Teacher's Perceptions and Hesitancy: Integrating ChatGPT as a Tool in English Language Learning

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Article Info	Abstract
	Incorporation of innovative technologies has acquired importance for enhancing pedagogical strategies for effective language learning. This study explored the perceptions and hesitancies of English teachers in Bangladesh regarding the integration of ChatGPT as a language learning tool. Thirty-one English teachers from diverse educational institutions of high school and above across different regions of Bangladesh were recruited for the study in August 2023. A structured questionnaire was designed and utilized to elicit socio-demographic information, perceptions and hesitancy of these teachers towards adoption of ChatGPT as a language learning tool. Data analysis was carried out using SPSS. Almost 80% participants were willing to recommend the use of ChatGPT to other English teachers yet hesitant about it. Familiarity with ChatGPT, confidence in incorporating ChatGPT into their English lessons ($p<0.001$) were found to be positively correlated with the positive attitudes towards its integration. Teachers less likely to encourage students to use ChatGPT for English language learning outside the classroom are more hesitant to adopt Chatbot GPT in their teaching practice ($p = 0.004$). A consistent pattern of positive agreement among participants was seen regarding the willingness to receive professional training on ChatGPT. The findings of this pilot study shed light on the initial attitudes of English teachers in Bangladesh towards incorporating ChatGPT in language learning. While some displayed enthusiasm due to its potential benefits, others expressed hesitations regarding its impact on traditional teaching methods. The outcomes highlight the need for further exploration and teacher training in integrating such technologies effectively.

Introduction

Artificial Intelligence is a broad field that encompasses various concepts in Information Technology (Mohammad, 2020). The digital world is becoming more complex annually. Scientists and researchers have come up with innovations in the field of technology. AI showcases the abilities of AI, such as in smart buildings, such as the ability to manage air quality in a building, temperatures, and or playing music depending on the sensed mood of the occupants of the space. Furthermore, research suggests AI has achieved a new paradigm of importance with the advent of big data where data driven decision making has become embedded into healthcare, industry and

security industry altogether. Within the education sector, there has been increased application of artificial intelligence, going over and above the conventional understanding of AI to include embedded computer systems (Chen et al., 2020).

Education has taken advantage of information technology (Hawkridge,2022). As information is the source of power in this day and Information Technology is the means of wielding that formidable power. Information Technology helps boost efficiency and productivity in our daily life which has been reflected with its use cases in education in general (Hawkridge, 2022).

AI amplifies productivity and flexibility through machine learning algorithms, robotics and automations. AI is used in wide variety of industries such as Education, Healthcare, Business Management, Banking and Finance etc (Chui et al, 2018). It is used to detect fraud, improve speech recognition in call center management and call routing. AI techniques allow a more seamless experience for customers and more efficient processing. It concedes continuous estimation to logistics which adds substantial value across many sectors, such as routing of delivery traffic, thereby improves fuel efficiency and reduces delivery times (Chui et al, 2018).

There are several successful uses of AI in education, such as tasks like assisting with translations and language learning, outsourcing homework, grading assignments, detecting plagiarism, correcting grammar and many more. In light of the existing initiatives and technologies to come, different studies (Laanpere et al., 2014; Luckin et al., 2016; Mayer-Schönberger & Cukier, 2014) have recently contributed to the ways in which AI can help improve learning opportunities for students and management systems. One of the most revolutionary aspects of computer-supported collaborative learning is found in situations where learners are not physically in the same location and emerged with the advent on the onslaught of the pandemic. It provides students variable choices as when and where they wish to study. In respect to computer-supported collaborative learning, online asynchronous discussion groups accumulated with learning management systems and online learning management platforms play a central role (Pedro et al, 2019) where AI recently played the role of a virtual tutor to a student. AI guides softwares such as Turnitin, Grammarly, Quillbot plays a quintessential role in shaping today's academic writing, assignment submission and editing services that are needed by all stakeholders including teachers, staff and students on a daily basis.

