

PERSPECTIVES OF UNIVERSITY'S STUDENTS AND TEACHERS ABOUT THE USE OF CHATGPT IN LEARNING IN DISTRICT PESHAWAR

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Abstract

This study was designed to explore the perspectives of university's students and teachers about the use of ChatGPT in Learning. The research is quantitative in nature. Two self-constructed questionnaires were used having 40, 40 items. One was designed for students and the second one was designed for teachers. These scales have four perspectives. Acquaintance, Use of ChatGPT in learning/Teaching, Benefits of using ChatGPT and barriers of using ChatGPT. The results indicate that the perspectives of SBBWU university and UOP students are the same. The mean values for teachers suggest a notable difference (19.32) between the two groups, with SBBWU teachers having more positive perspectives on ChatGPT in Learning.

Keywords: Perspectives, ChatGPT, Learning, University's Students, University's Teachers

1. Introduction

Currently chatGPT (Generative Pre-trained Transformer) is a revolutionary chatbot that has already gained traction (Sundar, 2023). In the days following its introduction, its popularity increases, with over a million users. This AI-driven bot uses artificial intelligence to facilitate natural conversation with user. It can converse like a human since it was trained on a massive quantity of data, giving the impression that one is speaking with a real person rather than a machine (Cousins, 2023).

Prior researchers have discussed extensive language models created by students and viewpoints of academics. Numerous uses exist for large language models. It can help students in their educational path as seen by them. Scholars have employed extensive language models to create dynamic teaching materials, including tests and study guides, intending to improve student learning and participation (Sallam, 2023).

Tahiru (2021) narrated that Open AI created chatGPT, an open-source NLP model renowned for its human-like conversational capabilities. It's adept at providing personalized assistance and can offer customized educational resource suggestions to align with specific learning goals and preferences. The application of AI technology in education has the potential to revolutionize traditional teaching strategies and promote customized learning, and soft skill development. Still, important problems are also raised by the use of AI in education. Regarding the possible difficulties and risks that might arise as a consequence of this technological change. (Firat, 2023).

Chen et al., (2023) argued that AI technologies have completely changed the educational landscape by providing new learning opportunities. AI may be used in education in two key ways: by harnessing AI for insights, learning assessment, and process improvement, and by developing classroom-powered AI technologies. Intending to assist and improve the educational experience, these applications include a variety of AI technologies, such as chatbots, robots, clever teaching systems, education analytics dashboards, adaptive learning systems, and automatic evaluation. ITS, or intelligent tutoring systems, are one type of AI used in education that offers emulation of individual tutoring sessions.

A meta-analysis looking at their influence revealed a generally favorable impact on the academic success of college students while chatGPT may offer certain benefits, it also presents new challenges and risks in the realm of education. One prominent concern revolves around the prospect of AI-driven academic misconduct, since it can be used to pass tests and do work for other people the students. Teachers are concerned that students may become overly dependent on using chatGPT to quickly produce appropriate texts, possibly outsourcing there in the AI framework and it is unable to instruct students in critical thinking or help them formulate original ideas. Additionally, worries have been expressed about things such as false information, plagiarism, and improper references (Mhlana, 2023)

1.1 Objectives of the Study

This study was concerned with the following objectives:

1. To find out the perspectives of students about the use of chatGPT in learning at university level.
2. To explore the perspectives of teachers about the use of chatGPT in learning.
3. To identify the potential benefits and barriers associated with the use of chatGPT in learning.

1.2 Hypotheses

The following hypotheses were formulated to test statistically for this study;

H01. There is no significant difference among the perspectives of students about the use of chatGPT in learning.

H02. There is no significant difference among the perspectives of teachers about the use of chatGPT in learning.

2. REVIEW OF LITERATURE

ChatGPT, OpenAI's advanced conversational chatbot, has the potential to make it easier to incorporate AI into teaching and learning by providing teachers with a usable tool for educational purposes. Since its launch in November 2022, chatGPT has shown to be a valuable tool for educators, benefiting both teachers and students alike. ChatGPT aids students by stimulating problem solving, providing constructive feedback on their work, and assisting with essay writing. ChatGPT allows teachers to produce content such as quizzes, presentations, course outlines, as well as coding, grading, and writing scientific papers. ChatGPT is the best AI chatbot ever made available to the general public. Teachers have experienced a great deal of excitement as well as bewilderment over it. Consideration must be given to both the possible uses and significant concerns of chatGPT in order to guarantee that the technology is applied for social good rather than social damage (Qadir et al., 2022).

