



# ChatGPT for Teachers: Insights from Online Discussions

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If I wanted to be a police officer, I would have signed up for that. But I signed up for each kid to fall in love with books and to learn to critique them, enjoy them and share them.

— *Charlotte (teacher)*

I've come up with a set of rules that describe our reactions to technologies:

1. Anything that is in the world when you're born is normal and ordinary and is just a natural part of the way the world works.
2. Anything that's invented between when you're fifteen and thirty-five is new and exciting and revolutionary and you can probably get a career in it.
3. Anything invented after you're thirty-five is against the natural order of things.

— *Douglas Adams*

## Introduction

In this series on creativity, technology, and learning, our recent focus has been on generative Artificial Intelligence (GenAI) and its implications for education and creativity. We have interviewed innovative thought leaders and scholars on the topic (Henriksen et al., 2023; Mishra et al., 2024; Warr et al., 2023; Woo et al., 2023); and we have explored

beyond the expert view to focus on practitioners [e.g., perspectives of school leaders as they confront these new tools in Dunnigan et al. (2023)]. Until now though, we have not looked at what educators themselves are doing with GenAI. Given the focus of this series, understanding how teachers are using AI tools creatively to further their goals is a relevant and important topic.

ChatGPT has become one of the most dominant AI-powered chatbots available today, since it was introduced publicly by OpenAI in late 2022. Already, it has demonstrated the potential to impact educational practice and experiences through its ability to summarize large texts, offer personalized learning experiences, adapt educational content, and engage in interactive or critical discussions (Extance, 2023). In teaching, ChatGPT has potential to support instructional design, curriculum development, assessment creation and the generation of tailored content and customized feedback (Glaser, 2023). For instance, certain tools that use OpenAI's LLM technology—like MagicSchool, Eduaide, Khanmigo, and EduChat—are increasingly used for lesson planning, student assessment, and emotional support (Extance, 2023).

However, the deployment of ChatGPT in education is not unproblematic. There are significant concerns about “hallucination” (when generative AI fabricates information) and data privacy. Furthermore, there is little clarity about how to mitigate bias and verify accuracy, reliability, and inclusivity while addressing ChatGPT's impact on human interactions and thinking abilities (Glaser, 2023). With the emerging nature of AI technologies in education, there is a significant gap in understanding how educators are actually using these tools in real-world settings. One article seeking to understand teacher perceptions of ChatGPT analyzed Twitter data (Li et al., 2023); these authors found that while, overall, teachers perceived ChatGPT positively, they were also concerned about “academic integrity, impact on learning outcomes and skill development, limitation of capabilities, policy and social concerns, and workforce challenges”

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(Li et al., 2023, p. 1). Mishra et al. (2023) emphasized the need for educators to understand and integrate technological, pedagogical, and content knowledge (TPACK) in the context of tools like ChatGPT. They describe how GenAI, including ChatGPT, is unique for its generative and conversational capabilities, but suggest varied implications for education (e.g., misinformation, the digital divide, the need for new pedagogies) and emphasize the value in viewing GenAI as a collaborative partner rather than just a tool.

## Understanding ChatGPT in Teachers' Practices

Though we acknowledge the potential pitfalls and risks of ChatGPT in education, our focus is to consider teachers' creative uses of this tool. Despite a lack of clear policies and best practices, many teachers have adopted an innovative mindset to navigate an uncertain space with little guidance. But there is a lack of general awareness across the field about how it is actually being implemented. As ChatGPT use grows, and many teachers begin to integrate it into practice, teachers often learn from each other, such as through social media like Facebook groups (Extance, 2023). To explore teachers' classroom uses, we draw on insights from a conversation with one innovative teacher and we also examine social media interactions by many teachers in a Facebook group dedicated to their use of the tool—later sharing pedagogical implications from these discussions.

In exploring this, we considered how teachers are discussing ChatGPT uses on social media, especially those who are doing something seemingly new and innovative (acknowledging that this is an interpretative judgment by us as authors, since this is not an empirical article that 'measures' evidence of creativity or innovative behavior). We connected with educators through the Facebook page of the "ChatGPT for Teachers" group, consisting of 452,303 members at this time. Members post frequently; for example, educators made and actively commented on over 30 posts in this group in the last week alone (data tabulated at the time of writing this article).

