChatGPT on their reading performance. The study reflects the potential benefits of integrating ChatGPT to aid English language learners in enhancing their IELTS reading scores.

Ethical Consideration

Based on the recommendations of the Sino-Foreign University's Ethics Committee, ethical norms will be implemented. Following Bryman (2016), we shall reaffirm fundamental ethical precepts such as the respondents' voluntary involvement, the participants' safety from physical or emotional harm, and the participant's identity being preserved. Moreover, Wilson & MacLean (2011) shall be followed, guaranteeing privacy and secrecy. The majority of participants will maintain anonymity by using fictional identities. Participants will not be required to comment on subjects they may deem sensitive.

Research Design

One of the key components for adequately answering a research question is an appropriate research design (Cresswell, 2009). The research design is a well-organized strategy that offers a precise framework for data collection. This study will utilize a mixed method in terms of qualitative and quantitative methods. Additionally, the research will also adopt the questionnaire approach and semi-experimental method.

The mixed methods will be utilized in questionnaires and in-depth interviews to identify the prevalent issues on the Chat GPT use on the university campus and propose inclusive education initiatives that can promote a secure and productive learning environment for WKU students. The cornerstone to gathering information for any research study is a research questionnaire (Creswell, 2009). Researchers will create a self-made questionnaire that will be validated by professors who are authorities in this field. Besides, the study will gain insights into the Focus Group Discussion approach to comprehensively interpret the understanding of users on Chat GPT. To ensure participant anonymity and privacy, the validated questionnaire will be given online in addition to in-depth interviews that will be conducted either in person or virtually.

The semi-experimental method was chosen because semi-experimental studies can use both with-intervention and without-intervention measurements as well as non-randomly selected control groups (Harris et al., 2006). The researchers emphasize the significance of participants and focus on exploring the difference in students' test performance with and without using ChatGPT as a learning and reviewing tool.

Data Gathering Procedure

The study will start in March to December 2023. Table 1 shows the schedule of data gathering. The following treatment phase were illustrated and explained.

Table 1: Schedule of data gathering and where it was conducted

Schedule of Data Gathering		
	When	Where
Pre-Test	November 22, 2023	WKU lab
Treatment Phase	November 24, 2023	WKU lab
Post Treatment Phase	November 24, 2023	WKU lab

The pre-test will be done on November 22, 2023; It is done through the pre-tests that researchers provide at the WKU classroom. The pre-test will identify the levels of learning abilities. The treatment phase will be done on November 24, 2023. The students are met at the WKU classroom, and later Chat GPT is introduced in their material learning procedure. Post-treatment is done on the same day as the treatment phase. The different phases are presented in Figure 2 below:

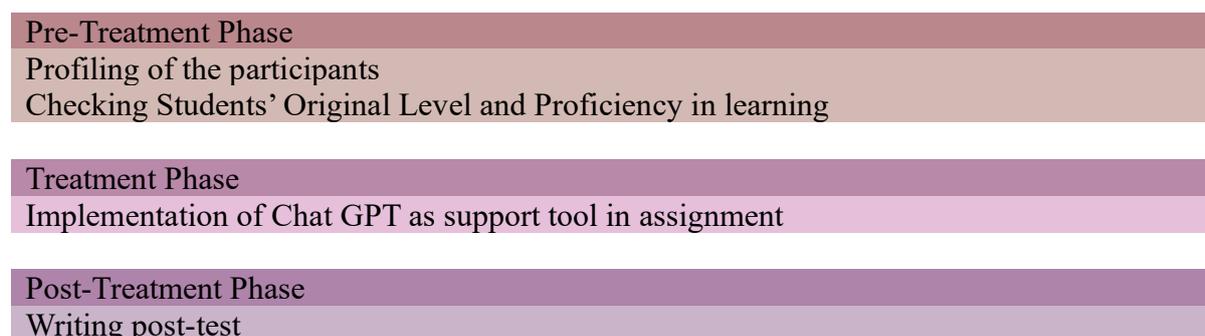


Figure 2: Research Design Framework

Phase 1. Pre-treatment Phase

The group was given a questionnaire about their attitudes before doing the pre-test. There are 28 items in the survey. Then they will do the pre-test, which is one of the parts of the pre-treatment phase. The pre-test will check students' learning capability, entry level and profile the population as well. The 35-item designed questions for the materials that researchers provide are used to conduct the test to determine the student's performance in learning and reviewing. By giving the participants a material and giving them 20 minutes to prepare for the material-based test, the pre-test is completed in this period. Then, researchers will mark the test paper.

Phase 2. Treatment Phase

The Treatment phase contains two groups. Based on the pre-test scores, the researchers will divide the respondents into two groups of generally average levels. Participants will be provided reading material and will learn it in a given time. The experimental group will be allowed to use ChatGPT as a learning tool, including the possibility of asking ChatGPT to spot-check their mastery and help them refine material focus and content. The control group will complete the review independently.

Phase 3. Post-treatment Phase

A post-test is organized during the post-treatment phase. The self-made post-test based on the provided materials will be given to participants after the treatment phase. This measure aims to explore the differences in learning outcomes between using Chat GPT as a tool and without using Chat GPT.

Data Analysis

Another step that researchers could take is to gain a fundamental understanding of qualitative data analysis. All quantitative data will be analyzed using SPSS software. Normally, researchers will look at the raw data and pinpoint important themes in light of the qualitative information gathered. The main techniques for analyzing qualitative data in this study are topic and narrative analysis. Researchers can gain a greater understanding of the participants' experiences and perspectives by using thematic analysis. A narrative analysis would also be used to gain a holistic view of the participants' experiences because it is also anticipated that study participants will create stories and share their social and cultural context. This would allow the researchers to see and feel how the phenomenon occurs in the social setting. In light of the literature review and theoretical perspective, researchers create patterns and key themes for a deeper comprehension of the subjects and better interpretations of the major findings.