Significant changes have been brought about in society, the economy, and the environment as a result of the quick development of technology and the interconnection (Mhlanga, 2023) of the world. Artificial intelligence has advanced significantly in recent years, which has sparked the creation of ground-breaking technologies like Open AI's ChatGPT. ChatGPT is a language model developed by OpenAI which is based on the GPT-3.5 architecture that stands for "Generative Pre-trained Transformer 3.5." ChatGPT generates human-like text in response to text-based input. It is a type of large language model (LLM) that uses deep learning techniques and a massive amount of text data to accomplish its tasks. The ChatGPT is a strong Natural Language Processing tool that can produce conversations that appear to be written by a human (Surameery et al.,2023).

ChatGPT is pre-trained and fine tuned on GPT-3.5 architecture primarily with several variations and upgrades

currently at play. Modern technology like the ChatGPT language model has the potential to revolutionize the educational landscape. Chat GPT allows to have human-like conversations and much more. The language model can answer questions and assist with tasks, such as composing emails, essays, and code. In addition to answering simple questions, Chat GPT has many functions. It has the ability to describe anything in great detail and engage in philosophical conversations. However, the accuracy of ChatGPT's answers are not beyond question. It is not a credible source for research purpose. This conundrum makes ChatGPT a bit more interesting for researchers to explore its applicability and acceptance in several domains.

ChatGPT has been integrated into customer service chatbots to assist customers with inquiries and provide information. It generates text content for various purposes, including writing articles, marketing copy, and product descriptions. In healthcare, ChatGPT serves in generating medical reports, answering patient queries, and providing information on various medical conditions and treatments. It assists lawyers in legal research, document drafting, and providing initial responses to legal queries. ChatGPT is used as a learning assistant to help students with their questions and homework. It provides explanations and information on a wide range of topics.

This AI model is capable of understanding and generating human-like text, making it useful for a wide range of applications such as answering questions, content creation, and customer support. Its potential to automate tasks and its contribution to research and development in artificial intelligence have also fueled its global and potentially regional appeal, including in Bangladesh. The young teachers of different educational level in Bangladesh are aware of ChatGPT. Incorporation of innovative technologies has acquired importance for enhancing pedagogical strategies for effective language learning.

Technologies offer new and effective strategies to enhance the learning process. By using tools such as language learning apps, interactive multimedia, and virtual classrooms, educators can create engaging and personalized learning experiences for students. These innovations not only facilitate language acquisition but also adapt to different learning styles making education more accessible and efficient. As a result, technology integration is seen as a key enabler for improving language education outcomes.

Teacher's Perception and Hesitancy of ChatGPT in Bangladeshi context has not been discussed in any article or research paper. This is the biggest research gap which we will try to mitigate through our paper. However, in a recent research in Bangladesh, data was elicited from 100 undergraduate students who had access to the Chat GPT in in 2023 who were gathered using a quantitative research design (Tanvir et al., 2023). The research has shown that ChatGPT has negative impact on creativity which impacts motivation and sometimes lead to plagiarism and therefore it has a negative impact on academic performance.

However, we are working with three objective here in this research paper to show the perception, hesitancy and socio-demographic information. Socio-demographic information in this pilot study refers to the age, profession, employment status and level of education of the participants. The age of the selected participants are above 18 and ranges from 25 to 35. They are from different geographical areas and cities of Bangladesh. They all are from different teaching levels as well. By gathering all the information these participants we can reach to a unique

conclusion. How they are perceiving ChatGPT from their perspective is also significant. Even in this pilot study the majority is familiar with ChatGPT yet to the big minority this perception of ChatGPT is not yet clear. Even though more than half of the respondents is familiar with Chat GPT yet more than one quarter percent they are ready to introduce ChatGPT in their classroom. Traditional form of teaching English is emphasized. Credibility and accuracy of ChatGPT should have been a important factor of hesitancy but it seems that, the hesitancy on that particular ground is quite low. The detail of this study has been presented in tabular in result section.

