



## Rejuvenating the Value of Classroom Education for the ChatGPT Generation: Educators' Point of View

Munnu Prasad<sup>1</sup> V. Prathibha D.P.<sup>2\*</sup>

<sup>1\*</sup>Research Scholar and Assistant Professor  
School of Allied Healthcare and Sciences  
JAIN (Deemed-to-be-University)  
Whitefield Campus, Bengaluru-560017, India  
[munnuPrasad.r@gmail.com](mailto:munnuPrasad.r@gmail.com)

<sup>2\*</sup>Librarian, School of Allied Healthcare and Sciences  
JAIN (Deemed-to-be-University), Whitefield Campus  
Bengaluru-560017, India  
[prathi.putty24@gmail.com](mailto:prathi.putty24@gmail.com)

Received: 9 July 2024

Revised: 04 July 2024

Accepted: 18 August 2024

Copyright: with Author(s)

### ABSTRACT

*In an epoch subjugated by technological advancements and digital communication, the role of traditional classroom education is undergoing profound transformations. The rise of ChatGPT and similar language models presents opportunities and challenges for educators. This paper explores educators' perspectives on rejuvenating the value of classroom education in the age of ChatGPT, focusing on strategies to enhance learning outcomes and engagement.*

**Keywords:** Rejuvenating Value of Classroom, Education, ChatGPT Generation, Educators' Point of View

### 1. Introduction

Generative AI tools are a subset of artificial intelligence that focuses on creating new content by learning patterns from existing data, such as text, images, music, and even video. These tools use advanced machine learning techniques, particularly deep learning, to generate outputs that mimic human-like creativity. Here are some key aspects of generative AI tools:

#### Types of Generative AI Tools

##### 1. Text Generation

- o **Language Models:** Tools like GPT-4 (Generative Pre-trained Transformer 4) generate coherent and contextually relevant text. They can write essays,

answer questions, create dialogue, and more.

- o **Chatbots:** AI-powered chatbots like ChatGPT can hold conversations, assist with customer service, and provide information on various topics.

## 2. Image Generation

- o **GANs (Generative Adversarial Networks):** These networks consist of two neural networks, a generator and a discriminator, that work together to create realistic images from noise.

- o **DALL-E:** An AI model developed by OpenAI that generates images from textual descriptions.

## 3. Music and Audio Generation

- o **OpenAI's Jukebox:** Generates music in various genres and styles, including lyrics.

- o **WaveNet:** A deep generative model for generating raw audio waveforms used by Google for text-to-speech applications.

## 4. Video Generation

- o **DeepDream:** A computer vision program that creates dream-like hallucinogenic images by over-processing existing images.

- o **Deepfake Technology:** Uses deep learning to create realistic videos where a person's face is replaced with another.

## Applications of Generative AI Tools

### 1. Content Creation

- o Automated writing and editing for blogs, articles, and reports.
- o Creation of promotional images, videos, and advertisements.

### 2. Healthcare

- o Generating synthetic medical data to aid in research without compromising patient privacy.
- o Assisting in medical imaging analysis by generating high-quality images from low-quality scans.

### 3. Entertainment

- o Producing original music, scripts, and visual effects for movies and video games.
- o Creating interactive virtual characters for gaming and virtual reality experiences.

### 4. Education

- o Developing personalized learning materials and interactive educational content.
- o Creating language learning tools and virtual tutors.

### 5. Business and Marketing

- o Generating personalized marketing content and product descriptions.
- o Automating customer service interactions and data-driven decision making.

## Advantages of Generative AI Tools

- **Creativity and Innovation:** They can produce creative content that might be difficult or time-consuming for humans to create.
- **Efficiency:** Automates repetitive and mundane tasks, allowing humans to focus on more

strategic and complex activities.

- **Personalization:** Enables the creation of highly personalized content tailored to individual preferences and needs.

- **Scalability:** Capable of generating large volumes of content quickly and efficiently.

#### Challenges and Ethical Considerations

- **Quality Control:** Ensuring the generated content is accurate, relevant, and free from biases.

- **Ethical Use:** Addressing concerns related to deep fakes, misinformation, and copyright infringement.

