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REIMAGINING TEACHER EFFECTIVENESS IN THE AGE OF AI: INSIGHTS FROM A QUALITATIVE STUDY ON CHATGPT INTEGRATION

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Abstract

In November 2022, Open Artificial Intelligence (AI) introduced the contentious generative AI tool known as ChatGBT-plus or ChatGPT-4 (Chat Generative Pretrained Transformer), which became accessible to users through the internet in February 2023. This study examines the utilization of ChatGPT by university teachers in Kashmir, India, along with its possible advantages and disadvantages. The primary objective is to comprehend the experiences and viewpoints of faculty members concerning the incorporation of ChatGPTs into their teaching and learning techniques. For this research, a qualitative research approach was employed. The data was collected via a self–constructed open-ended questionnaire. This study examined many aspects of accessing ChatGPT at the university level. The questionnaire was distributed online using a Google Form. The data was gathered, organized, and examined using theme analysis (Sundler et al., 2019). In the analysis phase, we initially prepared and structured the data, transcribed it, familiarized ourselves with the data corpus, assigned codes to the full dataset, and ultimately generated categories and themes from the underlying coded excerpts. After the data was analysed, three themes emerged. It is clear from the results that tech-savvy Teachers frequently support the use of AI in the classroom. To teach teachers how to use AI technologies like ChatGPT successfully, professional development is necessary. ChatGPT is viewed by many educators as a tool to improve learning. Over-reliance on AI worries some teachers because it may stifle academic integrity and critical thinking. Educators are concerned that students may use ChatGPT to create assignments, which might result in problems with originality. In an AI-driven age, it calls into question how to evaluate student learning in a meaningful way. The findings offer important suggestions that academics, educators, and policymakers may use to enhance educational outcomes by leveraging artificial intelligence systems.

Keywords: Teacher Effectiveness, Chat GPT, Teachers, Artificial Intelligence, Qualitative Study

Introduction

Russel & Norvig (2010) John McCarthy coined the phrase "artificial intelligence" in 1956. Baker and Smith (2019) pointed out that AI does not relate to a particular technology but is stated as "computers that perform cognitive tasks, usually associated with human minds, particularly learning and problem-solving" (p.10).

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Artificial Intelligence's (AI) rapid development is drastically changing a number of industries, including education. Classrooms are progressively implementing AI-driven technology to improve teaching and learning, such as virtual assistants, automated grading tools, and adaptive learning systems (Luckin et al., 2018). Among these innovations, the potential of ChatGPT, an advanced language model created by OpenAI, to produce responses that resemble those of a human, offer immediate feedback, and assist with lesson preparation has drawn a lot of interest. Examining the impact of AI integration on teacher effectiveness is crucial as the technology continues to transform education.

AI's Expanding Role in Education

By facilitating personalised learning, expediting administrative tasks, and providing real-time academic support, artificial intelligence is transforming education (Holmes et al., 2019). AI can evaluate students' progress and customise learning materials to fit each student's needs using adaptive learning platforms (Zawacki-Richter et al., 2019). AI-powered tools also assist with grading, content creation, and interactive learning. However, despite these technological advancements, AI cannot replace the essential human aspects of teaching, such as emotional intelligence, mentorship, and ethical reasoning. Consequently, a deliberate balance approach between technical innovations along with human-centered pedagogy is required when integrating AI into education.

ChatGPTs Potential and Its Impact on Teaching

As an AI-powered conversational model, ChatGPT offers various applications in education. It supports teachers by generating lesson plans, summarizing complex topics, creating quizzes, and delivering instant feedback to students (Kasneci et al., 2023). Furthermore, it can serve as a virtual mentor to help learners comprehend issues, generate creative solutions, and polish their work. Concerns regarding academic integrity, an over-reliance on artificial intelligence, and the possible dissemination of false material must be addressed in spite of these benefits (Zhai, 2022). Therefore, it is crucial to understand how instructors can effectively integrate ChatGPT into their instruction without compromising educational values. As AI continues to reshape the educational landscape, teachers remain central to fostering critical thinking, creativity, and ethical awareness. This paper examines the impact of ChatGPT integration on teacher effectiveness by analysing educators' perspectives on its benefits, challenges, and pedagogical implications. By integrating AI responsibly, teachers can enhance their instructional approaches while preserving the fundamental human aspects of education.

The Importance of Teacher Effectiveness in the AI Era

Although AI can enhance instruction, teacher effectiveness remains a key determinant of meaningful learning outcomes. Skilled educators do more than deliver knowledge; they encourage critical thinking, nurture creativity, and provide ethical guidance (Darling-Hammond, 2020). In AI-integrated classrooms, teachers must not only master their subject matter but also effectively incorporate AI tools while preserving their role as facilitators of learning. They perform a critical part in helping students critically assess AI-generated information, navigate ethical dilemmas, and develop digital literacy skills (Selwyn, 2022). Additionally, teachers are responsible for ensuring AI-supported education is inclusive, equitable, and accessible to all learners.