Even though there are no research work on Teacher's Perception of ChatGPT in Bangladeshi context but we have found a somewhat similar research which took place in Pakistan. It has explored the attitudes of faculty members towards using ChatGPT in higher education settings. It has used the Technology Acceptance Model (TAM) to understand the acceptance level of university teachers towards ChatGPT and its implications for teaching and learning. The study has conducted semi-structured interviews with 20 faculty members of a private university in Pakistan to gather insights. The findings indicate that university faculty members generally have a negative perception and attitude towards using ChatGPT, citing concerns about cheating and plagiarism as major risks. However, they also acknowledge potential benefits such as ease in lesson planning and assessment. (Iqbal et al., 2022)

Method

Participants and Data Collection

This pilot study involved analyzing the perception and hesitancy regarding ChatGPT adoption in English language practice from a small group of English teachers of Bangladesh. The inclusion criteria were age > 18 years old, English teachers of Bangladesh, teaching grade of high school and above. Purposive sampling was adopted for selection of the participants to ensure diverse background representation of the sample participants. Informed written consent was taken from all participants. A structured survey questionnaire was administered as a tool to collect data from the participants. The survey response intake was active for one month starting from August 2023. Responses with missing data were excluded from the study. Thirty-one completed survey was compiled and taken onto analysis at the end of the survey period.
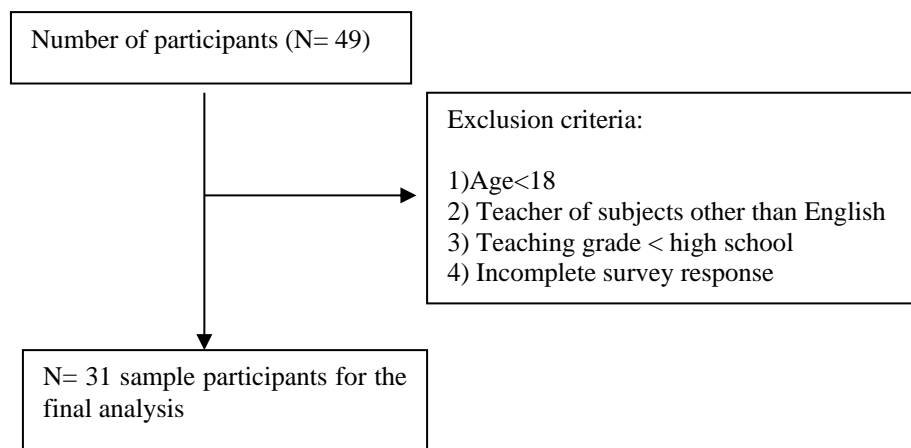

Figure 1. Inclusion of Study Participants

Study Survey

The survey questionnaire was structured after consultation with expert researcher in education and technology usability and feasibility. The survey had three key sections. First section had questions for socio-demographic information including age, gender, education, years of teaching experience, grade of teaching, area of teaching, and the type of institution the sample participant teaches in. The following section had a 10 item Likert set of questions to assess the perception about ChatGPT adoption in English language learning. The four scale responses to the Likert item ranged from strongly agree to strongly disagree with adjusted score from four to one. Eight questions assessed the positivity towards the implementation of ChatGPT, and two questions assessed the hesitancy among the participants. Reverse scoring was adopted for the hesitancy questions. Finally, the third section had questions to determine the concerns and reason for hesitancy towards adoption of ChatGPT in English language learning.

Data Analysis

The study utilized Microsoft excel and SPSS version 26.0 (SPSS, Chicago, IL, USA) to analyze the data. Descriptive statistics were carried out for all socio-demographic variables, mean and standard deviation for the quantitative variable, and frequency and percentages for the categorical variables. Correlation analyses were conducted among the Likert item responses to gain insight on the participant's perception on ChatGPT adoption to English language learning, and to assess for multicollinearity. On the other hand, this correlation provided us the chance to subjectively validate the Likert items by assessing the direction of positive (8) and negative (2) items regarding perception. Qualitative variable frequencies were analyzed to assess the cause of hesitancy among the participants as well.