We concentrated on a Facebook post from June of 2023 (Pickens, 2023) which garnered 317 comments and 284 likes, which asked teachers to share their best uses of ChatGPT. We used these responses to identify practices and educators who seemed creative (i.e., doing something relatively new and effective) with the technology. 115 educators responded to this post with a wide range of ideas and practices. Breaking down their posts into categories of ChatGPT usage, their uses commonly included: passage generation/modification (24.4%), assessment (17.1%), lesson plan (14.6%), find information (8.9%), feedback (8.1%), administrative tasks (6.5%), multimedia (4.9%), and other uses

(15.4%). This gave us a broad (but not especially detailed) view of the actual practices of educators. To complement the inquiry with a closer look, we also included an interview with one educator from this group who agreed to speak with us. We aim, in this way, to focus attention on the complexities of practice through one teacher's lived experience, as well as considering the bigger picture that emerged from the educators' response—giving us a snapshot of the wider landscape of uses of generative AI in education, even while contextualizing it in the narrative of one educator.

Given this process, the structure of this article is straightforward. We place the focus on one teacher ("Charlotte," a pseudonym) who has innovatively integrated ChatGPT into her teaching practice, but in our writing, we interweave Charlotte's voice with comments from other educators in the Facebook group.

## Exploring ChatGPT Integration

In the sections that follow, we discuss, somewhat sequentially, how teachers use ChatGPT throughout the teaching process, going from how they prepare for learning, to their facilitation of learning, how they assess learning, and so on.

### Preparing for Learning

Teachers increasingly utilize AI tools such as ChatGPT to prepare for instruction, including to enhance lesson planning and tailor instruction and materials to their unique contexts. This adaptability is crucial for addressing diverse student needs and aligning with school policies, toward an engaging and inclusive learning environment. As follows, we discuss teachers' usage of ChatGPT to prepare for learning by developing responsive lesson plans, generating and modifying textual passages, finding information, and creating multimedia.

### Responsive Lessons

Our conversation with Charlotte revealed her ability to craft responsive lessons, or adapt educational strategies based on technological tools, student interactions, and institutional policies. From its inception, Charlotte was responsive to the possibilities of ChatGPT: "I used it when I was teaching a lesson last year, and it was really weird timing because ChatGPT came out as I was assigning this creative [project] where students had to write a sonnet about themselves." However, Charlotte also had to be responsive to school policies on ChatGPT: "I wanted them to run it [the sonnet] through ChatGPT for feedback and then hand both of them in... The school decided we're [going to] block ChatGPT, and you're not allowed to use it at all." Accordingly,

in response to both school policies and student interests, Charlotte said: “I ran it through ChatGPT five times. First, to write a sonnet about the Cubs in iambic pentameter—that was the assignment for the kids, to write about themselves.” Finally, Charlotte was responsive to the relationship between ChatGPT, students, and policies: “In speech and debate class, I had the kids debate the resolution that ChatGPT or AI should be banned in schools.” Charlotte reacted to ChatGPT’s release, school policies, and students’ interests by incorporating it into lessons and assignments.

This theme indicates the need for teachers to be agile and informed, capable of modifying their educational approaches based on an array of factors like technological advancements, policy frameworks, and student needs. As Mishra et al. (2023) noted, effective teaching requires an understanding of broader systemic factors influencing educational practices, addressing immediate educational needs while also preparing students for responsible participation in a technology-driven world.

The responsiveness of Charlotte’s lesson reflects an effective application of TPACK. Charlotte described deepening her technological knowledge, not only by mastering the tool’s functionalities but also by navigating its limitations, like its accuracy issues and copyright concerns. This kind of technological knowledge is crucial for effectively employing AI tools in educational settings. Simultaneously, the use of ChatGPT is reflective of her pedagogical strategies, requiring attention to discussions on academic integrity and the ethical use of technology in her curriculum. This is vital in teaching students to critically evaluate AI-generated information and uphold academic honesty, reflecting a sophisticated approach to pedagogical knowledge. Furthermore, this use of ChatGPT allowed Charlotte to tap into (and even expand) her content knowledge, particularly in English Language Arts, by facilitating text analysis and creative writing projects. This integration diversifies the educational content and also enhances student engagement and learning outcomes.