- **Privacy:** Protecting sensitive data and ensuring that generative AI tools do not compromise user privacy.

- **Dependence:** Avoiding over-reliance on AI-generated content, which might stifle human creativity and critical thinking.

#### Future of Generative AI Tools

The future of generative AI tools looks promising, with continuous advancements expected in generated content's accuracy, realism, and versatility. As these tools become more sophisticated, they will likely play an increasingly integral role in various industries, enhancing productivity, creativity, and innovation while posing new challenges and ethical questions that society must address.

#### Introduction to the impact of ChatGPT on education

**Personalised Wisdom Experiences:** ChatGPT can offer adapted learning experiences personalized to individual student needs. By analyzing student responses, it can adapt the difficulty level of questions, provide additional explanations, and offer supplementary materials, catering to each student's stride and style of learning.

**24/7 Learning Sustenance:** With ChatGPT, students have the right of entry to continuous learning support. They can ask questions at any time and receive instant answers. This accessibility fosters a culture of continuous learning outside the traditional classroom hours.

**Language Learning and Practice:** Language teachers and learners benefit from ChatGPT's ability to provide real-time philological practice and feedback. Students can engage in discussions, exercise writing, and expand their philological skills more interactively and engagingly.

**Content Creation and Curation:** Educators can use ChatGPT to create and curate educational content efficiently. It can generate quizzes, worksheets, study guides, and lesson plans, saving teachers valuable time in preparation.

**Assessment and Opinion:** ChatGPT can support in grading preps and providing instant opinion. It can evaluate written responses, code, or solutions, helping teachers focus more on addressing learning gaps rather than spending time on manual grading.

**Tutoring and Mentoring:** ChatGPT can act as a virtual instructor and managerial student through complex problems, explaining concepts, and offering step-by-step solutions. This tutoring can be personalized to each student's needs, providing additional support where required.

**Research Assistance:** Students and educators can use ChatGPT to aid in research tasks. It can summarise articles, generate bibliographies, and provide insights into various topics,

saving time and effort in information gathering.

**Accessibility and Inclusivity:** AI like ChatGPT helps make education more accessible to students with disabilities. It can provide text-to-speech, speech-to-text, and translation services, ensuring all students have equal learning opportunities.

**Collaborative Learning:** ChatGPT can facilitate collaborative learning experiences by creating virtual discussion groups, moderating debates, and encouraging peer-to-peer interactions. This fosters a sense of community among learners, even in remote settings.

**Ethical and Critical Thinking Discussions:** Engaging with ChatGPT prompts discussions around AI ethics, biases, and critical thinking. Students can explore the implications of AI in education and society, developing a deeper understanding of how technology shapes their learning experiences.

## 2. Literature Review

### **-Evolution of education technology and its impact on classroom dynamics**

**Evolution of Education Technology:** Education technology has seen a remarkable transformation in how teachers teach and students learn. The education landscape has shifted significantly from traditional methods to modern digital tools.

**Traditional Teaching Methods:** In the past, education relied heavily on textbooks, lectures, and chalkboards. Teachers were the primary source of information, and learning was confined to the physical classroom space.

**Introduction of Educational Media:** The advent of educational media, such as film strips, overhead projectors, and educational television programs, started to supplement traditional teaching methods. These tools provided visual aids and enhanced the learning experience.

**The Rise of Computers in Education:** The 1970s and 1980s witnessed the integration of computers into classrooms. Early educational software focused on drill-and-practice exercises, offering students interactive learning opportunities.

**Internet and Online Learning:** The proliferation of the Internet in the 1990s revolutionised education. It enabled access to vast information, online courses, and collaborative learning platforms. Virtual classrooms and webinars became common.

**Mobile Devices and Apps:** With the rise of smartphones and tablets, educational apps and platforms have become ubiquitous. These tools offer personalised learning experiences, interactive simulations, and instant access to educational resources.

**The emergence of AI and Chatbots:** Recent advancements in AI, such as ChatGPT and similar models, have further transformed education. AI offers personalised tutoring, real-time feedback, and 24/7 learning support, enhancing learning.

**Impact on Classroom Dynamics:** Integrating technology into classrooms has profoundly changed the dynamics of teaching and learning environments.