Results

Experiment Results

Table 2: Experiment result

Group	Mean		Standard deviation		P value	Decision
	Pretest	Posttest	Pretest	Posttest		
EG	1.67	1.75	1.07	0.97	0.585	Retain

The experiment results showed that there is no significant difference in pre-test and post-test scores of the students in reading comprehension before and after using ChatGPT ($p = 0.585$), which implies that the use of ChatGPT actually did not have a measurable impact on the students' reading abilities. We infer that the main reason might be that the questions we used was too detail-focused instead of testing participants' general understanding of the materials. And most of the participants mainly used the translating ($n = 10$) and summary ($n = 7$) functions (see Table 3), so actually they cannot really get full use of ChatGPT as we expected. Therefore, participants found it difficult to review and answer the test questions with the help of ChatGPT. At this level, there is a discrepancy between the question setup and the actual participants' usage of ChatGPT's capabilities. It is important to recognize the disparity that exists between the way the questions were initially written up and how participants actually use ChatGPT. We have decided to keep these results despite the small sample size of this study, however we acknowledge that conclusions should not be generalized too hastily. Subsequent investigations ought to carefully examine and regulate factors, guaranteeing a more comprehensive examination of ChatGPT's effectiveness as an educational aid.

Table 3: The functions of ChatGPT used by participants

Functions of ChatGPT	Frenquency	Percentage
Summary	7	58%
Translate	10	83%
ask for detailed information	3	25%
help with setting questions	2	17%
ask questions related to the article	1	8%

Questionnaire

Existing Student Perceptions of ChatGPT

Table 4: Students' familiarity with ChatGPT

Degree	Frenquency	Percentage
very familiar	26	13.68%
somewhat familiar	140	73.68%
not familiar at all	24	12.63%

Table 5: The level of trust among students in ChatGPT

Degree of trust	Frenquency	Percentage
very confident	25	13.16%
somewhat doubtful	161	84.74%
not confident at all	4	2.11%

The results indicated that the majority of students (74%) have a moderate level of familiarity with ChatGPT, 14% of the participants were very familiar with ChatGPT. And 84% of students hold a skeptical and doubtful attitude towards ChatGPT, with only 13% expressing high trust in it. This indicates that while ChatGPT generated considerable excitement during its initial release, students still approach it with curiosity and caution.

The functions students preferred to use

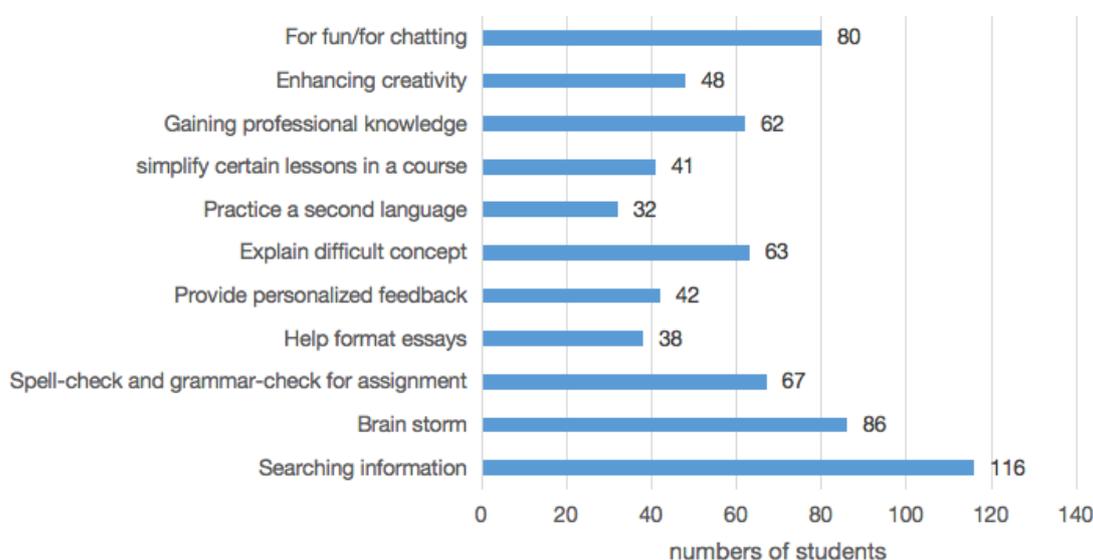


Figure 3: Functions students preferred to use

The functionalities most commonly used by students are information retrieval (61.05%), brain storming and generating opinions (45.26%), and entertainment (42.11%), while the utilization of features for assisting independent learning is relatively limited.

Finding 3- Questionnaire- Attitude

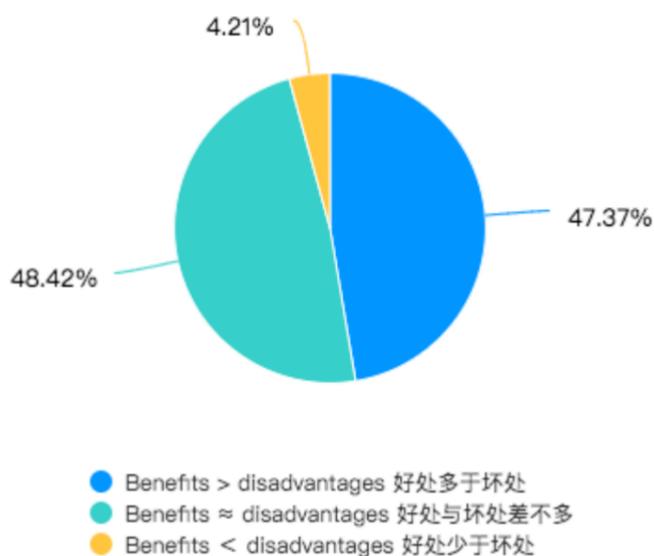


Figure 4: Students' attitude toward the potential benefits of using ChatGPT

Generally speaking, close to half of the participants believe that the benefits of using ChatGPT outweigh the drawbacks.

Specifically, the participants identified several advantages. The main advantages include efficiency (90%), assistance in learning (73.33%), and inspiring new perspectives (66.7%). Others also discover its value in boosting creativity (43.33%), enhancing linguistic abilities (34.44%), and support the advanced technology in AI that can be used in learning (35.56%).

