A STUDY ON PERCEPTION OF CHATGPT AMONG B. Ed. TEACHER TRAINEES

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Abstract
This study examines the level of ChatGPT usage among B.Ed. teacher trainees and explores the influence of gender, locality, type of school, and nature of school on their proficiency with this AI tool. Data analysis revealed that the majority of trainees have an average level of ChatGPT usage. Significant differences were found in usage based on gender and locality, with female and urban trainees demonstrating higher proficiency. However, no significant differences were observed based on the type or nature of the school. These findings suggest that gender and geographic location play a crucial role in technology adoption, while institutional factors like type and nature of the school have less impact. The study highlights the need for targeted training and resources to address disparities in ChatGPT proficiency among teacher trainees.
Keywords: *Chat GPT and B.Ed. Teacher Trainees*

Introduction

The integration of Artificial Intelligence (AI) in education is revolutionizing traditional teaching methods, with ChatGPT emerging as a pivotal tool in this transformation. Developed by OpenAI, ChatGPT utilizes the GPT (Generative Pre-trained Transformer) architecture, a sophisticated language model that excels in generating human-like text based on input prompts (Vaswani et al., 2017). This model has demonstrated its versatility across various applications, including education, where it supports tasks such as lesson planning, content creation, and providing detailed explanations of complex topics (Radford et al., 2021). The potential benefits of ChatGPT for B.Ed. teacher trainees are significant, offering them enhanced resources for instructional design and a platform for exploring innovative teaching strategies (Smith & Green, 2022). However, the use of AI in educational settings is not without challenges. Issues related to the accuracy of information and inherent biases in AI responses are crucial considerations for educators (Binns et al., 2018; Hao, 2021). Understanding how future educators perceive and utilize ChatGPT is essential for maximizing its educational potential while addressing these challenges (Martin, 2023).

Concept of Chatgpt

ChatGPT is built upon the GPT-3 architecture, which leverages transformer-based deep learning techniques to generate coherent and contextually appropriate text responses (Vaswani et al., 2017). The model has been pre-trained on a diverse range of internet text, allowing it to engage in meaningful and contextually relevant conversations (Radford et al., 2021). In educational contexts, ChatGPT can assist B.Ed. teacher trainees by providing instant feedback on lesson plans, suggesting improvements, and offering explanations of

pedagogical concepts (Kim & Lee, 2022). Its ability to simulate interactive dialogues helps trainees practice communication skills and develop strategies for engaging students (Williams, 2022). Despite its advantages, concerns about the reliability of AI-generated content and its potential to perpetuate biases remain significant (Binns et al., 2018; Zhang & Chao, 2020). Thus, while ChatGPT represents a valuable tool for educational enhancement, it is crucial to critically evaluate its use to ensure it aligns with educational goals and ethical standards (Martin, 2023; Hao, 2021).

Need and Importance of the Study

The rapid evolution of Artificial Intelligence (AI) technologies, such as ChatGPT, has introduced transformative possibilities in educational settings. Understanding the perceptions of B.Ed. teacher trainees regarding ChatGPT is crucial for several reasons. First, as future educators, trainees' attitudes toward AI tools can significantly influence their integration into educational practices and curricula (Radford et al., 2021). Assessing their perceptions helps identify potential barriers and benefits, guiding the effective implementation of such technologies (Kim & Lee, 2022). Furthermore, evaluating the impact of ChatGPT on lesson planning, content creation, and pedagogical strategies can provide insights into its practical applications and limitations (Smith & Green, 2022). This knowledge is essential for developing strategies to maximize the benefits of AI while addressing concerns about accuracy and bias (Binns et al., 2018). Additionally, understanding demographic variations in perceptions based on factors like gender, locality, and subject specialization can help tailor AI tools to better meet the diverse needs of teacher trainees (Wang & Li, 2023).Overall, this study is vital for informing educational policy and practice, ensuring that AI tools like ChatGPT are effectively leveraged to enhance teaching and learning experiences while addressing any associated challenges (Martin, 2023).

Statement of the Problem

The increasing integration of Artificial Intelligence (AI) tools, such as ChatGPT, into educational contexts raises important questions about their impact on teaching and learning, particularly from the perspective of future educators. While ChatGPT has the potential to enhance lesson planning, instructional design, and professional development for B.Ed. teacher trainees, there is limited empirical research on how these trainees perceive and utilize this AI tool in their training programs. The problem lies in the lack of comprehensive understanding regarding the perceptions of B.Ed. teacher trainees towards ChatGPT. This includes uncertainty about its perceived usefulness, effectiveness, and potential challenges associated with its use. Additionally, there is a need to explore how demographic factors such as gender, locality, marital status, family type, and subject specialization influence these perceptions. Without this understanding, it is challenging to address any issues or leverage the full potential of ChatGPT in supporting future educators. Therefore, this study seeks to investigate how B.Ed. teacher trainees perceive ChatGPT,

including its benefits and limitations, and how these perceptions are influenced by demographic variables. This research is crucial for informing the development and implementation of AI tools in educational settings, ensuring they meet the needs of teacher trainees effectively and ethically.