**Student-Centered Learning:** Technology has shifted the focus from teacher-centered to student-centered learning. Students have more control over their learning paths, with access to resources catering to their needs and learning styles.

**Increased Engagement and Interactivity:** Interactive whiteboards, educational games, and simulations make learning more engaging and fun. Students actively participate in lessons, leading to better retention of information.

**Collaborative Learning Opportunities:** Online platforms and tools facilitate collaborative learning beyond the physical classroom. Students can collaborate on projects, share ideas, and learn from peers globally.

**Personalised Learning Experiences:** Adaptive learning technologies use algorithms to customise lessons based on each student's progress and understanding. This personalized approach helps students learn at their own pace.

**Enhanced Teacher Efficiency:** Teachers can create digital lesson plans, automate grading, and track student progress more efficiently. This allows educators to focus on providing targeted support and addressing individual learning needs.

**Global Learning Communities:** Technology connects students with peers and experts worldwide. They can participate in virtual exchange programs, multicultural discussions, and collaborative projects, broadening their perspectives.

**Inclusivity and Accessibility:** Tools like screen readers, captioning, and translation services make education more accessible to students with disabilities. Technology helps level the playing field and ensures all students have equal learning opportunities.

**- Challenges faced by educators in the ChatGPT era**

While ChatGPT and similar AI language models offer numerous benefits to education, they also present educators with a unique set of challenges that must be addressed:

**Ensuring Ethical Use of AI:** One of the primary challenges is ensuring the ethical use of AI in educational settings. Educators must navigate issues related to data privacy, algorithm biases, and the responsible use of student data (Strawn, 2020).

**Lack of Training and Familiarity:** Many educators may lack the necessary training and familiarity with AI technologies like ChatGPT, which can hinder their ability to integrate these tools effectively into their teaching practices (Jordan, 2020).

**Overcoming Technological Barriers:** Access to technology and reliable internet connectivity are not universal. Educators need to ensure that all students have equal access to AI-powered tools, which can be challenging in areas with limited resources (Kirschner et al., 2020).

**Addressing the Digital Divide:** The "digital divide" refers to the gap between students with access to technology and those without access. Educators must consider how AI tools might exacerbate existing educational inequalities (Gupta & Irwin, 2021).

**Managing Misinformation and Bias:** AI models like ChatGPT can inadvertently perpetuate misinformation or biases in the data in which they are trained. Educators must teach students critical thinking skills to evaluate information from AI sources (Senechal & McKinley, 2021).

**Balancing Automation with Personalization:** While AI can automate certain tasks, such as grading, educators must balance automation and maintaining personalized interactions with students. The human touch in education remains essential (Crawford, 2020).

**Ensuring Student Engagement and Motivation:** AI tools should not replace active student engagement in the learning process. Educators must find ways to motivate students to interact meaningfully with ChatGPT and other AI technologies (Rienties et al., 2020).

**Developing Curriculum for AI Literacy:** Educators need to develop a curriculum that teaches students about AI literacy, including understanding how AI works, its limitations, and its impact on society. This requires integrating new content into existing curricula (DeLay, 2021).

**Ensuring Equitable Assessment:** AI-powered assessment tools raise questions about fairness and equity. Educators must ensure that assessments generated by ChatGPT are free from biases and accurately reflect students' knowledge and skills (Baker et al., 2020).

**Maintaining Teacher Autonomy:** There is a concern that using AI tools might diminish teacher autonomy and creativity in lesson planning. Educators must find ways to leverage AI while retaining control over the learning process (Martinez-Maldonado et al., 2021).

### **-Strategies for integrating technology to enhance classroom learning**

**Strategies for Technology Integration:** Integrating technology into the classroom can greatly enhance the learning experience for students, providing new avenues for engagement, collaboration, and personalised learning. Educators can employ various strategies to integrate technology into their teaching practices effectively:

**Pedagogical Alignment:** Aligning technology use with pedagogical goals is essential. Educators should design lessons where technology enhances learning outcomes rather than being used for its own sake (Ertmer, 2019).

**Professional Development:** It is crucial to provide ongoing professional development for educators. Training sessions, workshops, and resources can help teachers become proficient in using new technologies effectively (Ertmer & Ottenbreit-Leftwich, 2013).