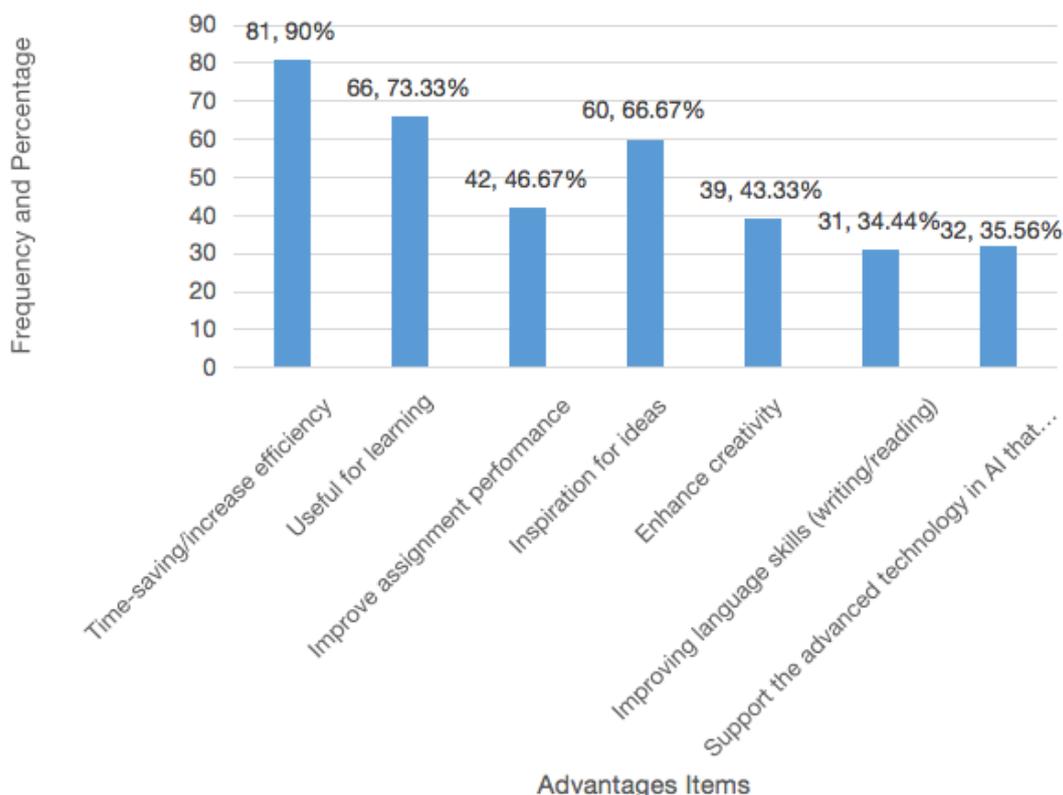


Figure 5: The advantages of using ChatGPT

The main drawbacks identified are the potential for cheating (77.37%), a lack of creativity (62.11%) and critical thinking (64.21%), and the possibility of inaccurate information (64.74%). Additional drawbacks encompass language barrier (35.79%) and right issues (46.84%).

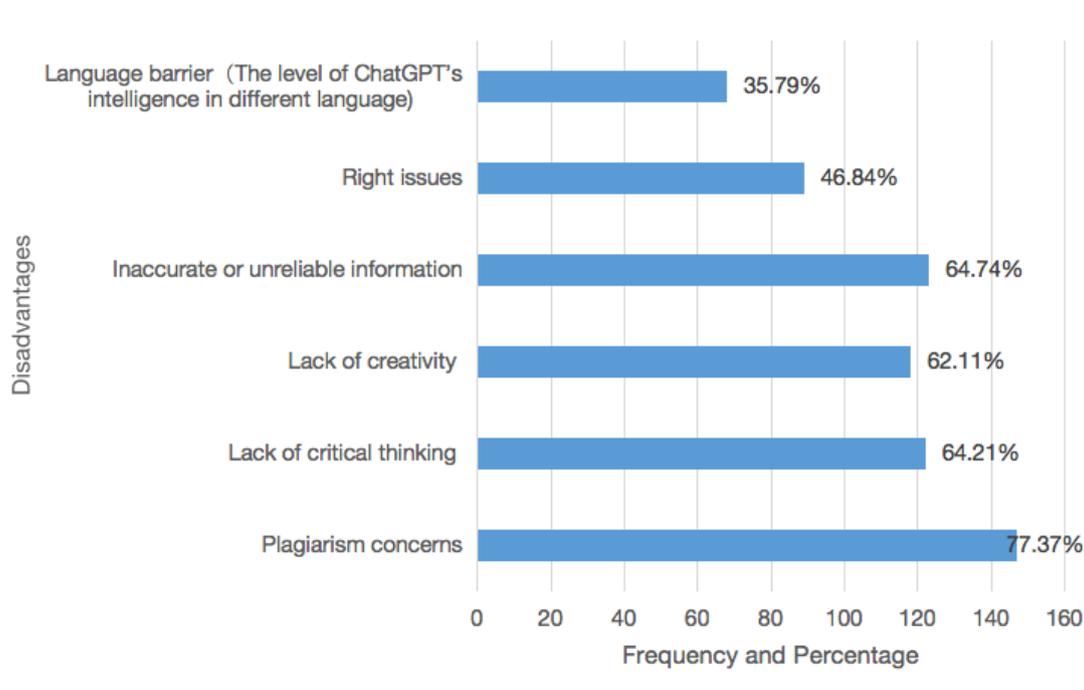


Figure 6: The disadvantages of using ChatGPT

Finding 4- Questionnaire- Future Prospects of ChatGPT

To conclude, the prevailing sentiment among most participants leans toward an optimistic outlook regarding the future evolution of ChatGPT. The majority of respondents (78.95%) are likely to express an interest in delving further into ChatGPT and its possible applications within their respective fields, while a minority (21.05%) may not share this enthusiasm.