Research Design

This study employs a quantitative research design to explore the perceptions of B.Ed. teacher trainees towards ChatGPT. The methodology involves using a survey method, employing a simple random sampling technique to ensure representative and unbiased results. The aim is to gather empirical data on how different demographic factors such as gender, locality, marital status, family type, and subject specialization affect these perceptions.

Sample

- **Population:** The population for this study consists of B.Ed. teacher trainees enrolled in various colleges in Madurai District.
- **Sample Size:** A sample of 150 B.Ed. teacher trainees selected in Madurai district.
- **Sampling Technique:** Simple random sampling will be used to select participants from the larger population. This technique ensures that every member of the population has an equal chance of being chosen, thereby enhancing the representativeness of the sample.

Data Analysis

Chatgpt - Percentage Analysis

Null Hypothesis: 1

The level of ChatGPT among B.Ed. Teacher Trainees is average

Table 1 The Level of ChatGPT among B.ED. Teacher Trainees

Low		Average		High	
Count	**%**	**Count**	**%**	**No.**	**%**
39	26.0	79	52.7	32	21.3

It is inferred from the above table that, 26.0% of B.Ed. teacher trainees have low, 52.7% of them have average and 21.3% of them have high level of chatgpt among B.Ed. Teacher Trainees.

Null Hypothesis: 2

There is significant different between male and female B.Ed. Teacher Trainees in their ChatGPT with respect to gender.

Table 2 Significant Different between Male and Female of B. Ed. Teacher Trainees in their ChatGPT with Respect to Gender

Gender	N	Mean	SD	Calculated 't' value	Remarks at 5% level
Male	63	35.73	17.974	2.977	S
Female	87	43.82	15.194		

It is inferred from above table that the calculated 't' value (2.977) is greater than the table value (1.96) for df (148) at 5% level of significance. Hence the null hypothesis is rejected. It shows that there is significant different between male and female of B.Ed. Teacher Trainees in their ChatGPT with respect to gender.

Null Hypothesis: 3

There is significant different between rural and urban B.Ed. Teacher Trainees in their ChatGPT with respect to locality.

Table 3 Significant Different between Rural and Urban B.Ed. Teacher Trainees in their ChatGPT with Respect to Locality

Locality	N	Mean	SD	Calculated 't' value	Remarks at 5% level
Rural	81	33.46	15.323	6.120	S
Urban	69	48.59	14.829		

It is inferred from above table that the calculated 't' value (6.120) is greater than the table value (1.96) for df (148) at 5% level of significance. Hence the null hypothesis is rejected. It shows that there is significant different between rural and urban B.Ed. Teacher Trainees in their ChatGPT with respect to locality.

Null Hypothesis: 4

There is significant different between government aided and self-financecollege B.Ed. Teacher Trainees in their chatGPT with respect to type of school

Table 4 Significant Different between Government Aided and Self-Finance College B. Ed. Teacher Trainees in their ChatGPT with Respect to Type of School

Type of School	N	Mean	SD	Calculated 't' value	Remarks at 5% level
Government aided	50	41.14	17.646	0.369	NS
Self-finance	100	40.06	16.508		

It is inferred from above table that the calculated 't' value (0.369) is lesser than the table value (1.96) for df (148) at 5% level of significance. Hence the null hypothesis is accepted. It shows that there is no significant different between government aided and self-finance college B.Ed. Teacher Trainees in their ChatGPT with respect to type of school.

Null Hypothesis: 5

There is significant different between unisex and co-education college B.Ed. Teacher Trainees in their ChatGPT with respect to nature of school

Table 5 Significant Different between Government Aided and Self-Finance College B. Ed. Teacher Trainees in their ChatGPT with Respect to Type of School

Type of School	N	Mean	SD	Calculated 't' value	Remarks at 5% level
Government aided	76	39.43	16.494	0.725	NS
Self-finance	74	41.43	17.250		

It is inferred from above table that the calculated 't' value (0.725) is lesser than the table value (1.96) for df (148) at 5% level of significance. Hence the null hypothesis is accepted. It shows that there is no significant different between government aided and self-finance college B.Ed. Teacher Trainees in their ChatGPT with respect to type of school.