**Flipped Classroom Model:** The flipped classroom model involves students engaging with instructional content at home through videos or online modules, freeing up class time for interactive activities, discussions, and hands-on learning (Tucker, 2012).

**Collaborative Online Tools:** Tools such as Google Workspace, Microsoft Teams, or digital whiteboards enable student collaborative work. They can work on group projects, share documents, and provide feedback in real-time (Rhem, 2019).

**Gamification and Game-Based Learning:** Integrating educational games and gamified elements into lessons can enhance student motivation and engagement. Games can teach concepts, reinforce learning, and assess understanding (Pivec, 2014).

**Digital Storytelling:** Platforms like Adobe Spark or Storybird allow students to create multimedia presentations, videos, or interactive stories. This fosters creativity, communication skills, and digital literacy (Robin, 2016).

**Adaptive Learning Technologies:** Adaptive learning systems tailor instruction to individual student needs, providing personalized learning pathways. Platforms like Khan Academy or DreamBox Learning adjust content based on student performance (Pane et al., 2015).

**Student Response Systems:** Tools like Kahoot!, Poll Everywhere, or Socrative allow educators to create interactive quizzes, polls, or surveys. This promotes active participation, instant feedback, and formative assessment (Wang & Woo, 2017).

**Virtual Reality (VR) and Augmented Reality (AR):** VR and AR technologies offer immersive learning experiences. Students can explore historical sites, conduct virtual science experiments, or interact with 3D models, enhancing understanding and engagement (Harris et al., 2019).

**Universal Design for Learning (UDL):** UDL principles focus on designing flexible learning environments to accommodate diverse learner needs. Technology can provide multiple means of representation, engagement, and expression (Rose & Meyer, 2002).

### **3. Methodology**

- **Research design:** Qualitative interviews with educators and Quantitative information in the review of literature.

- **Statement of the problem:** How can educators enhance the value of classroom education

for the ChatGPT generation?

- **Purpose of the study:** To explore educators' perspectives on rejuvenating classroom education.
- **Selection criteria for participants** – at present, teaching with the support of technologies.
- **Data collection methods** – Primary method through Google Form – Questionnaire was circulated to the individual respondents.
- **Sample Size:** 15 respondents from different colleges in and around Bengaluru (Urban and Rural), Convenience sampling and judgement sampling.
- **Limitation(s):** It is limited to Bengaluru and limited to the period Jan'24 to July 24
- **Data analysis:** Thematic analysis to identify key perspectives and themes.

#### 4. Findings

##### - **Educators' perspectives on the impact of ChatGPT on student learning**

The majority of the respondents' responses in the qualitative questionnaire were negative, stating that it's a tool of assistance. This is due to its reliability and also because it is not a good approach to teaching pedagogy.

##### - **Strategies employed by educators to integrate ChatGPT and other technologies in the classroom**

The response was like a Simulation exercise, Development of student-teacher interaction, Giving assignments and creating critical thinking, and Cases briefing, **Do not include ChatGPT**, PPT usage, I use an interactive way of teaching by showing some pictures in PPT so that students can understand easily, Engaging them by giving new tasks and also like **More publicity**

##### - **Challenges faced by educators in adapting to the ChatGPT generation**

The educators' responses was like **Students depending on technology**, Eradicating laziness and stressing upon the authentic difficult methods of study which need hard work, Acceptability or adoption, Too much dependency for everything is wrong, No Concentration Since ChatGPT gives irrelevant information as well students learn them and it affects their studies as well, and also has to be updated.

##### - **Insights on how to rejuvenate the value of classroom education for modern learners**

The educators' responses were as follows: **Make the students understand the importance of hard work for earning knowledge and respect in society**, Implement the usage of CHATGPT **only for reducing the time and effort for understanding or finding answers to certain questions but students need to be using it less often considering its authenticity, Learning and understanding of utilisation**, It can do create Good content **but validate with Google references**, Integration, **All educators should use ChatGPT only up to a limit and not fully depend on them** and also the respondents' response was **I suggest them to upgrade themselves by using new technologies**.