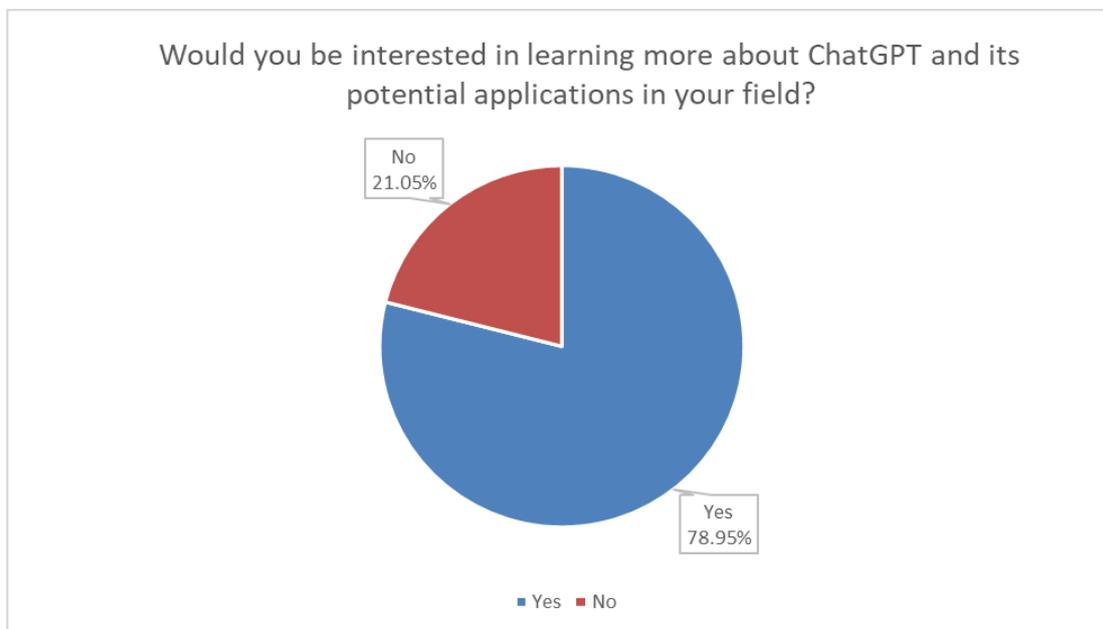


Figure 7: Students’ interests in learning more about ChatGPT

The prevailing viewpoint among the majority of respondents (91.58%) is a positive outlook on the future improvement of ChatGPT, with only a minority (8.42%) maintaining a pessimistic stance.

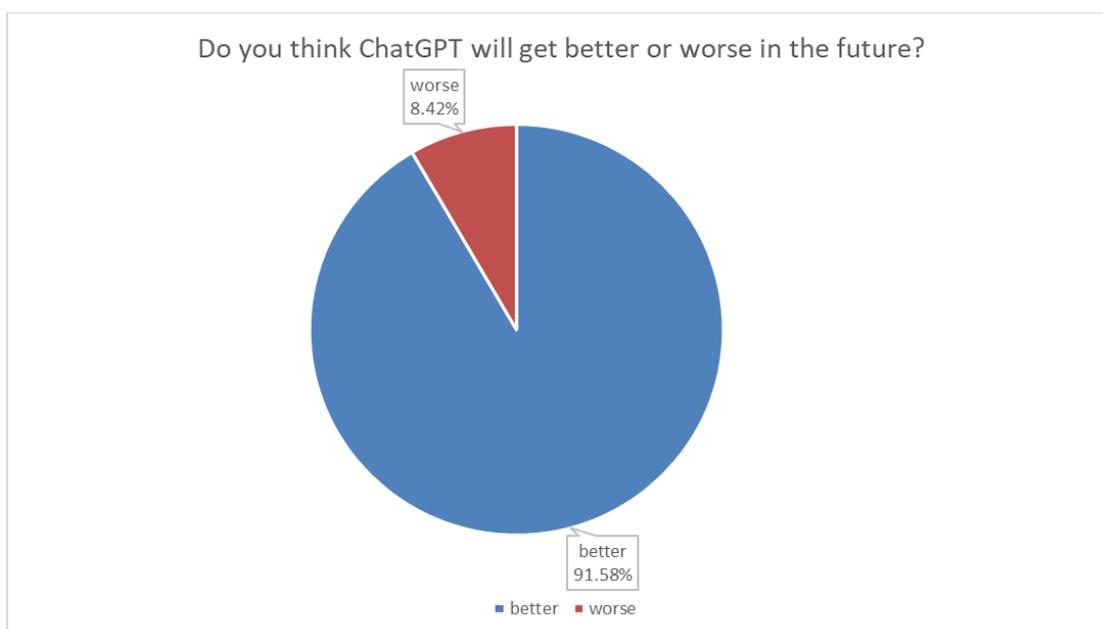


Figure 8: Students' perception in whether ChatGPT will better in the future

Questionnaire—Professor’s View on the Use of ChatGPT

Demographic Profile of the Respondents

1. Respondents’ Distribution by Gender

Figure 9 presents the Respondents’ Distribution by Gender. Of 12 respondents in the survey, 7 or 41.67 % were males, while 5 or 58.33 % were females.

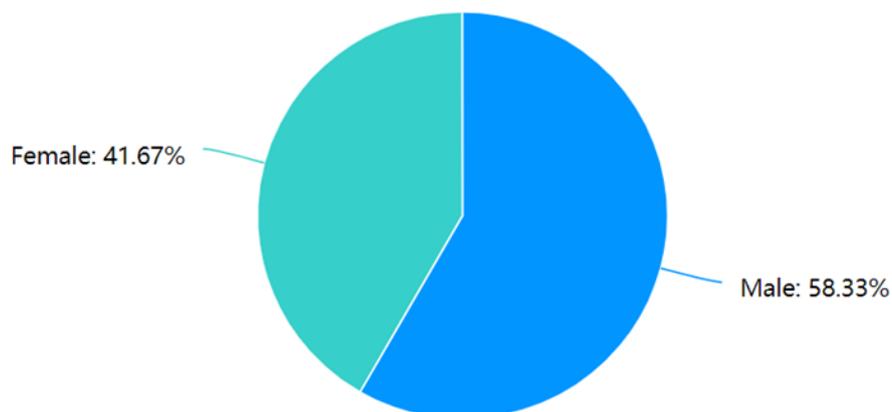


Figure 9: Respondents Distribution by Gender

2. Respondents’ Distribution by College

Figure 10 presents the Respondents’ Distribution by College. Of the 12 respondents, 1 or 8.33% of them were College of Business & Public Management (CBPM), followed by 7 or 58.33% of them were College of Liberal Arts (CLA); 1 or 8.33% of them were College of Architecture & Design (CAD); 3 or 25% of them were College of Science and Technology (CST).

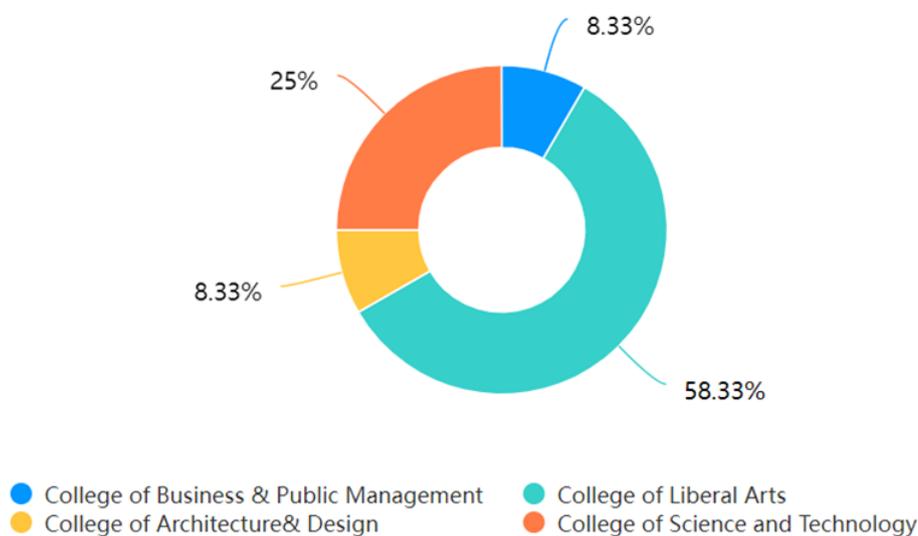


Figure 10: Respondents’ Distribution by College

3. Respondents’ Distribution by Teaching Years

Figure 11 presents the Respondents’ Distribution by teaching years. Of the 12 respondents, no one has taught for less than two years; 2 or 16.67 % WKU professors have taught 3-5 years; followed by 3 or 25% WKU professors have taught for 5-10 years; 7 or 58.33% WKU professors have taught more than 10 years.

