Using ChatGPT to Support Student-Led Inquiry

edu edutopia.org/article/using-chatgpt-support-student-led-inquiry

Matthew Kloosterman

ChatGPT & Generative AI

Positioning AI as a mentor or simulator of real-world scenarios can promote student inquiry and aid project-based learning.

By [Matthew Kloosterman](#)

October 24, 2023

Drazen Zigic / iStock

Picture students passionately debating about an original inquiry but hitting a roadblock. Disagreements arise, and learners crave solutions.

Next, imagine that students turn to ChatGPT to overcome these obstacles in their thinking. How can ChatGPT be used as such a tool? I'd like to share three ways to harness ChatGPT to bolster student-led inquiry.

1. SIMULATing SCENARIOS

Showing students that ChatGPT can simulate real-world scenarios offers them another way to problem-solve. Students can use strategies and ideas presented by ChatGPT's simulation and apply them to their learning context.

For example, this prompt for ChatGPT is crafted in a way that presents a student project (such as making a newspaper, book, or other product). I share the educational framework I'm using with my students and write, in detail, about what decisions the students get to make within the project or inquiry. I position students as practitioners (e.g., scientists, editors, writers, historians), and I give details about the problem they are facing. I also share important role details, such as how another student may be in a position of authority (the lead historian for the project or the manager of the science lab, for example).

I then share that we want to know what real-life professionals would do when there is disagreement. "Could you please simulate a scenario where two such professionals disagree, and make your response as realistic as possible?" I ask ChatGPT, sharing that students would like to use some of the strategies in the simulation to problem-solve in their project.

The framing of this simulation prompt is applicable across subjects; for example, I similarly managed to prompt ChatGPT to simulate a disagreement about chemical application for a science project.

2. EMPOWERing CRITICAL THINKING

I like to involve students in this process of thinking about how best to gather information and strategies to address problems within their learning context. Scaffolding the process positions students to independently harness ChatGPT to problem-solve. I like to use the "I do, we do, you do" teaching strategy.

For example, I brainstorm one or two problems that may arise from an inquiry in front of the class (I do). Then, students brainstorm possible problems that may arise from a project or inquiry (we do). I add onto their ideas, and we might end up with something like this: *Student A strongly disagrees that student B should use certain chemicals in a science experiment.*

I show students the prompt and break down its specifics or even distribute the prompt in printed form for group analysis. And then I demonstrate how to use ChatGPT to simulate a scenario. As a class, we select one of the problems that students brainstormed and use ChatGPT to simulate a scenario. After we practice

prompting, they try to generate their own simulations and scenarios using new prompts. Eventually, students share their solutions on a Padlet or shared Word document.

ChatGPT may generate inaccuracies, which become learning opportunities for both the students and the teacher. Have a section on Padlet or a shared Word document for students to share possible errors that may need further examination. Here are some questions that educators can use to guide this type of examination: How do we know that ChatGPT gave us a faulty response? Why did these issues surface? Can they be rectified?

When students read ChatGPT's responses and discern inaccuracies, they further strengthen their critical reading skills and learn that ChatGPT is a tool, not a replacement for humans.

3. PROGRAMming AN EXPERT

Visits from experts sustain inquiry in project-based learning (PBL). Experts provide students with firsthand insights on a topic of study. When prompted, ChatGPT can give students an expert experience as well.

For example, students can prompt ChatGPT to become a mentor. Students can then type their questions into ChatGPT and read answers from the simulated mentor. Here is a prompt that I used successfully.

To frame this type of prompt, I ask ChatGPT to become a historian, literature professor, biologist, author, chemist, or other mentor. I tell ChatGPT that students will ask it questions and that it should be as unbiased as possible, making sure to answer factually. I then say that students will be focusing on a given topic—for example, World War II, Jonathan Swift's *A Modest Proposal*, or Newton's gravity law.

I tell it that its task is to be an expert about the topic so that students can better understand the objective or goal of the lesson.

SupportING STUDENTS' AI EXPLORATION

When used strategically to provide solutions, mend disagreements, and enhance students' critical thinking skills as they work through different simulations, ChatGPT can become a tool in the classroom.

By practicing the strategies above, students become empowered to make decisions during student-led inquiries that are aided by AI. And in doing so, they learn how to position ChatGPT as a mentor that is supportive of their ideas and questions.

AI is an innovation that will continue to evolve in education. By empowering students with these strategies, we can help them learn more about AI's vastness and capabilities. AI is more than a fact generator. Students can use skills gained from this article (and their other AI pieces as well) to experiment and explore possibilities within this ever-evolving AI landscape.

7 Comments

1. Sunaina S

   November 2, 2023

   I love this idea. I truly believe that AI is a great tool to prompt critical thinking but it's up to us educators to reimagine our evaluations to allow students to use AI to inquire.

   1. Matthew K

      November 3, 2023

      Dear Sunaina,

      Many thanks for your comment.

      Yes! My prediction is that AI articles will continue to surface as we grow alongisde it in both our classrooms and schools across the world.

      Teach on,

2. J

Jennifer W

November 2, 2023

I am embracing AI and what it may mean for education and myself as a teacher. For students…many of the AI tools are for only 18 and up. Chat GPT says 13-18 with parent permission. Just a reminder that student safety comes first. Encouraging everyone to dig into this side of AI, age restrictions and guidelines setup to protect us before proposing student use. ChatGPT Terms of Use.

   1. Matthew K

     November 3, 2023

     Thanks for sharing this vital piece of information. Yes, student safety does come first.

     Wishing you all the best,

3. Laura B

   November 2, 2023

   These are some really interesting ways to use AI in the classroom. I would love to sit in the back of a class and see it all in action. I do wonder how well students are able to discern bias and inaccuracies in the AI responses — do you find that they are more motivated to do so because it is AI? It seems like that kind of focused, critical reading is what we always want them to do, but it's hard work.

   1. Matthew K

      November 3, 2023

      Hi Laura,

      Great question! Many thanks for asking.

      Yes, we found that our students were quite motivated to critique and question ChatGPT because its AI and new to our kids.

      Before we did an activity with AI in our classroom, our students had a unit on debate. Some of the skills from this unit transferred and assisted students with identifying biases.

      Many thanks again for asking! Please let me know if you have additional questions.

      Take care and teach on,

      1. Laura B

         November 3, 2023

         Thanks for responding! I can see great value in tying debate to critical reading skills.