Literature Review

The rapid progress of AI technologies has profound implications for teaching and learning as well. Zawacki- Richter et al. (2019) predict that AI-supported instruction will revolutionise education. According to Cope et al. (2020), significant efforts have been made to use AI into teaching and learning. The benefits of AI for educators and the difficulties they encounter in implementing AI in the classroom should be discussed in order to make AI pedagogically relevant. Furthermore, teachers' roles in the development of AI and their proficiency in its instructional application have proven to be quite difficult. Giving teachers the necessary information, abilities, and attitudes will enable them to carry out this integration. OpenAI's ChatGPT is one of the AI technologies that have drawn a lot of interest due to its possible uses in education. A useful tool for both teachers and students, ChatGPT is a sophisticated language model that can produce writing that appears human based on input it gets (Brown et al., 2020). By offering individualised learning experiences, real-time feedback, and assistance with administrative duties, ChatGPTs inclusion in higher education has the potential to completely transform conventional teaching approaches. These tools can assist teachers in customising their lesson plans to each student's needs, which will enhance learning outcomes Heffernan, (2020). Several research studies have explored the role of AI in education, highlighting the potential benefits and pitfalls associated with its adoption. Welskop (2023) remarked on ChatGPT's effects on higher education, emphasising the issues and difficulties surrounding its use. In order to guarantee the efficient and moral application of AI in education, the study underlined the necessity of tackling concerns like data privacy, academic integrity, and the digital literacy gap. In the context of Indian higher education, where institutional adoption of technology varies greatly, these issues are especially pertinent. Teachers play an orchestrating role in the process of teaching and learning, emphasised by Dillenbourg (2013) AI must first learn how to effectively orchestrate learning and teaching from teachers' data, before it can

genuinely assist teachers in such approach. This is because effective teaching depends on teachers' capability to implement appropriate pedagogical methods in their instruction. Regarding the use of technology, most teachers now recognize the importance of technology in teaching and learning activities. However, the integration of technology into courses is still difficult due to several factors, such as the school culture, availability of resources, and teachers' attitudes, knowledge, and skills. The development of teachers' expertise in using technology in the classroom is mostly the responsibility of the instructors themselves. AI is used in education to support and improve learning environments through the use of intelligent collaborative learning systems, intelligent tutoring systems, and intelligent agents. By reacting to students' demands through personalised learning platforms and providing real-time class status updates, AI assists teachers in making decisions. Furthermore, the educational system could be reshaped by AI. Rahm (2023) a recent influx of advancements in AI's potential and accessibility, such ChatGPT, has demonstrated the complex and long-standing link between technology and education.

Research Question

What is the perception among university teachers towards Teacher Effectiveness in the Age of Artificial Intelligence?

Methodology

This was a qualitative study to understand the perception of perception among university teachers towards Teacher Effectiveness in the Era of Artificial Intelligence in Kashmir. The researchers followed an exploratory approach in this study to fulfil the purpose of the study. It is used when a researcher has observed something and seeks to understand more about the problem.

Research Setting and Participants

Three universities from Kashmir that were offering Research courses were chosen purposively for this study. Thirty participants (University teachers) were selected through purposive and snowball techniques from these three Universities. Purposeful sampling was used first, and subsequently, snowball sampling was used to find more participants. This procedure was repeated until the required participants were selected. For those individuals who were easily available, a purposive sampling strategy was adopted. When researchers ran out of participants, the snowball sampling technique was used, and the only way to reach new participants was through the recommendations of existing study participants. They were selected through the following inclusion criteria: residents of Kashmir from

rural and urban areas, teaching in Universities in Kashmir. All participants were given assurance about their anonymity.

Findings:

Empowering Education: AI and ChatGPT as Learning Catalysts

Academic discussions clarify ChatGPT's intricate educational dynamics and tactical implementation, portraying it as a versatile tool that is changing the face of education. The integration of ChatGPT into academia represents a fundamental transformation in teaching and learning, rather than simply expanding the existing toolkit of educational resources. The use of AI in education enhances both technological proficiency and real-world sociocultural applications, particularly in environments where teachers are tech-savvy (Celik, 2023). The growing acceptance of ChatGPT in education signals a new pedagogical shift, leading to a reassessment of educational goals, content, methodologies, and purpose. Petko et al. (2018) highlighted that teachers' proactive readiness has been a key factor in the successful adoption of AI in education. Respondents observed that AI is expected to evolve harmoniously, integrating technological advancements with human-centered teaching approaches. ChatGPT's role in knowledge dissemination, content generation, and educational inclusivity underscores its significance in the academic sphere. Its rise reflects the rapid advancements in artificial intelligence within education. Teachers exhibited varying levels of awareness regarding AI in education. While some expressed optimism, many acknowledged AI's potentials to create dynamic, interactive learning environments and personalized learning experiences. In the Indian context, Vazhayil et al. (2019) reported that AI tools significantly reduced teachers' workloads and saved time. University educators remain optimistic about the future of AI tools like ChatGPT, recognizing their ability to enhance teaching, enrich learning, and improve academic outcomes. AI has also demonstrated high efficiency and accuracy in assessment and evaluation tasks (Zawacki-Richter et al., 2019). Additionally, Ryu and Han (2018) found that teachers in leading institutions acknowledged AI-powered education as a means to enhance student creativity. In education, the conversation around AI has shifted from fear to opportunity.