The study design has some limitations that we want to acknowledge. Since this is a pilot study, small sample size may affect the generalizability of the findings. Participants baseline knowledge regarding ChatGPT were unknown, recruiting a control group was out of the scope of our study. Therefore, it was not possible to know if there would be differences in perceptions among the participants with adequate intervention.

Results

Table 1 demonstrates the socio-demographic characteristics of the sample participants. The dataset comprises individuals with an average age of 27.35 years (standard deviation of 7.44). The gender distribution indicates that 32.3% are male, and 67.7% are female. In terms of teaching experience, 74.2% have 0-2 years, 12.9% have 3-5 years, and 6.5% each have 5-10 years or more than 10 years of experience. Regarding the grade level they teach, 64.5% teach at the university level, 19.4% at high school, 12.9% at college, and 3.2% to adult learners. The location of teaching varies with 51.6% in towns, 45.2% in urban areas, and 3.2% in rural areas. In terms of education, 54.8% have a postgraduate degree, 25.8% have a graduate degree, and 19.4% have an undergraduate degree. Lastly, 74.2% teach in private institutions, 19.4% in government institutions, and 6.5% in autonomous institutions.

Table 1. Characteristic of Sample Participants

Variable	Mean	Standard Deviation
Age	27.35	7.44

	Frequency	Percentage
Gender		
Male	10	32.3
Female	21	67.7
Years of teaching experience		
0-2 years	23	74.2
3-5 years	4	12.9
5-10 years	2	6.5
10+ years	2	6.5
Grade of Teaching		
High School	6	19.4
College	4	12.9
University	20	64.5
Adult Learner	1	3.2
Area of Teaching		
Urban	14	45.2
Town	16	51.6
Rural	1	3.2
Education		
Undergraduate	6	19.4
Graduate	8	25.8
Postgraduate	17	54.8
Institution of Teaching		
Government	6	19.4
Private	23	74.2
Autonomous	2	6.5

Note. Mean and standard deviation were measured for continuous variable, frequency and percentage were measured for categorical variables

Nearly 80% of participants were reluctant about using ChatGPT but were ready to suggest it to other English instructors. Teachers' biggest concerns were about the lack of human connection in language practice and the

possibility of relying on technology excessively (Figure 3). Incorporating ChatGPT for vocabulary and grammar practice in the classroom is preferred by more than half of the instructors. Positive opinions towards its incorporation were shown to be significantly connected with ChatGPT familiarity and confidence (p<0.001) in integrating it into English teaching. Instructors who are less inclined to support their students in using ChatGPT for English language learning outside the classroom are also less inclined to include Chatbot GPT into their lesson plans (p = 0.004). A trend of agreement was seen regarding the willingness to know more on ChatGPT through professional training (Figure 2).
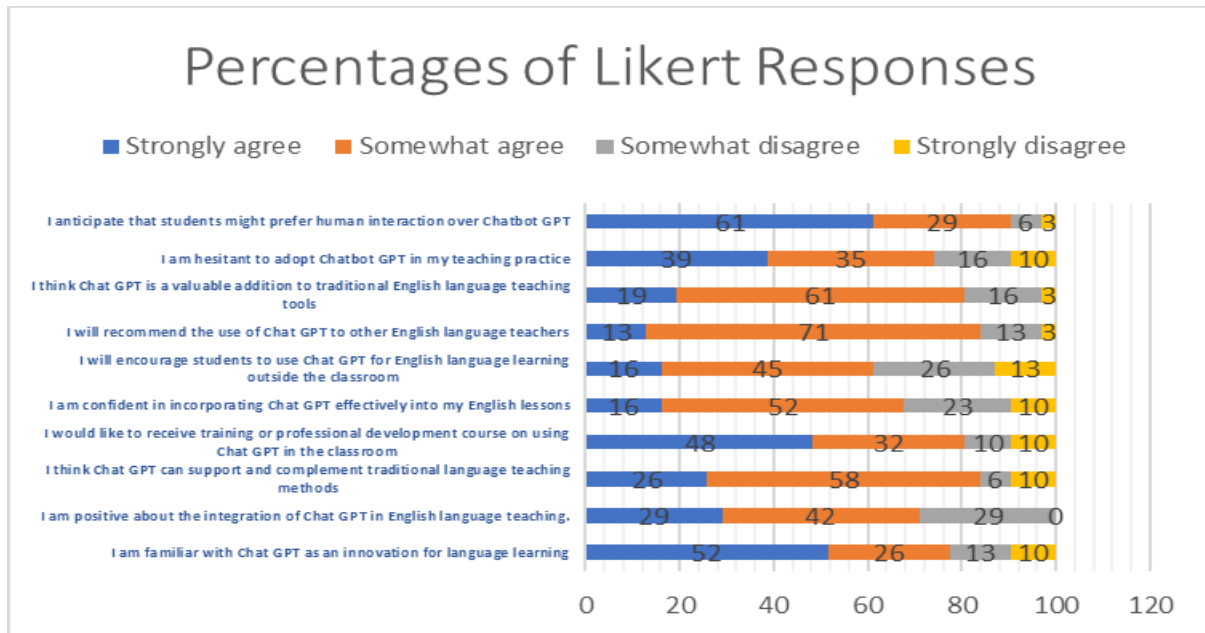