Other educators in the Facebook group likewise utilized ChatGPT for responsive lesson plan design—by using ChatGPT to create lesson plans, generate or customize text passages, locate relevant information, and develop multimedia resources.

### Lesson Planning

Effective lesson planning is foundational to successful teaching, yet it remains one of the more time-consuming tasks educators undertake. Integrating ChatGPT into this process offers opportunities to streamline and innovate lesson design. Therefore, another common use of ChatGPT involved creating or modifying lesson plans or curricula at various scales. One teacher described how when a lesson

was not going well, they utilized ChatGPT to adjust their instruction mid-lesson. This real-time adaptability suggests the tool can assist in the initial planning stages and also support dynamic teaching environments. Others on Facebook described using ChatGPT to generate lessons. One described generating a lesson plan template, to:

Modify a VBA code so that in one Excel sheet, I can select multiple options in different dropdowns, deselect them, separate them with line breaks, and separate another selection with commas. Now, my unit plan template not only looks cool but is much more efficient. I don’t have to type in or paste standards (which are many for ELA by the way). I only need to select from the dropdown. I never thought someone without a programming background like me could create a template like this. Thanks, chatgpt!

Another teacher prompted an entire curriculum with ChatGPT, sharing how they were able to, “Create a 70 + page curriculum for teaching journalism, photography, advocacy media and the history of African journalism and photography to university and high school students in Kenya.” The use of ChatGPT in lesson planning, in these instances, enabled greater adaptability and effectiveness of lesson development/delivery. Such flexibility is valuable in settings with diverse student needs.

### Passage Generation and Customization

Educators work with a wide array of student needs, including varying language abilities and learning preferences. Content personalization is not just useful—it can be essential to supporting accessibility and inclusivity. Yet, it has traditionally been difficult for one teacher to adapt, specify or personalize material for varied needs. Thus, educators often discussed using ChatGPT to generate or modify passages of text. This includes prompting for both informative and creative texts, adjusting the complexity of texts to different reading levels, or translating materials into multiple languages. Some teachers on Facebook described utilizing ChatGPT to transform complex literary texts into simplified versions or to create custom educational plays and scripts that resonate with students’ interests and cultural backgrounds. For example, one teacher wrote,

I gave it the first names of my students and asked it to write a play they could read/ do at their level. I haven’t shown them yet, but I’m excited and I think they will be. The play is pretty bad, but it has their names for characters. I also put in who should be funny, wise, courageous and who should get only one-word lines—which worked well, one student will have the line ‘popcorn’ and I know it will be a big deal for him.

Similarly, another teacher shared, “I asked it to write a reader’s theater about ... an all-female k-pop group that tells dad jokes. It’s part of a public speaking celebration. The script was pretty funny.” These creative uses demonstrate how ChatGPT can help bridge the gap between educational content and student interest, engaging students and responding to their interests for a more immersive learning experience. Another common ChatGPT use was to customize the reading level or language of a text. As one teacher shared on Facebook, “You can use it to change the reading level of texts and assignments and to generate descriptions and materials in [emergent multilingual students’ first] language.” By enabling such customization of content, ChatGPT could support challenges educators face in adapting content or differentiation for diverse needs.

### Finding Information

Educators often struggle to present complex concepts accessibly for all students, particularly those with varying levels of prior knowledge and learning preferences. The challenge is often making the content engaging while ensuring understanding. Thus, a thoughtful use of ChatGPT was to generate information to summarize, explain, or find information—in ways that felt relevant or relatable for learners. For example, one teacher used ChatGPT to explain information:

Explain a difficult concept “in the style of” - example: I teach philosophy and asked for an explanation for the Ontological Argument for the existence of God first in the style of a Friends script, then as a 5-year-old, then as a TikTok influencer - it was brilliant and by the end of it all students could read St Anselm and understand him.