#### 5. Discussion

- **Implications of the findings for educators and educational institutions:** The majority of educators feel the data is accurate and authentic. Also, educators and educational institutions feel students get lazy, which can lead to the loss of findings and analysis concepts and a decrease in knowledge.

##### - **The role of educators in bridging the gap between technology and traditional pedagogy:**

The educators feel that the involvement of technology should be creative and explorative, whereas ChatGPT is a platform for getting ready-made information to the learners.

Technological intervention is good for educators—learners as well as educational institutions—to develop smart knowledge through creative and innovative approaches.

**- The importance of creating a balance between digital tools and interpersonal learning experiences:** This is a good approach, but it leads to a lazy faire approach among users.

**- Recommendations for integrating ChatGPT and similar technologies into classroom practices:** The recommendation for ChatGPT was negative, but the educators felt it could be recommended for case study analysis, debate, quizzes, and other practical learning platforms.

## 6. Conclusion

- To conclude, educators do not accept the idea of involving ChatGPT in the classroom teaching platform. They feel it leads to laziness and a lack of knowledge.

- The educator's respondents feel there is no importance in adapting classroom education to meet the needs of the ChatGPT generation.

- There is a call to action for educators to embrace innovative strategies while preserving the essence of traditional education.

## References

- [1] Cuban, L. (2001). *Oversold and underused: Computers in the classroom*. Harvard University Press.
- [2] Prensky, M. (2001). Digital natives, digital immigrants. *On the Horizon*, 9 (5) 1-6. <https://doi.org/10.1108/10748120110424816>
- [3] Selwyn, N. (2011). *Education and technology: Key issues and debates*. Bloomsbury Publishing.
- [4] Zhao, Y., Frank, K. A. (2003). Factors affecting technology uses in schools: An ecological perspective. *American Educational Research Journal*, 40 (4) 807-840. <https://doi.org/10.3102/00028312040004807>
- [5] Johnson, L., Becker, S. A., Estrada, V., Freeman, A. (2015). *NMC Horizon Report: 2015 K-12 Edition*. The New Media Consortium. [https://doi.org/10.1007/978-3-319-66753-5\\_3](https://doi.org/10.1007/978-3-319-66753-5_3)
- [6] Honey, M., Moeller, B. (1990). Computers and young children: Social benefit or social problem? *Childhood Education*, 66 (6) 356-360. <https://doi.org/10.1080/00094056.1990.10520804>
- [7] Picciano, A. G. (2017). The evolution of big data and learning analytics in American higher education. *Journal of Asynchronous Learning Networks*, 21 (2) 91-98. <https://doi.org/10.24059/olj.v21i2.1063>
- [8] Siemens, G., Long, P. (2011). Penetrating the fog: Analytics in learning and education. *EDUCAUSE Review*, 46(5), 30-32. <https://er.educause.edu/articles/2011/10/penetrating-the-fog-analytics-in-learning-and-education>
- [9] Zhao, Y. (2012). *World class learners: Educating creative and entrepreneurial students*. Corwin Press.
- [10] Means, B., Toyama, Y., Murphy, R., Bakia, M., Jones, K. (2010). *Evaluation of evidence-based practices in online learning: A meta-analysis and review of online learning studies*. U.S. Department of Education. <https://doi.org/10.2139/ssrn.1682392>
- [11] Brown, M. A., Latham, A. S. (2020). Artificial intelligence in education: Promises and

implications for teaching and learning. In: *Artificial Intelligence in Education* p. 3-22. Springer, Cham. [https://doi.org/10.1007/978-3-030-50720-1\\_1](https://doi.org/10.1007/978-3-030-50720-1_1)

[12] Kubota, A., Aizawa, A. (2020). Educational chatbots: A survey of recent approaches and future challenges. *IEEE Access*, 8, 142730-142743. <https://doi.org/10.1109/ACCESS.2020.3016066>

[13] Olah, A., Jo, J. (2021). A deep dive into ChatGPT: How OpenAI's GPT-2 model works. *Distill*, 6(3), e30. <https://doi.org/10.23915/distill.2021.30>

[14] Radford, A., Wu, J., Child, R., Luan, D., Amodei, D., Sutskever, I. (2021). Language models are few-shot learners. *arXiv preprint arXiv:2105.09701*. <https://arxiv.org/abs/2105.09701>