Figure 2. Feedback Survey Response on ChatGPT Adoption to English Language Learning

Table 2 demonstrates the strength and direction of bivariate correlation analysis of Likert items. Items 3, 4, 5, 6, 7, and 8 exhibit moderate to strong positive correlations. These statements all share a common theme of favorability towards ChatGPT integration in English language teaching. Specifically, respondents who are more familiar with ChatGPT (Item 1) tend to hold a more positive attitude towards its integration (Item 2). This positive attitude, in turn, correlates with their belief that ChatGPT can complement traditional teaching methods (Item 3), their interest in receiving training on ChatGPT (Item 4), their confidence in incorporating it into lessons (Item 5), and their willingness to encourage students to use ChatGPT outside the classroom (Item 6). Furthermore, this favorable disposition extends to recommending ChatGPT to other teachers (Item 7) and regarding it as a valuable addition to traditional teaching tools (Item 8). These correlations collectively suggest that respondents who are more familiar and positive about ChatGPT are also more likely to see its potential in education and be enthusiastic about its use.

On the other hand, Items 9 and 10 demonstrate a moderate negative correlation. Item 9 represents respondents' hesitancy to adopt ChatGPT in their teaching practices, while Item 10 reflects their anticipation that students might prefer human interaction over ChatGPT. The negative correlation indicates that individuals who express hesitancy to integrate ChatGPT into their teaching practices (Item 9) are more likely to anticipate that students will prefer

human interaction over ChatGPT (Item 10). This suggests that hesitancy may be driven by concerns about students' preferences for human interaction in the learning process, potentially leading to a reluctance to adopt technology in the classroom. Understanding these correlations can inform strategies to promote the effective adoption of technology in education, emphasizing the need to address educators' familiarity, attitudes, and concerns while highlighting the potential benefits of technology integration.

Table 2. Survey Feedback Questionnaire Items Correlation Analysis

	Item1	Item2	Item3	Item4	Item5	Item6	Item7	Item8	Item9	Item 10
Item1: I am familiar with ChatGPT as an innovation for language learning	1.00									
Item 2: I am positive about the integration of ChatGPT in English language teaching.	0.09*	1.00								
Item 3: I think ChatGPT can support and complement traditional language teaching methods	-0.04	**0.51***	1.00							
Item 4: I would like to receive training or professional development course on using ChatGPT in the classroom	-0.18	0.36*	**0.73***	1.00						
Item 5: I am confident in incorporating ChatGPT effectively into my English lessons	0.06	**0.58***	0.37*	0.39*	1.00					
Item 6: I will encourage students to	0.11	**0.38***	0.46*	0.07	0.60*	1.00				