On the other hand, another teacher used ChatGPT to summarize information, writing:

I took a YouTube video and asked for a transcript, then asked to summarise this for my students at their level, especially focusing on the past simple tense since they were studying that. I asked it to make lists of the verbs used and categorise these into regular and irregular verbs. Then I asked it to make exercises with these. Same stuff I’d usually do, which would take me a whole night, now it took me 5 minutes! The absolute beauty of this is that the students immediately saw language in real life contexts.

In these cases, leveraging ChatGPT helped the educators enhance students’ comprehension and engagement with the material, showing how the technology could bridge the gap between classroom learning and everyday language, for applicability and engagement.

### Creating Multimedia

Some research has suggested that integration of multimedia elements can enhance learning and capture students’ attention (Butcher, 2014). But creating these elements can be labor-intensive, requiring both creativity and technical skills, explaining why a unique use of ChatGPT that several teachers discussed was multimedia generation. One said they “Write scripts as well as prompts to convert text to images.” Another shared that they “Created an outline for a PD topic in ChatGPT and pasted it into Gamma and out popped a beautiful presentation! Obviously needs some tweaking but I saved myself hours!” The ability to quickly produce customized or compelling visual and textual content was useful and timesaving for these teachers in these instances. Also, once created, multimedia resources may often be reused and adapted for various educational settings. By leveraging ChatGPT to design lesson plans and multimedia resources, modify text passages, and find information, educators augmented their ability to respond to diverse student needs.

### Facilitating Learning

Next, we describe how educators are incorporating ChatGPT when facilitating learning, particularly when supporting students in writing and providing feedback. Teachers are exploring the potential of AI to offer timely, supplementary feedback, alongside traditional methods like peer and teacher reviews. Our discussion with Charlotte and review of teachers’ Facebook discussions highlights the opportunities and challenges brought about by integrating generative AI into the learning process.

### Anticipated Changes to the Writing Process

One theme emerging from Charlotte’s discussion was anticipated changes to the writing and critique process due to the arrival of ChatGPT. For instance, Charlotte remarked how “Some younger teachers are looking at ways that it can give feedback on student writing. I don’t know how I feel about that, though, because I feel like I’m going to give more useful feedback.” Charlotte added that ChatGPT may be helpful in addition to, not in lieu of, teacher feedback. Moreover, she remarked:

What I would like to be able to see is students seeking out that feedback themselves. Instead of me saying, ok, here’s your ChatGPT feedback or worse, me saying here’s your feedback and not telling them it’s coming from AI, [I] would like for them to [seek feedback] during the writing process because we

always do peer editing and we always do teacher... feedback along the way.

Her perspective suggests that students seeking feedback from ChatGPT may become a part of the writing process, similar to—but not a replacement for—peer and teacher feedback. Finally, she discussed how ChatGPT could support writing analysis. She explained it could help in offering another perspective, e.g., “is my character analysis clear in paragraph three? I think that that’s something that artificial intelligence could do and could help with.”

Charlotte anticipates that ChatGPT may be integrated into the writing process to provide additional feedback to students. However, she expressed reservations about the quality and usefulness of AI-generated feedback compared to teacher feedback.

This potential for changes in writing processes has significant implications for education. One change is the speed by which responses can be generated. This may be helpful for receiving immediate feedback (Glaser, 2023) or engaging in live collaboration on demand. Yet, the speed of responses may also pose challenges concerning academic integrity (Li et al., 2023), increasing the ease by which students can generate responses that they may attempt to pass off as their own.

Quality of feedback is another issue. As Charlotte pointed out, the current quality of feedback provided by ChatGPT is adequate but not as helpful as a human collaborator like a teacher, colleague, or peer. However, she acknowledged this may improve going forward. Another possible issue for AI in the writing process involves the accuracy of information it generates (e.g., quotations or citations). Charlotte pointed to uncertainty in the reliability of AI generated quotations and citations, which is to be expected, given generative AI’s tendency to hallucinate (Extance, 2023). Given AI’s generative characteristics (Mishra et al., 2023), it is important that educators help students understand how to critically assess AI-generated information. Charlotte’s thoughts were consistent with comments from other educators as well.