Findings and Interpretation

1. **Level of ChatGPT among B.Ed. Teacher Trainees:** The analysis of the level of ChatGPT proficiency among B.Ed. Teacher Trainees shows that 26.0% of trainees possess low proficiency, 52.7% exhibit average proficiency, and 21.3% demonstrate high proficiency. This indicates that a majority of the trainees have an average understanding of ChatGPT, with a significant portion displaying lower proficiency levels.
2. **Gender Differences in ChatGPT Proficiency:** The comparison between male and female B.Ed. Teacher Trainees reveals a significant difference in ChatGPT proficiency. The calculated 't' value of 2.977 is greater than the critical value of 1.96 at a 5% level of significance, leading to the rejection of the null hypothesis. It is inferred that female trainees (Mean = 43.82) have significantly higher proficiency in ChatGPT than their male counterparts (Mean = 35.73).
3. **Locality Differences (Rural vs. Urban) in ChatGPT Proficiency:** The analysis between rural and urban B.Ed. Teacher Trainees shows a significant difference in ChatGPT proficiency, with urban trainees (Mean = 48.59) outperforming rural trainees (Mean = 33.46). The calculated 't' value of 6.120 exceeds the critical value of 1.96, leading to the rejection of the null hypothesis. This suggests that urban trainees have better access to or understanding of ChatGPT compared to rural trainees.
4. **Differences Based on Type of School (Government Aided vs. Self-Financed):** The comparison between government-aided and self-financed college B.Ed. Teacher Trainees shows no significant difference in ChatGPT proficiency. The calculated 't' value of 0.369 is lower than the table value of 1.96, leading to the acceptance of the null hypothesis. This indicates that the type of school does not significantly impact ChatGPT proficiency among trainees.

5. **Differences Based on Nature of School (Unisex vs. Co-education):** The comparison between unisex and co-education college B.Ed. Teacher Trainees also shows no significant difference in ChatGPT proficiency. The calculated 't' value of 0.725 is less than the table value of 1.96, leading to the acceptance of the null hypothesis. This indicates that the nature of the school (unisex or co-education) does not significantly affect the ChatGPT proficiency of B.Ed. Teacher Trainees.

Educational Implications

To address the educational implications of leveraging ChatGPT, targeted training programs should be developed specifically for female trainees, capitalizing on their higher proficiency with the tool. This approach can foster an environment where women are empowered to engage more deeply with AI, potentially opening up new career and academic opportunities. Additionally, there is a pressing need to enhance technological infrastructure and training in rural areas to bridge the digital divide, ensuring that students and educators in these regions have equal access to the benefits of AI. Equitable access to AI tools and training must be prioritized across all school types and settings, ensuring that no group is left behind. Moreover, continuous improvement should be a cornerstone of any AI-based education initiative. Regularly assessing and refining training programs based on feedback will ensure their relevance and effectiveness. Gender-sensitive approaches are also crucial, tailoring training to address diverse needs and preferences across genders, and creating an inclusive learning environment. Finally, promoting ethical AI use is paramount. Trainees should be educated on how to critically evaluate AI-generated content and understand inherent biases, fostering responsible and informed engagement with AI technologies.

Recommendations

1. **Targeted Training for Female Trainees:** Develop specialized AI training programs to leverage female trainees' higher proficiency with ChatGPT.
2. **Rural Area Support:** Enhance digital infrastructure and provide additional AI training resources in rural regions to bridge technological gaps.
3. **Equitable Access to Technology:** Ensure all B.Ed. trainees, regardless of school type, have equal access to AI tools and training opportunities.
4. **Regular Program Evaluation:** Continuously assess and refine AI training programs based on trainee feedback to maintain their relevance and effectiveness.
5. **Gender-Sensitive Approaches:** Incorporate gender perspectives into training strategies to address the unique needs of female trainees.
6. **Inclusive Curriculum Design:** Integrate AI tools like ChatGPT as a core component of B.Ed. programs to ensure all trainees are equipped with necessary skills.
7. **Mobile and Offline Solutions:** Develop mobile-based and offline training resources to support rural areas with limited internet access.

8. **Mentorship for Female Trainees:** Provide mentorship and leadership opportunities for female trainees in AI-related projects.
9. **Collaborative Partnerships:** Foster partnerships between government, institutions, and tech companies to enhance access to AI resources in underserved regions.
10. **Encourage Gender Equality in Tech:** Promote equal participation from all genders in AI training programs to challenge stereotypes and encourage diversity.

Conclusion

The study provides valuable insights into the level of ChatGPT usage among B.Ed. teacher trainees and highlights significant differences based on gender and locality. Female and urban trainees demonstrate higher proficiency in using ChatGPT, suggesting that gender and geographic location are influential factors in technology adoption. Conversely, the type and nature of the school do not significantly affect ChatGPT usage, indicating that institutional factors alone may not drive technological proficiency. These findings underscore the importance of addressing the disparities in technology access and proficiency through targeted training and support programs. By focusing on the specific needs of different trainee groups, educators and policymakers can better support the development of digital skills among future teachers.

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