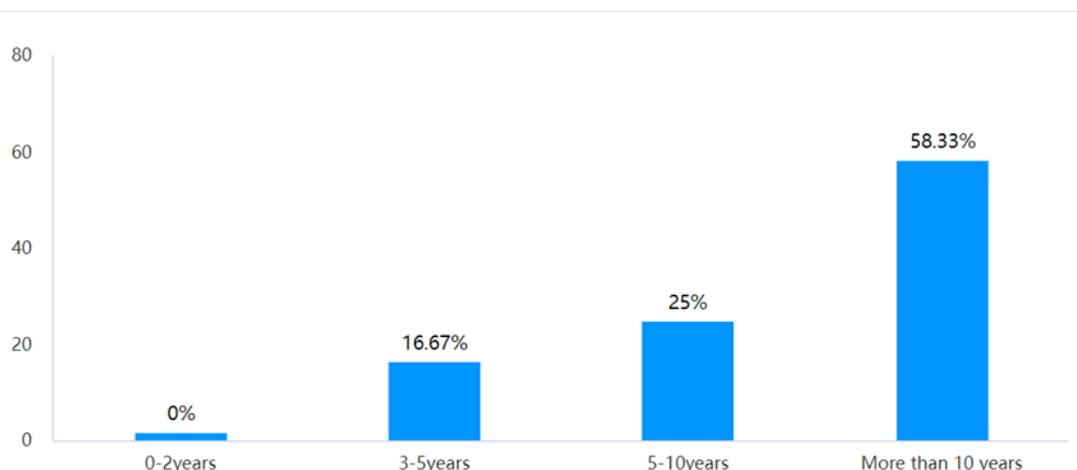


Figure 11: Respondents’ Distribution by Teaching Years

Figure 12 presents the Respondents’ Distribution by present position. Of the 12 respondents, no one is executive director or chair professor in WKU; 1 or 8.33 % is a Dean or Head of School; followed by 4 or 33.33% are Associate professors in WKU; 7 or 58.33% are senior lecturer in WKU.

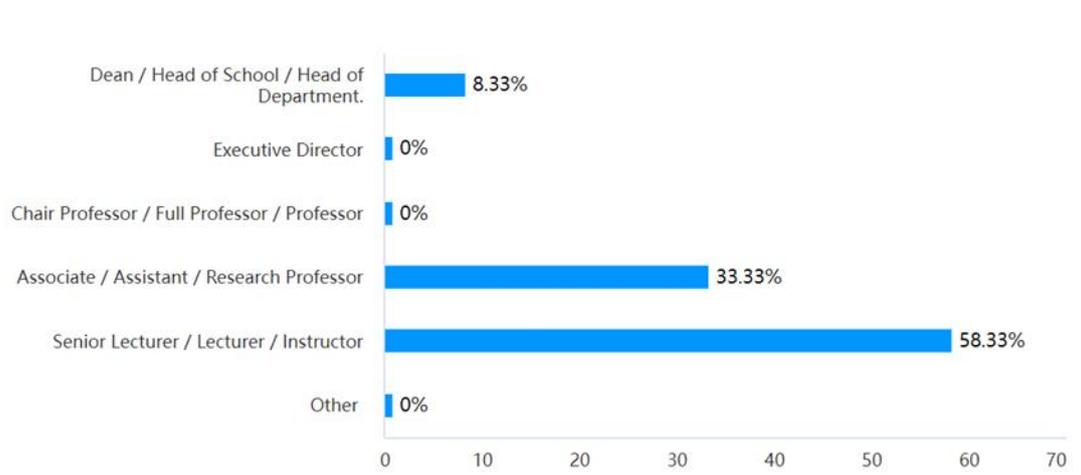


Figure 12: Respondents’ Distribution by Present Position

Investigating the Usage of ChatGPT

1. Respondents’ Awareness and Familiarity of ChatGPT

Figure 13 presents the Respondents whether have heard of ChatGPT before. Of the 12 respondents, 1 or 8.33% WKU professor have not heard of ChatGPT before; 11 or 91.67% had heard of ChatGPT before.

Figure 14 presents how the Respondents are familiar with ChatGPT. Of the 11 professors who had heard of ChatGPT, 1 or 9.09% WKU professor was very familiar with it; 9 or 81.82% WKU professors were somewhat familiar with ChatGPT; 1 or 9.09% WKU professor was not familiar at all.