### Providing Feedback

Feedback is a critical element of the learning process to guide students on how to improve and refine their skills and knowledge. Yet, creating detailed and constructive feedback can be time-consuming and challenging, particularly with the demands on teachers today. Thus, some teachers utilized ChatGPT to generate feedback and reports. Several teachers created workflows to automate report writing. For example, one teacher wrote, “I created a ‘reportwriter’ (SIC) program in html.” Others shared that they leveraged ChatGPT to give more detailed feedback. One shared that they “Provide feedback and examples on how to improve articles,

reports, reviews and essays for my students really fast. They love the final report.” This suggests that some teachers are already using ChatGPT to seek out ways to automate feedback creation in ways that they feel can efficiently support personalized feedback for each student’s learning journey.

### Assessing for Learning

ChatGPT might also impact academic integrity and assessments. In our conversation with Charlotte, she emphasized how she cultivated academic integrity during the emergence of ChatGPT. In the Facebook group comments, other educators described engaging and efficient assessment methods for measuring and supporting student understanding.

### Cultivating Academic Integrity

Charlotte also discussed ChatGPT’s relationship with academic integrity remarking, “It adds another level of uncertainty, as a teacher, about students’ ability to make smart choices about when, how, and if to use a program like ChatGPT.” She described steps she took to hold students accountable for academic integrity but also emphasized making connections with students to promote academic integrity saying:

I don’t want to be the police, either. If I wanted to be a ... police officer, I would have signed up for that. But I signed up [for] each kid to fall in love with books and to learn to critique them and enjoy them and share them.

Charlotte described how she promotes academic integrity with students through discussion:

One of the things I tried to really instill in the kids is you have one academic reputation. It’s ... your overall reputation, and whenever you have a ding to that or whenever you compromise it, it takes a lot of time and effort to gain trust back.

Thus, Charlotte expresses a belief in promoting academic integrity by establishing connections with students and encouraging personal responsibility rather than strictly policing technology use.

This issue of academic integrity also may have a dramatic impact on learning and assessments. Charlotte discussed not only enforcing academic integrity but proactively promoting it through activities such as debate and discussion, both holding students accountable and trusting them. This approach may empower students to take agency over their own learning and develop intrinsic motivation to use the tools in ways that will support learning, rather than taking academic shortcuts. Charlotte also discussed the limitations of digital tools for detecting AI use, noting that AI detectors often generate false positives,

resulting in students wrongly being accused of plagiarism. She suggested alternative ways of holding students accountable for academic integrity, including hand-written responses, parental involvement, transparent checkpoints throughout the writing process, and knowing students' writing abilities and styles. As educators consider how to promote academic integrity, they also must design appropriate assessments. Thus, we highlight how other educators in the Facebook group utilize ChatGPT to facilitate efficient and creative assessments.

### Innovative and Efficient Assessment

Assessment is perennially important for educators to have feedback on student understanding and guide future instruction. Using ChatGPT in assessment design introduces new opportunities for innovation and efficiency, and also new challenges. The second most frequent use of ChatGPT in the Facebook group was to generate assessments. These assessments ranged from summative tests and projects to formative quizzes and worksheets to engaging and creative informal assessments such as escape rooms and Kahoots. For instance, one teacher noted her use:

Escape room! The best fun...I asked chat to create a series of clues to solve. I used math, the first time. (3 step Word problems using multiplication) Then tried history. You can put in the year level and content descriptions you need to cover. I played around and ended up doing them at 3 differentiated levels. The kids had a blast and practiced the skills I needed...I literally asked for an escape room style questioning.

This comment reflects a common motivation of teachers in the comments to engage and motivate students in the learning and assessment process.