ChatGPT gives users autonomy over their learning; it has the potential to promote student-centered learning. Based on unique requirements, preferences, and objectives, it can provide tailored learning activities and information. Furthermore, chatGPT can offer a customized learning experience by adjusting to the learning style and pace of each individual. This feature can improve education and let students participate in activities that match their skills and interests (Yunus et al., 2023).

Chen (2021) claims that student-centered learning has the potential to increase motivation, engagement, and academic accomplishment. With chatGPT, teachers may offer individualized learning experiences that are catered to the needs of each student. With the help of chatGPT, learners may design individualized learning pathways that give them command over their education and experiences. Additionally, it can encourage student involvement and active learning. All things considered, chatGPT might be a useful tool for student-centered learning since it offers flexible and personalized learning opportunities. In the end, it can result in improved academic performance by encouraging learner autonomy and involvement. Nonetheless, it's critical to address the drawbacks of using chatGPT in the classroom, including worries about security and privacy, the need for technological know-how, and the possibility of algorithmic biases.

According to Kasneci et al. (2023), chatGPT can aid university students with their writing and research assignments, as well as improve their critical thinking and problem-solving skills. According to the authors, utilizing a broad language model allows students to obtain document summaries and outlines, which help them, understand technical terms and learn how to structure their writing ideas.

Using chatGPT helps teachers by easing the burden of assessment; acting as a teaching assistant; assisting with students' individualized learning; serving as a research assistant; producing content; and assisting with language translation. However, chatGPT has certain limitations; including its inability to understand human language, lack of data beyond 2021, and inability to fully replace human knowledge and capability (Khan et al., 2023; Shidiq et al., 2023).

Education is threatened by a variety of factors, including a lack of contextual understanding, dangers to academic integrity, the democratization of plagiarism, the persistence of educational discrimination, and a reduction in higher-order cognitive skills. The positive perceptions that students had of chatGPT and their resolute desire to utilize it propelled its introduction into the classroom. That being said, there is no statistical correlation between students' perceptions and their intention to use chatGPT (Farrokhnia et al., 2023; Rahman & Watanobe, 2023).

3. MATERIAL & METHODS

The present study was descriptive and a survey was conducted. The study population covered students and teachers of numerical sciences (Maths, Physics) and social sciences (Education, History) of SBBWU and UOP in District Peshawar.

3.1 Study Design

The researcher selected 297 students and 71 teachers as the sample of the study. 105 students from SBBWU and 192 students from UOP were selected through proportionate sampling technique and teachers were selected through Census sampling technique.

3.2 Measurement

Two self-constructed questionnaires were used having 40, 40 items. One was designed for students and the second one was designed for teachers. These scales have four perspectives. Acquaintance, Use of ChatGPT in learning/Teaching, Benefits of using ChatGPT and barriers of using ChatGPT. The results of the pilot study, which involved 16 teachers and 60 students, showed that the Cronbach Alpha reliability coefficient for the teacher questionnaire was 0.903 and the Cronbach Alpha reliability coefficient for the student questionnaire was 0.943.

3.3 Data Analysis

The data collected from 297 university students and 71 teachers were anatomized through mean, standard deviation and t-test. Mean and Standard deviation was used to describe variables of the study, t-test was used to find out the difference in the perspectives of SBBWU students and teachers and UOP students and teachers.

4. Results

Table 1: Perspectives of students regarding Acquaintance, Use of ChatGPT in Learning, Benefits and Barriers

	N	Mean	St. Deviation
Acquaintance	297	2.62	1.204
Use of chatGPT in Learning	297	2.36	1.091
benefits	297	2.23	1.013
Barriers	297	2.66	1.19
Valid N	297		

Table indicates that the mean value for acquaintance is 2.62 and standard deviation is 1.204, the mean value for use of chatGPT in learning is 2.36 and standard deviation is 1. 091. The mean value for benefits is 2.23, standard deviation is 1.013 while mean value for barriers is 2.66 and standard deviation is 1.19 which shows that majority of students are satisfied regarding the use of chatGPT in learning.