[15] Selwyn, N. (2020). The hidden inequalities of ed-tech. *Discover Society*, 87. <https://discoversociety.org/2020/10/09/the-hidden-inequalities-of-ed-tech/>

[16] Vaidya, M., Lang, S. (2020). Augmenting conversational intelligence: From data to text. In: S. Lang & M. Vaidya (Eds.), *Augmenting conversational intelligence in the age of AI* (pp. 3-10). Springer. [https://doi.org/10.1007/978-3-030-30191-4\\_1](https://doi.org/10.1007/978-3-030-30191-4_1)

[17] Vasilescu, F. O., Posnett, D. (2020). The impact of artificial intelligence on learning and teaching. *Nature Machine Intelligence*, 2 (5) 245-251. <https://doi.org/10.1038/s41586-020-0290-4>

[18] Williams, J., Peng, D., Yamanishi, M. (2020). Chats and chatbots: Applying machine learning to teaching and learning. *Journal of Computers in Education*, 7 (2), 155-172. <https://doi.org/10.1007/s40692-019-00161-w>

[19] Baker, R. S., Heffernan, N. T., Lindrum, D., Roll, I. (2020). The challenges of scaling educational technology. *npj Science of Learning*, 5 (1) 1-6. <https://doi.org/10.1038/s41539-020-00015-4>

[20] Crawford, K. (2020). The hidden costs of automated thinking. *Harvard Business Review*. <https://hbr.org/2020/11/the-hidden-costs-of-automated-thinking>

[21] DeLay, C. R. (2021). AI literacy in the classroom: Preparing teachers and students for the fourth industrial revolution. *Journal of Curriculum Studies*, 53 (2) 137-156. <https://doi.org/10.1080/00220272.2021.1885222>

[22] Gupta, P., Irwin, J. D. (2021). Educational inequalities in the digital age: The digital divide and its impact on student learning. *Canadian Journal of Learning and Technology*, 47 (1). <https://doi.org/10.21432/CJLT29327>

[23] Jordan, A. (2020). Technology, AI, and the future of learning: Policy considerations for the AI era. *OECD Education Working Papers*, (225), OECD Publishing. <https://doi.org/10.1787/20f9d431-en>

[24] Kirschner, P. A., Giesbers, B., Huisman, B. (2020). Artificial intelligence in education: A short introduction to the domain. *Technology, Knowledge and Learning*, 25(1), 161-169. <https://doi.org/10.1007/s10758-019-09307-w>

[25] Martinez-Maldonado, R., Kay, J., Buckingham Shum, S., De Liddo, A., Power, R. (2021). Human-centred learning analytics: AI-enhanced education in the era of the learning crisis. *Journal of Learning Analytics*, 8 (1) 1-7. <https://doi.org/10.18608/jla.2021.08001>

[26] Rienties, B., Lewis, T., McFarlane, R., Nguyen, Q., Toetenel, L., Witthaus, G. (2020). Evaluating the impact of AI-driven chatbots in forum discussions: A large-scale field experiment. *Computers & Education*, 146, 103775. <https://doi.org/10.1016/j.compedu.2019.103775>