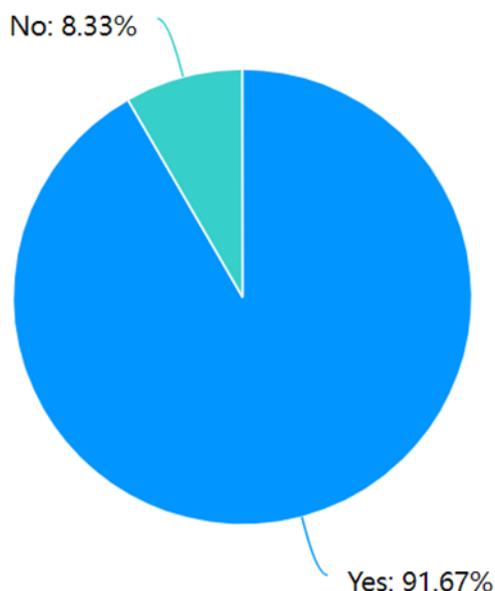


Figure 13: Respondents whether have heard of ChatGPT before

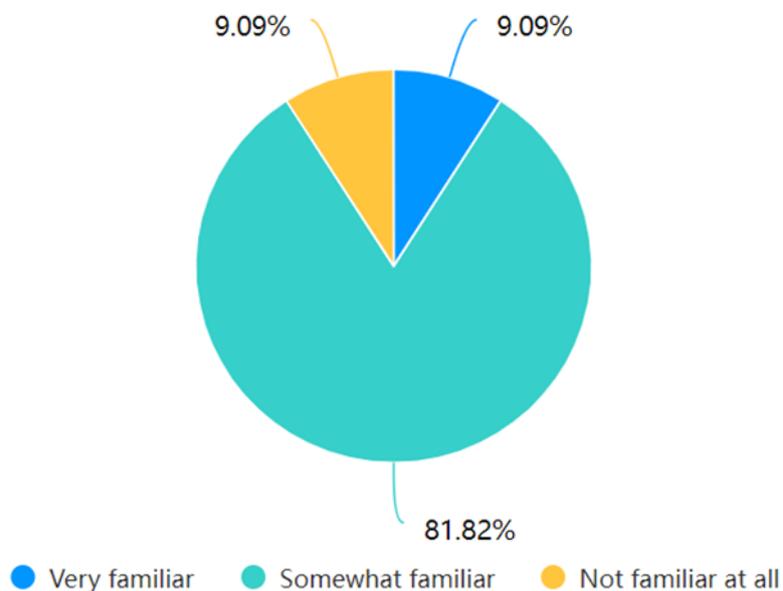


Figure 14: How the Respondents are familiar with ChatGPT

2. Respondents’ Usage Pattern of ChatGPT

Figure 15 presents the Respondents whether have used ChatGPT as a teaching or research tool before. Of the 11 respondents who had heard about ChatGPT before, 2 or 18.18% WKU professors have used ChatGPT as teaching or research tool before; 9 or 81.82% WKU professors have not used ChatGPT as a teaching or research tool before.

Figure 16 presents how useful it was for Respondents’ teaching or research. Of the 2 professors who had used ChatGPT for their teaching or research, 2 or 100% WKU professors think ChatGPT is somewhat useful for their teaching or research.

Figure 17 presents the Respondents’ use of ChatGPT in teaching or research. Due to multiple choices, the total percentages would be greater than 100%. Use of ChatGPT in WKU professors’ teaching or research was ranked in order of percentage as follows: Generating discussion topics/Syllabus > Enhancing creativity > Answering students' questions = Providing feedback = Teaching a foreign language. It can be seen that generating discussion topics/ Syllabus is the main use in WKU professors’ teaching or research.

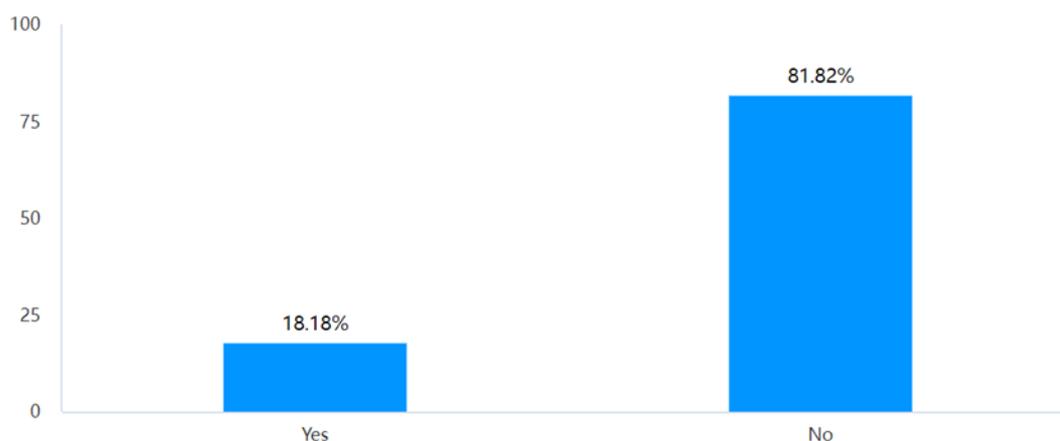


Figure 15: The Respondents whether have used ChatGPT as a teaching or research tool before