One university teacher (T1) was of the view that

> *"I've seen my students' future teachers embrace ChatGPT to design lesson plans, create engaging classroom activities, and even simulate student responses for discussion. They tell me that AI saves them time, allowing them to focus on improving their instructional strategies. What excites me most is how AI fosters creativity, not just efficiency"*

Another university teacher (T5)

> *"ChatGPT has transformed the way my students approach difficult concepts. Before, many of them struggled with synthesizing information from multiple sources. Now, they use AI to generate summaries, explore different perspectives, and refine their arguments before presenting them in class. Of course, I remind them to fact-check and think critically, but overall, AI has made learning more interactive and engaging".*

One university teacher (T3) opened up about her experience and said that initially, I was sceptical about using ChatGPT in my programming courses. However, I quickly realized that it helps students to understand complex concepts. Many of my students use AI to get alternative explanations for difficult concepts, which enhances their comprehension. I encourage them to use AI ethically asking it 'why' and 'how' rather than just copying answers. The key is guiding them toward critical thinking while leveraging AI's efficiency.

AI Over-Reliance: Eroding Student Learning and Originality

The study highlights growing concerns among educators regarding students' increasing dependence on AI tools in academic environments. AI-driven platforms like ChatGPT and intelligent tutoring systems provide valuable benefits, such as personalized learning, instant feedback, and assistance in idea generation. However, their use without proper moderation can lead to significant drawbacks (Ahmad et al., 2023; Johnson & Taylor, 2022). Many educators observed that students who consistently rely on AI tend to engage in passive learning, accepting AI-generated content without critically evaluating or fully grasping the concepts. This trend raises concerns about the depth of their understanding and overall academic development (Miller, 2024; Smith & Johnson, 2023). A key issue raised by participants is the decline in analytical reasoning and decision-making skills among students who heavily depend on AI for their coursework. Educators noted that excessive reliance on AI for problem-solving, and research diminishes students' engagement in essential cognitive processes, such as independent reasoning and creativity (Davis & Nguyen, 2023; Garcia, 2023). This dependency weakens their ability to formulate original arguments and express unique perspectives, ultimately impacting their ability to produce innovative and authentic work (Robinson & Patel, 2023). Another major concern is academic integrity and plagiarism. Educators reported that students often submit AI-generated content without making substantial revisions or adding personal insights, raising ethical issues regarding the authenticity of their work (Turner & Adams, 2024). Since AI-generated responses can closely resemble existing sources or previous outputs, institutions have noted increased plagiarism cases (Williams, 2023). As a result, stricter academic policies and the implementation of AI-detection tools have become necessary to maintain academic integrity (Johnson et al., 2022). Furthermore, the study found that institutional factors, access to AI tools, and students' digital literacy levels influence how AI is utilized in education (Robinson & Patel, 2023). While some students effectively use AI as a supplementary resource, others misuse it by over-relying on it for

completing assignments with minimal effort. Educators emphasized the need for AI education programs to help students develop the competencies required to utilize AI ethically and effectively while staying mentally engaged (Chen, 2022).

To address these challenges, educators proposed structured strategies that promote balanced AI integration. Suggested approaches include AI-assisted learning combined with critical reflection exercises, blended learning models that incorporate both traditional and AI-based methods, and workshops on ethical AI use (Davis & Nguyen, 2023). These measures aim to ensure that students develop essential academic competencies while still benefiting from AI as a supportive tool.

To conclude, although AI has the capacity to enhance education, its overuse may hinder student learning, originality, and cognitive development (Miller, 2024). To prevent these negative effects, a collaborative effort involving educators, institutions, and policymakers is essential to foster an educational environment where AI supports learning without replacing fundamental academic skills (Smith et al., 2023).

While discussing the drawbacks of AI, one of the university teacher (T27) said, "One of my biggest concerns is the diminishing originality in students' writing. Many rely on ChatGPT to rephrase existing ideas instead of developing their own perspectives. In sociology, critical thinking and unique viewpoints are crucial, yet I see an increasing number of research papers that lack personal voice. I now assign in class writing exercises where students have to develop arguments without AI assistance, reinforcing independent thought before they use AI for refinement."