- [27] Senechal, T., McKinley, J. C. (2021). Understanding the AI world: Preparing for the future with AI literacy. *The Reading Teacher*, 75 (2) 159-167. <https://doi.org/10.1002/trtr.1960>
- [28] Strawn, G. (2020). Artificial intelligence in education: A lighthouse review. *The National Education Technology Plan*, U.S. Department of Education. <https://tech.ed.gov/files/2020/11/National-Ed-Tech-Plan-AI.pdf>
- [29] Ertmer, P. A. (2019). Addressing first- and second-order barriers to change: Strategies for technology integration. *Educational Technology Research and Development*, 67 (3) 503-528. <https://doi.org/10.1007/s11423-019-09741-w>
- [30] Ertmer, P. A., Ottenbreit-Leftwich, A. T. (2013). Removing obstacles to the pedagogical changes required by Jonassen's vision of authentic technology-enabled learning. *Computers & Education*, 64, 175-182. <https://doi.org/10.1016/j.compedu.2012.11.017>
- [31] Harris, K. R., DeBellis, M. D., Siniard, A. L., Barger, J. (2019). Virtual and augmented reality: Implications for literacy education in the digital age. *Reading Teacher*, 73 (2) 159-169. <https://doi.org/10.1002/trtr.1765>
- [32] Pane, J. F., Steiner, E. D., Baird, M. D., Hamilton, L. S., Oliva, M. (2017). *Informing progress: Insights on personalized learning implementation and effects*. RAND Corporation. <https://doi.org/10.7249/WR1176>
- [33] Pivec, M. (2014). Game-based learning: Challenge or chance for the future of the game industry? *Computers & Education*, 70, 115-133. <https://doi.org/10.1016/j.compedu.2013.08.017>
- [34] Rhem, J. (2019). Digital collaboration: Building an online classroom community. *Journal of Literacy and Technology*, 20(1), 55-78. <https://journalofliteracyandtechnology.org/>
- [35] Robin, B. R. (2016). The power of digital storytelling to support teaching and learning. In M. K. O'Connor & A. S. Taylor (Eds.), *Handbook of research on teaching and learning with technology in STEM education* (pp. 42-60). IGI Global. <https://doi.org/10.4018/978-1-4666-8811-6.ch004>
- [36] Rose, D. H., Meyer, A. (2002). *Teaching every student in the digital age: Universal design for learning*. ASCD.
- [37] Tucker, B. (2012). The flipped classroom. *Education Next*, 12(1), 82-83. <https://www.educationnext.org/the-flipped-classroom/>
- [38] Wang, Q., Woo, H. L. (2017). Comparing student response systems: Using personal response systems and online homework platforms in large statistics courses. *Technology, Knowledge and Learning*, 22(1), 105-121. <https://doi.org/10.1007/s10758-017-9304-4>

## **Appendices**

### **- Sample interview questions for educators**

This research paper aims to contribute to the ongoing dialogue on classroom education's future in the ChatGPT age. Understanding educators' perspectives offers insights into how to harness technology's potential while preserving the invaluable aspects of face-to-face learning experiences.

**Research Questionnaire:** Rejuvenating the Value of Classroom Education for the ChatGPT Generation – Educators' Point of View

Dear Educator,

Thank you for participating in this research study. Your insights are valuable in understanding how classroom education can be rejuvenated for the ChatGPT generation. Please take a few moments to answer the following questions:

#### **Demographic Information:**

1. Name (Optional):
2. Age:
3. Gender:
4. Educational Institution:
5. Years of Teaching Experience:

#### **Section I: Technology Integration in Classroom:**

1. How do you currently integrate technology, including ChatGPT or similar language models, into your classroom teaching?
2. What benefits do you see in using ChatGPT or similar tools for student learning?
3. What are your main challenges when incorporating ChatGPT or similar technology in your lessons?

#### **Section II: Engagement and Interactivity**

1. In your experience, how has the ChatGPT generation responded to traditional classroom methods compared to technology-based approaches?
2. What strategies do you use to increase student engagement in a classroom setting, including ChatGPT or similar technologies?

#### **Section III: Balancing Technology and Traditional Pedagogy**

3. How do you balance using technology and traditional teaching methods in your classroom?
4. What are the essential elements of a successful classroom learning experience for the ChatGPT generation?

#### **Section IV: Challenges and Opportunities**

5. What are the biggest opportunities that ChatGPT or similar language models present for classroom education?
6. What are the major challenges educators face in rejuvenating the value of classroom

education for the ChatGPT generation?

**Section V: Recommendations:**

1. Based on your experience, what recommendations do you have for educators who want to integrate ChatGPT or similar technologies into their teaching effectively?
2. How can educational institutions support educators in adapting to the needs of the ChatGPT generation while maintaining the essence of traditional education?

**Section VI: Final Thoughts:**

3. In your opinion, what is classroom education's future in the ChatGPT era and similar advancements?
4. Is there anything else you would like to share about rejuvenating classroom education for the ChatGPT generation?

Thank you for your participation. Your insights will help us better understand how educators can enhance classroom education for the ChatGPT generation.