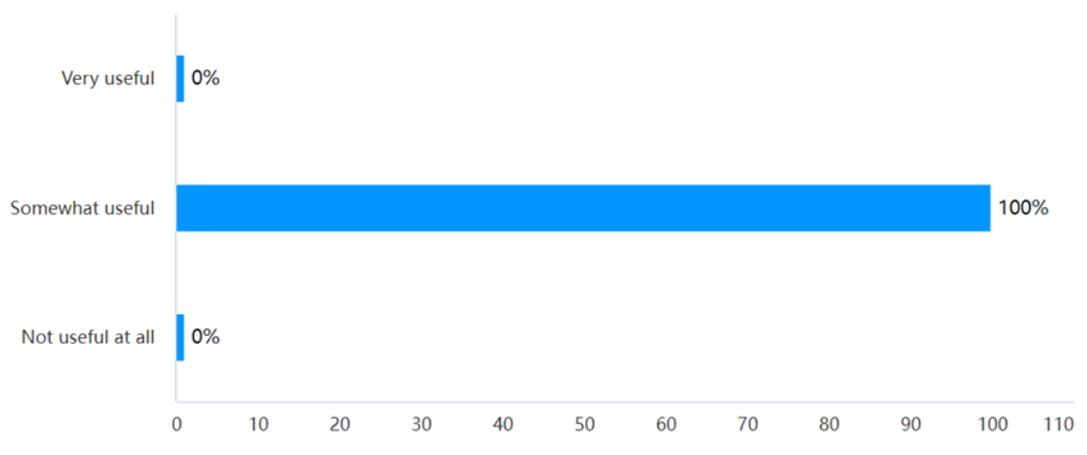


Figure 16: How useful it was for Respondents’ teaching or research

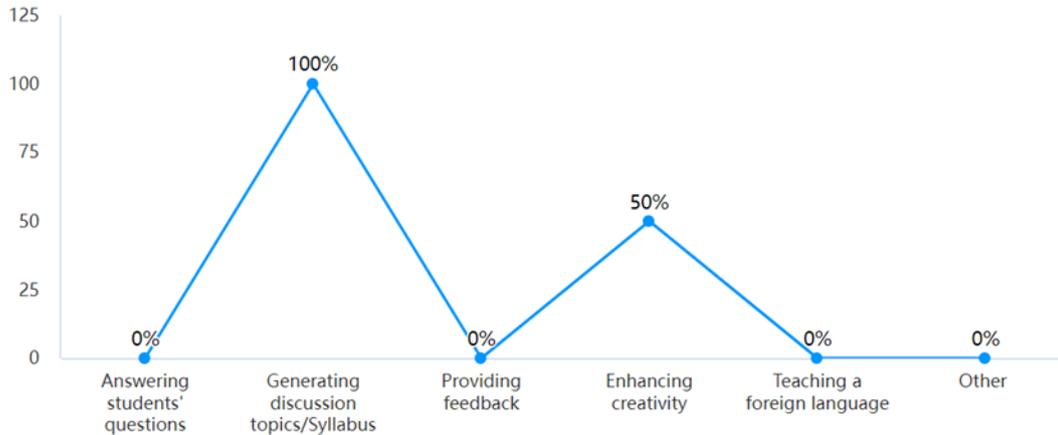


Figure 17: The Respondents' use of ChatGPT in teaching or research

Exploring the Attitude Towards Student's Usage of ChatGPT as Learning Support Tool

1. Respondents' Attitude Toward ChatGPT Whether Is a Useful Tool for Students

Figure 18 presents the Respondents' opinions on whether ChatGPT could be a useful tool for students. Of the 12 respondents, 1 or 9.09% WKU professor supposes ChatGPT definitely is a useful tool for students; 10 or 90.91% WKU professors suppose ChatGPT is a useful tool to some extent.

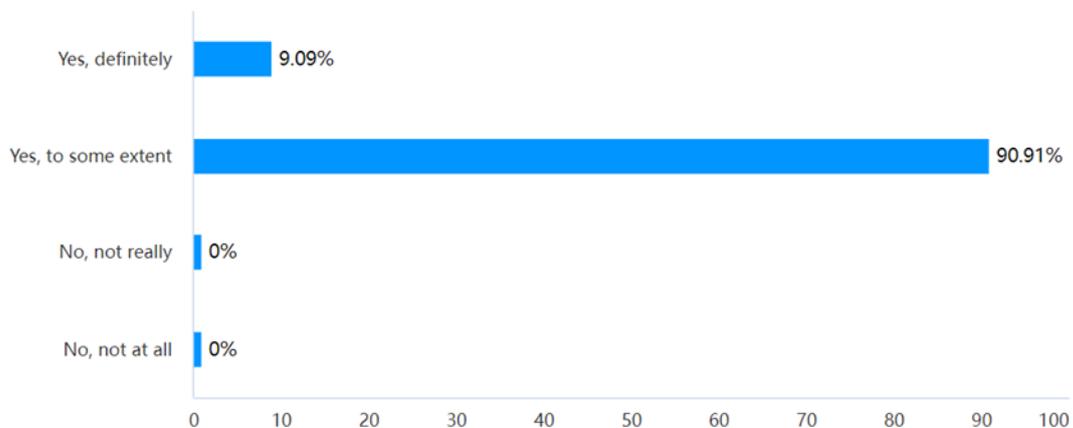


Figure 18: The Respondents' opinions on whether ChatGPT could be a useful tool for students

2. Respondents' Reasons for Whether ChatGPT Is a Useful Tool for Students

Due to multiple choices, the total percentages would be greater than 100%. Figure 19 presents Respondents' reasons that ChatGPT could be a useful tool for students. Reasons of ChatGPT could be a useful tool of students was ranked in order of percentage as follows: Exploration > Idea generation > Language Learning = Time-saving. It can be seen that exploration is the main reason that ChatGPT could be a useful tool of students.

Figure 20 presents Respondents' reasons that ChatGPT could not be a useful tool for students. Reasons of ChatGPT could not be a useful tool of student was ranked in order of percentage as follows: Lack of critical thinking > Cheating = Plagiarism Concerns > Inaccurate or

unreliable information. It can be seen that lack of critical thinking is the main reason that ChatGPT could not be a useful tool of students.