use ChatGPT for English language learning outside the classroom									
Item 7: I will recommend the use of ChatGPT to other English language teachers	-0.01	**0.38***	0.47*	0.39*	0.54*	0.58*	1.00		
Item 8: I think ChatGPT is a valuable addition to traditional English language teaching tools	0.13	**0.50***	0.42*	0.42*	0.54*	0.50*	0.74*	1.00	
Item 9: I am hesitant to adopt Chatbot GPT in my teaching practice	0.10	**-0.43***	-0.35	-0.23	-0.47*	-0.41*	-0.39*	-0.26	1.00	
Item 10: I anticipate that students might prefer human interaction over Chatbot GPT	-0.06	**0.07**	-0.11	-0.12	-0.03	-0.15	-0.15	-0.26	0.32	1.00

Note: Correlation coefficient r strength ranges between -1 to 1, * indicates statistical significance at <0.05. Positive and negative sign indicates the direction of the relationship.

There are several reasons why English instructors are hesitant to use ChatGPT in their English language lessons (see Figure 3). Teacher's most significant concern accounting for 42% of the responses, is that the students may become too dependent on technology and ChatGPT adoption can substitute the conventional method of language learning. Furthermore, 32.26% of teachers express concern about a potential lack of interpersonal engagement, highlighting the significance of one-on-one communication in language acquisition. Another issue is the language output's reliability and accuracy, which is 19.35%, which highlights the requirement for trustworthy instructional materials. Although they are less common (3.2%), privacy and security concerns also play a role in hesitation, highlighting the need of protecting information and interactions. Together, these factors influence educators' reluctance, emphasizing the need of addressing the function, quality, and security of technology in English

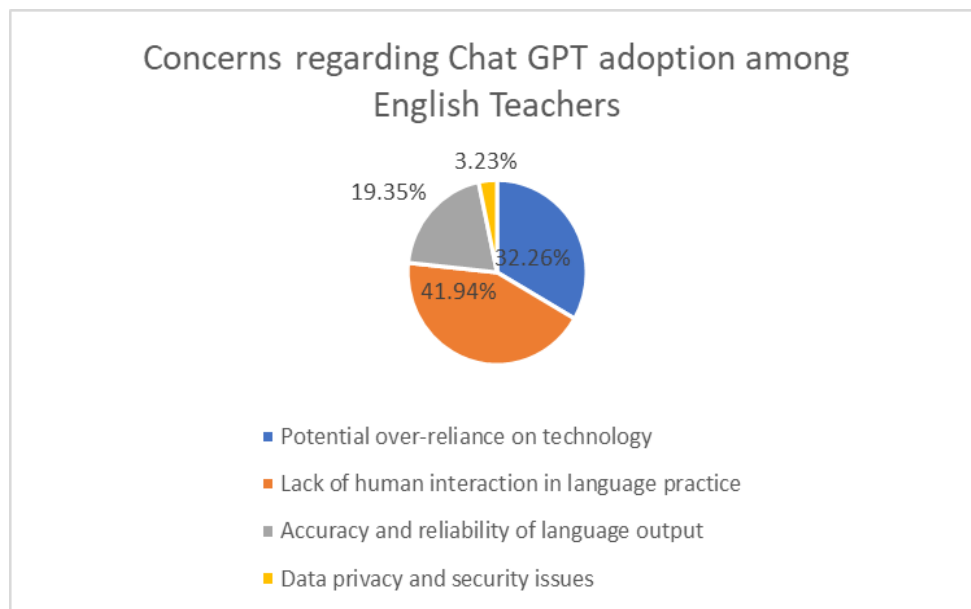language instruction in order to promote effective integration.

Figure 3. Concerns Regarding ChatGPT Adoption among English Teachers

Discussion

To the best of our knowledge and exploration of state-of-the-art, this is so far the first paper in Bangladesh which studied on the perception and hesitancy of the English teachers regarding ChatGPT integration in language practice. Although there appears to be a collective agreement among the participants to recommend this tool to other instructors for English language lesson, a generalized hesitancy has been observed. A robust body of literature have acknowledged the beneficial use of ChatGPT to enhance the teaching outcome. In contrast, researchers have also expressed concern about academic integrity (Teng, 2023).