Table 2: Perspectives of teachers regarding Acquaintance, Use of ChatGPT in Learning, Benefits and Barriers

	N	Mean	St. Deviation
Acquaintance	71	2.76	1.143
Use of chatGPT in Teaching	71	2.68	1.088
Benefits	71	2.58	1.088
Barriers	71	2.53	1.112
Valid N	71		

Table indicates that the mean value for acquaintance is 2.76 and standard deviation is 1.143, the mean value for use of chatGPT in teaching is 2.68 and standard deviation is 1. 088. The mean value for benefits is 2.58, standard deviation is 1.088 while mean value for barriers is

2.53 and standard deviation is 1.112 which shows that majority of teachers are satisfied regarding the use of chatGPT in learning/Teaching.

Table 3: Comparison of SBBWU and UOP Students' Perspectives about the use of chatGPT in Learning.

H₀₁. There is no significant difference among the perspectives of students about the use of chatGPT in learning.

Type	N	Mean	S. D	T	sig
SBBWU	105	102.41	20.42	1.68	.430
UOP	192	98.49	18.44		

df = 294

The calculated value of t in table 3 above is less than the tabulated value of t at the 0.05 level, it is statistically non-significant ($p > 0.05$). Accordingly, the null hypothesis, "There is no significant difference among the perspectives of students about the use of chatGPT in learning," is accepted, furthermore, the mean score value of SBBWU students is (Mean=102.41, S.D=20.42) and UOP student is (Mean=98.49, S.D=18.44). The small difference in mean values (3.92) is statistically non-significant, indicating that SBBWU students and UOP students have same perspectives.

Table 4: Comparison of SBBWU and UOP Teachers' Perspectives about the use of chatGPT in Learning.

H₀₂. There is no significant difference among the perspectives of teachers about the use of chatGPT in learning.

Type	N	Mean	S. D	T	Sig
SBBWU	24	118.87	16.705	4.14	.367
UOP	47	99.55	19.431		

df = 69

Given that the computed value of t in table 4 above was 4.14, which is less than the tabulated value of t at the 0.05 level and thus statistically non-significant ($p > 0.05$), the null hypothesis, "There is no significant difference among the perspectives of teachers about the use of chatGPT in learning," is accepted. Furthermore, the mean score value of SBBWU teachers is (Mean=118.87, S. D=16.705) and UOP teachers is (Mean=99.55, S. D=19.431). The mean values suggest a notable difference (19.32) between the two groups, with SBBWU teachers having a more positive perspectives on chatGPT in Learning.

4.1 Discussion

The quantitative data and the study's reviewed literature are combined and analyzed in this part. The purpose of the study was to find out the perspectives of university students and teachers about the use of chatGPT in learning in district Peshawar. The main purpose of the study were to find out the perspectives of students about the use of chatGPT in learning at

university level and to explore the perspectives of teachers about the use of chatGPT in learning. To identify the potential benefits and barriers linked with the use of chatGPT in learning. The findings of the study showed that there is difference in mean values of (3.92) which is statistically non- significant, indicating that the perspectives of SBBWU students and UOP students are same. The mean values for teachers suggest a notable difference (19.32) between the two groups, with SBBWU teachers having a more positive perspectives on chatGPT in Learning.

Researcher such as Mathieson (1991) have examined gender differences in technology adoption and found that attitudes and actions towards technology can differ between men and women. These differences could be attributed to gender norms and social influences on personal choices and beliefs (Fast & Horvitz, 2016). Therefore, it's possible that gender affects how people experience the chatGPT, especially when it comes to factors like perceived ease of use (PEOU) (Liu et al., 2022).

5. Conclusion

This part deals with the main conclusions of the study. With respect to the first, second and third objectives of the study, which were about to find out the perspectives of students about the use of chatGPT in learning at university level; to explore the perspectives of teachers about the use of chatGPT in learning; to find the possible benefits and barriers linked with the use of chatGPT in learning. The study explored that, on the basis of university wise comparison, the result of the study showed that the perspectives of SBBWU university and UOP students are the same. The mean values for teachers suggest a notable difference (19.32) between the two groups, with SBBWU teachers having more positive perspectives on chatGPT in Learning.

5.1 Limitation of the study and Future Suggestions

This study is limited to the only four perspectives of using chatGPT by university's students and teachers and the investigating perspectives are acquaintance, use of chatGPT in learning, benefits and barriers of chatGPT in learning. Whereas there are so many perspectives of using chatGPT of university's level students and teachers which are not investigated in this study. Future study ought be directed to compare the use of ChatGPT among male and female students.

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