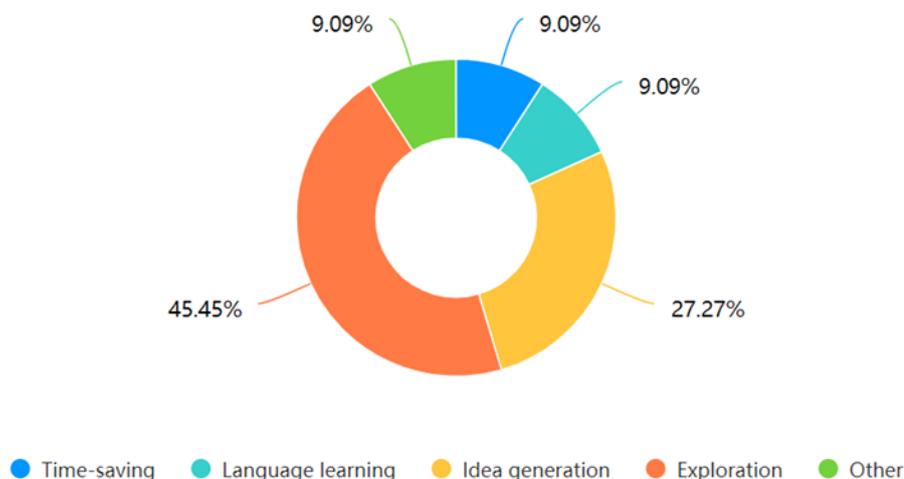


Figure 19: Respondents’ reasons that ChatGPT could be a useful tool for students

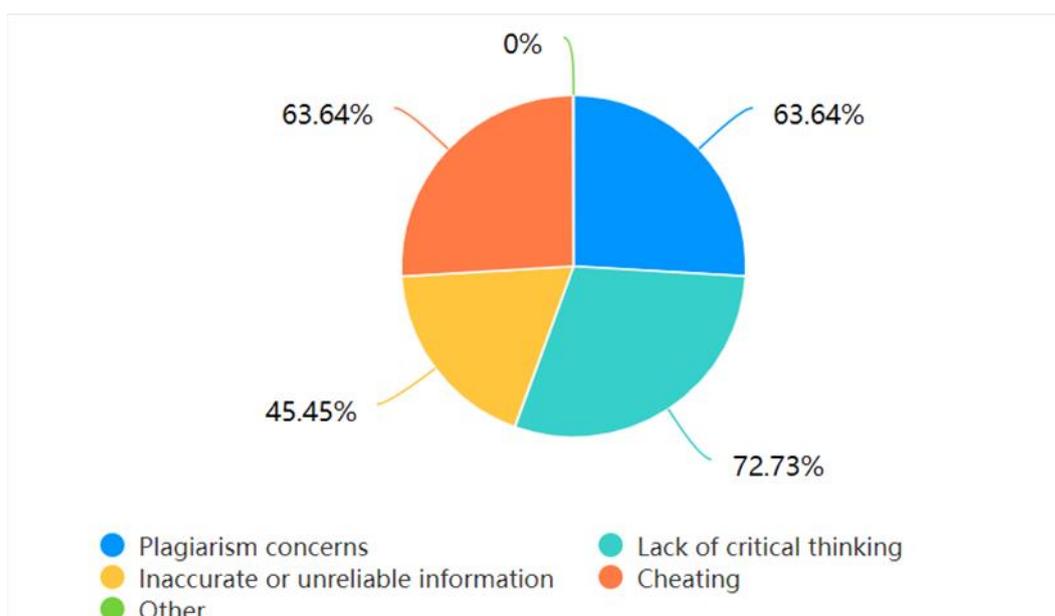


Figure 20: Respondents’ reasons that ChatGPT could not be a useful tool for students

Discussion and Conclusion

This quasi study explores the role of ChatGPT as a learning aid through experiment and mixed method survey, as well as the acceptance and use of ChatGPT by students and professors at Sino-foreign joint universities. The experimental results showed that the addition of ChatGPT did not produce a significant difference in the pre-test and post-test scores of reading comprehension ($p = 0.585$). The lack of this effect suggests that, at least in the context of this study, ChatGPT did not significantly improve students' reading ability. One possible explanation for this result is a mismatch between the detail-oriented nature of the test questions and participants' primary use of ChatGPT's translation and summarization features.

The differences between problem setting and actual use highlight the need for a more consistent approach in future research.

In the survey questionnaire, we found that the majority of students (74%) reported moderate familiarity with ChatGPT, with 14% reporting high familiarity. However, an overwhelming 84% of people expressed doubts and doubts about ChatGPT, and only 13% showed high trust. This suggests that, while there was initial excitement about the release of ChatGPT, students approached it with curiosity and caution. The pervasive use of information retrieval, brainstorming, and entertainment features suggests that students have not yet exploited the full potential of ChatGPT to assist autonomous learning. ChatGPT is not widely used in students' autonomous and independent learning.

When considering the perceived advantages and disadvantages, nearly half of the participants believed that the advantages of using ChatGPT outweighed the disadvantages. Efficiency, learning assistance and the stimulation of new perspectives are considered key advantages. Instead, the possibility of cheating, lack of creativity and critical thinking, and the possibility of inaccurate information were considered major disadvantages. These findings highlight the nuanced perspectives students hold regarding the usefulness and limitations of ChatGPT.

A survey of Wenzhou-Kean University professors revealed differences in familiarity among educators, suggesting the need for targeted awareness initiatives and professional development opportunities to ensure informed use of ChatGPT in academic settings. Professors' perceptions of ChatGPT as a useful tool for students were primarily positive, with 90.91% finding it useful to some extent. This is consistent with perceived benefits reported by students, emphasizing the potential for exploration, idea generation, language learning and time saving. However, the concerns expressed by students and professors, particularly regarding a lack of critical thinking, cheating, and potential plagiarism, highlight the need for careful and thoughtful integration of ChatGPT into the learning environment.

The current study provides valuable insights into the complex dynamics surrounding the adoption of ChatGPT as an educational tool. The results indicate that while there is potential for its utility, careful consideration of factors such as problem setting, user familiarity, and the balance between advantages and disadvantages is critical for its effective integration. The use of ChatGPT is becoming more and more common in Sino-foreign joint schools. Under this trend, students need to fully understand the functions and usage of ChatGPT, and choose learning assistance methods that suit themselves and their goals. The findings also highlight the importance of collaborative approaches between educators and students, and the need to explore appropriate levels of use. How to take advantage of artificial intelligence tools such as ChatGPT and deal with potential crises and challenges are issues that people in this era have to face.

Future prospects for ChatGPT integration as a learning tool are promising, especially in higher education settings. Professors and students in high school and college may come up with creative methods to use ChatGPT's features for academic purposes. As more instructors and students get acquainted with ChatGPT, its use in higher education may go beyond basic assignments like brainstorming and information retrieval. It might be possible to work together to integrate ChatGPT into coursework to support language acquisition, idea production, and the examination of various viewpoints. According to the study, a sizable percentage of participants thought ChatGPT was helpful for efficiency and help with learning, suggesting that it could support academic pursuits.

Proactive steps must be taken to avert possible overuse or dependency. It is possible to hold awareness campaigns to inform academics and students about the proper and moral use of ChatGPT. It is essential to promote a balance between the use of the instrument and autonomous thought. Using ChatGPT in conjunction with critical thinking activities helps promote a more all-encompassing learning strategy.

In summary, there is a great deal of potential for improving learning experiences when ChatGPT is incorporated into the educational system. As technology develops, it's critical to adjust and look for novel approaches to utilizing AI's advantages while maintaining ethical and responsible use. A comprehensive strategy that takes into account how the dynamics between technology and education are changing should direct future research and applications.

Innovation and Significance of Study

This paper is significant to the university, students, academic and educational system. This research helps determine how Chat GPT be better applied in the university and benefit students. Professor's view will be studied in this research. It has been found that ChatGPT is good at looking for factual answers but poor in writing academically. Moreover, it can help educators rethink how to make more challenging assignments and tests, to help students learn more (Thorp, 2023). This research will study the acceptance of this new learning tool by professors and students to determine whether universities can well accept it. As this is a new supporting learning tool, students' interest easily rises. The feeling of freshness order about them to make more and better use of it. Previous research has found that ChatGPT can help researchers conduct systematic reviews precisely and save time (Wang et al., 2023). If it can be widely used, it will be more convenient and practical for students to deal with complex literature. Whether the benefits of using ChatGPT outweigh its disadvantages will be studied in this research. ChatGPT has various functions and has already been used to write papers, summarize literature and drafts, and improve essays (van Dis et al., 2023). Students' reliance on it will be enormously improved if it is widely spread and used. However, students' reliance on learning tools heavily affects their academic performance. This research will try to balance using the learning tool and independent learning. This topic is innovative and has not been studied yet. Though it is limited to Sino-foreign joint universities, it still has its reference significance. The biggest problem that ChatGPT face is the academic integrity problem. It will be a significant step forward for the education system if it can be used and promoted within reasonable scopes.

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