The prevalence of use of ChatGPT by college students to complete task and obtain grades that was otherwise expected to be done by the students themselves is exceptionally high (McGee, 2023). Over-reliance on the tool can hinder critical thinking and active learning, impacting students' overall development (Kasneci et al., 2023). Many educational institutions have prohibited the use of ChatGPT to maintain quality of student's academic output. Scholars point out various challenges, including the quality of data, limitations on knowledge scope, ethical concerns, technical dependence, misuse, and biases (Alshater, 2022; Huang, 2023). Addressing those challenges are crucial to minimize potential negative impacts.

However, some researchers advocate the integration of ChatGPT into the education. Students should be taught how to use these technologies correctly and effectively to ensure meaningful and efficient learning (Dwivedi et al., 2023). This approach emphasizes responsible use of technology while balancing academic integrity. The use of ChatGPT also presents opportunities for education. With the rise of online learning, these technologies can be used to enhance the learning experience and improve academic performance. It can help bridge the gap in educational resources between different regions and provide innovative teaching methods. To ensure the

responsible use of ChatGPT in education, regulations and policies need to be established. This includes protecting students' privacy and rights, enforcing academic integrity, and providing guidance and supervision to prevent misuse (Ienca, 2023; Zhou et al., 2023).

The effective integration of ChatGPT into teaching method requires teachers to adapt their lesson plans and strategies. For example, they can use ChatGPT to provide instant feedback or assessment to students' writing assignments or generate practice questions. ChatGPT can be a valuable tool to engage students, especially those who might be hesitant to ask questions in a traditional classroom setting. Teachers can encourage students to use ChatGPT as a resource to enhance their learning rather than using it as a shortcut. Training and professional development programs can help teachers become proficient in using ChatGPT. Workshops, courses, and collaboration with experts of AI can empower teachers to make the most of this technology. AI tools like ChatGPT can level the playing field in education by providing quality resources and assistance to students and teachers worldwide.

Governments and organizations can invest in technology infrastructure and training for teachers in remote regions. An effective feedback involving students, teachers, and AI developers can lead to continuous improvements in ChatGPT. Regular updates should address shortcomings and adapt to changing educational requirements. Governments and institutions can establish clear rules and regulations that protect students' rights, data privacy, and intellectual property.

In a nutshell we can say that, the integration of ChatGPT in education is an intricate and evolving process that involves multiple stakeholders. Addressing the challenges and harnessing the opportunities requires a multidisciplinary approach and a commitment to responsible and ethical use. The goal is to empower both educators and students to use AI technology for improved learning outcomes while upholding integrity and ethical standards.

Conclusion and Recommendation

The role of ChatGPT in education and language learning have been an issue of debate for its potential role in breach of academic integrity and enhancing effective teaching role simultaneously. Beneficial integration of ChatGPT into classroom subjects to primarily the establishment of rules and regulations to ensure proper educational use of ChatGPT. Effective strategies in the education system can balance out the potentials concerns regarding ChatGPT integration. This pilot study provides a basic blueprint to understand the attitude and potential concerns among English teachers of Bangladesh. It provides a strategical guideline, primary estimate of target areas to work on for successful implementation of classroom adoption of ChatGPT.

This research serves as a launching point for potential future research endeavor. Future research are warranted with more diverse and larger population to explore for an effective intervention session for the English teachers ChatGPT training on effective usage in the educational ecosystem. Furthering from that point onward, comparison of insights before and after intervention with the presence of a control group would provide a deeper understanding

of attitude and hesitancies. Longitudinal studies of adoption and aftermath on education system would be helpful for policymakers to make an informed decision on a large scale. The use of ChatGPT has the great potential for the education system and research driven decision is crucial for a better outcome.

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