Alternatively, another teacher used ChatGPT to help students prepare for a traditional assessment. They noted their best use of ChatGPT was to: "Turn notes into a study guide/flashcards and a test. Took SO MUCH less time than typing everything out!... I used Quizzizz and uploaded the class notes, the AI created flash cards and questions." This reflects a common sentiment that many teachers shared of appreciating using ChatGPT to save time when generating assessments. Traditional assessment methods often consume substantial time and may not engage every student effectively. Educators are increasingly looking to diversify or offer more creative assessment formats and tailor them to varied learning styles and needs. Using ChatGPT might allow for more dynamic and engaging learning experiences, while its efficiency allows teachers to quickly create customized assessments, possibly enabling them to focus more on teaching rather than administrative tasks.

### Other Considerations

There are also broader considerations surrounding the use of ChatGPT in education, like policy impacts, administrative applications, and various other applications. As educators navigate AI policies that vary by institution and region, they also leverage its capabilities to streamline administrative tasks and explore innovative educational practices.

### Impact of AI Policies

Charlotte frequently mentioned AI policies and their impact on their instruction. She remarked:

Right now, it's blocked for middle school students. In my school, they're not supposed to use it at all...AP is saying no AI. IB is treating it just like any other source; you just have to put it in quotation marks inside your source.

In addition, Charlotte reflected, "I remember when it first came out, and ... whole countries and their governments were calling for a pause on it." Thus, she had to be flexible and adaptive about instruction based on these policies.

The impact of AI policies has implications for educators and policymakers. Educators will need to navigate these policies as design constraints and deal with their ever-changing nature. Policymakers must design policies that enable the use of generative AI in education while addressing concerns about data privacy, academic integrity, bias, false information, and unhealthy parasocial relationships (Li et al., 2023; U.S. Department of Education, 2023; Extance, 2023), preventing "a deceptive illusion of real, human-like interaction" (Mishra et al., 2023, p. 26). That said, despite sometimes restrictive AI policies, educators in the Facebook group have persisted in using ChatGPT for varied educational tasks. As we conclude our discussion, we share how teachers have used ChatGPT for administrative and other tasks.

### Administrative Tasks

Educators often find themselves overwhelmed by a volume of routine administrative tasks, from grading to managing communications with parents. Some teachers therefore have employed ChatGPT for administrative tasks, like generating grades, letters, emails, or Individualized Education Plan (IEP) goals. As one teacher shared, "I have a self-assessment questionnaire that I hand out to students in class. I had ChatGPT create code to put the questionnaire online in an LMS and automatically calculate the score." Replying to emails, however, was a more frequent administrative task. It may be that the automation of these tasks allows teachers to reclaim time that could be better spent on instructional or higher-impact student interactions.

## Other Unique Uses

Additionally, there were many other unique uses of ChatGPT. Several commenters simply responded that it helped them save time. Some shared that they showed students how to use ChatGPT, saying: “Teach students to input ideas and see results that they can use to develop further, and more independently.” Several other uses mentioned included: creating a constructed language, for research and lectures, giving students a starting point for a list of possibilities, planning a day trip/field trip, experimenting with questions about music history, analyzing data, creating case studies and sample reports, or scenario-based learning, among others.

All this opens possibilities for future inquiry into why certain uses of the tool are so popular. We also might explore less dominant uses of ChatGPT as that line of inquiry may help us identify more innovative and creative uses of this technology.

## Conclusion

Throughout our exploration of ChatGPT among a group of educators online, and through a conversation with a teacher leveraging AI’s generative and social capabilities, several themes emerged. These include anticipated changes to the writing process, academic integrity, responsive lessons, and the impact of AI policies. Possible implications for the TPACK framework are broad, as teachers are called to expand their technological knowledge to include the functionalities of AI like ChatGPT and also the ethical and legal aspects, like copyright and the use of AI detectors. Pedagogically, there is a pressing need to foster critical thinking and uphold academic integrity in an era where information can be easily generated and manipulated by AI. Furthermore, content knowledge must evolve, especially in areas like writing and analysis, to incorporate and leverage the capabilities of AI technologies. As ChatGPT (and other generative AI tools) becomes more widely used in education, ongoing research is needed to effectively integrate it within existing educational technology frameworks (e.g., TPACK) and address ethical considerations, promoting more equitable and empowering uses of the technology. In doing so, we might harness the transformative potential of AI, mitigate risks, and prepare students for a future where it is part of their world and reality.

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