> *One respondent (T8) also was of the view that "Philosophy thrives on deep reflection and argumentation, but I've noticed that students using AI often produce surface-level responses. AI can mimic philosophical reasoning, but it doesn't engage in true intellectual struggle. I've had students turn in essays that seem well-structured but lack depth. Now, I require them to submit drafts showing their own thought processes before they consult AI, ensuring that their final work is authentically their own."*

> *One of the university teacher (T13) Creativity is at risk when students over-rely on AI for writing assignments. I've read stories and poems that feel formulaic, lacking the emotional depth and originality that human creativity brings. AI can assist with grammar and structure, but it cannot replace authentic expression. To combat this, I have directed students to write first drafts entirely by hand sharing their own views before they refine their work with AI, keeping their originality intact."*

The Role of Professional Development in Effective AI Integration for Student Learning

The effective use of AI tools in education requires continuous professional development for educators to ensure meaningful student learning. Teachers must

acquire digital literacy and pedagogical strategies to integrate AI effectively, enhancing student engagement and critical thinking (Luckin et al., 2021). Research highlights that professional training in AI fosters adaptive teaching methods, allowing educators to personalize learning experiences and address diverse student needs (Zawacki-Richter et al., 2019). Without adequate professional development, AI tools risk being underutilized or misapplied, limiting their potential to improve learning outcomes (Holmes et al., 2022). Therefore, investing in educator training is essential for leveraging AI's transformative impact in education.

Integrating AI tools in education requires on-going professional development to ensure meaningful student learning. Educators must develop digital competencies and pedagogical strategies to leverage AI effectively, fostering critical thinking and engagement (Luckin et al., 2021). Research indicates that professional training enables adaptive teaching methods, allowing for personalized learning experiences that cater to diverse student needs (Zawacki-Richter et al., 2019). Without proper training, AI tools may be misapplied, limiting their potential to enhance learning outcomes (Holmes et al., 2022). Therefore, investing in professional development is crucial for maximizing AI's impact on education.

"When AI tools were first introduced at our university, many of us struggled to integrate them effectively. It wasn't until we attended structured professional development sessions that we began to see their true potential. Learning about AI-driven assessment methods helped me create personalized learning pathways for my students, leading to increased engagement and improved outcomes.

> *Another participant (P30) stated that "Our university encourages AI use, but there's no official training program. We're expected to figure it out on our own, which is overwhelming given our workload".*

> *One university teacher (P21) asserted that "I see potential in AI for personalized learning, but without training, I struggle to implement AI-driven strategies effectively. Students expect us to be tech-savvy, but we're left to experiment without guidance".*

> *one of the university teacher (P17) said, "AI training should be a part of teacher education programs. Right now, it's an add-on rather than an essential skill. If we integrate AI learning into faculty development programs, more teachers will feel confident using it".*

Conclusion

The integration of AI tools like ChatGPT into university classrooms is reshaping traditional teaching methods, prompting a re-evaluation of what it means to be an

effective educator in the digital age. While AI offers undeniable benefits such as enhanced student engagement, personalized learning support, and efficiency in administrative tasks it also presents critical challenges that demand thoughtful consideration.

One of the most significant implications is the shifting role of teachers from sole knowledge providers to facilitators of critical thinking and ethical AI usage. As AI automates information retrieval and synthesis, educators must place greater emphasis on fostering analytical skills, creativity, and intellectual independence. Over-reliance on AI risks diminishing students' ability to engage deeply with complex subjects, potentially leading to superficial learning and a decline in original thought. Thus, effective teachers in the AI era must strike a delicate balance between leveraging AI's capabilities and ensuring students develop autonomous reasoning skills.

Moreover, the ethical and pedagogical concerns surrounding AI integration cannot be overlooked. While AI can democratize access to knowledge, it also raises concerns about academic integrity, data privacy, and algorithmic biases. Teachers must therefore develop strategies to guide students in using AI responsibly—encouraging transparency, proper attribution, and critical engagement with AI-generated content rather than passive acceptance.

Finally, reimagining teacher effectiveness in the age of AI requires institutional support and professional development. Universities must equip educators with the skills and frameworks needed to integrate AI meaningfully into their pedagogy. This includes designing assessments that go beyond AI's capabilities, fostering human-AI collaboration, and continuously adapting teaching practices in response to technological advancements.

Ultimately, while AI is a powerful tool for enhancing education, it cannot replace the human elements of teaching—mentorship, empathy, and the ability to inspire critical inquiry. The most effective educators will be those who embrace AI not as a substitute for expertise, but as an enabler of deeper learning, ethical reasoning, and intellectual growth in students. As AI continues to evolve, the role of educators will remain indispensable—not in delivering content, but in cultivating the next generation of thoughtful, ethical, and innovative thinkers.

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