Teachers or Technology?

Anonymous

ENGL 1121: College Writing and Critical Reading

Prof. Chris McCarthy

April 3, 2024

Teachers or Technology?

I was a homeschooler for ten years. During those ten years, I've experienced various schooling and teaching methods. I've had experience with human educators and independent schooling, as well as the use of books and digital tools for education. My immediate thought on the subject of technology and education was, "Yes, technology is very beneficial and can, in some ways, be better than teachers." While an unpopular opinion, there are people out there who would agree. Carrie Spector (2024) on *Stanford Report* talks about the opinions of education scholars on AI in the classroom and how it can do a lot of things more efficiently than teachers. However, after digging deeper into this topic and reevaluating my initial stance, I realized that there is a "middle ground" so to speak. Technology and AI in particular are very useful tools for teaching, but they can't fully replace the role of human teachers in the classroom.

Many people in addition to their argument that AI is a useful tool, claim that AI can't efficiently teach the way teachers can. Momo Bertrand (2023), an Education Specialist at The World Bank, in an article from *Al Jazeera* agrees that AI is a helpful tool for teachers and can "reduce teacher workloads," and "boost school accessibility for learners with visual and hearing impairments"; however, he claims that "[Human] educators must remain central to teaching and learning." And gives advice to teachers on how to navigate the use of technology in their classroom. I agree with Bertrand (2023) that AI is a helpful tool in reducing the amount of work for the teacher and making the education process for kids with visual and hearing issues easier through the use of technology, which, in addition, can be useful in other ways too. The *World Economic Forum* (2023) says, "AI can help foster the skills students will need to navigate and shape the future." They go on to explain the benefits and applications of AI such as the automation of administrative tasks. This can allow the teachers more time to build a relationship

with the class they are teaching. My goal is to identify technology's different uses in the classroom and how it can benefit teaching, hinder it, and even the role it plays in education outside of the public school, particularly in homeschool education. Technology can't replace teachers, but there are a lot of ways it can be helpful in education.

One of the applications of technology in the classroom is gamification. According to *College News* (n. d.), "Gamification involves using game design elements in non-game contexts, such as education." This is meant to make education engaging and interactive for younger students in particular, as well as a useful tool. John McCarthy (2021) from *Edutopia* gives great advice on how to use gamification effectively, and even compares the use of gamification to games and how it, if used effectively, can be a great resource. He says, "Whereas a game can have a valuable impact in one lesson activity, gamification done well is infused throughout the entire lesson and/or unit of study." My math course would always end each day with a "bonus round" of sorts where we had to solve as many math problems as we could before the time ran out. While I didn't always enjoy it (mainly because of the annoying and weird announcer) I think it was very effective in providing one last activity to show how much we learned. The idea of ending off the day with something fun and rewarding can teach kids that the hard work they do is rewarding, and teaching kids that their hard work can earn them rewards is very useful for education.

I agree that gamification is a great way to get kids excited about learning, but I also think it's important not to over-rely on this form of education. Spector (2024) quotes Dan Shwartz's statement that "one key aspect [of gamification] is reward," and further quotes, "If I get rewarded for doing math in a space-age video game, it doesn't mean I'm going to be motivated to do math anywhere else." In the past, my parents assigned a typing course to me and my

siblings, but I was never able to create a habit of doing it. The only reason I was compelled to do it was because of the mini games; however, I never cared about progressing, and the results can be seen today as I have poor typing skills. Gamification can help teachers by giving them a way to teach their students the material in a fun and motivating way, but it can also be a distraction and a hinderance if the material itself relies on it. If used effectively, gamification can be an extremely helpful tool for student learning.

An additional use of technology in the classroom is through the use of "asynchronous learning environments." Terrel Heick (2022) in an article from *TeachThought* explains that this use of technology can "reduce teacher workload and improve student performance." The use of asynchronous education is effective in giving the teacher a way to teach the curriculum by setting up a digital environment for the students to navigate. While this is helpful in reducing the amount of work for teachers, it can also have a positive impact on students. *The Yale Wave* (2022) explains some of the benefits of technology and how it can be used effectively in education. They explain how technology allows for more methods of interaction between students and professors. This can be very helpful for students in need of assistance or wanting to collaborate by giving them more than one way to contact their teacher and fellow classmates. If a student wants to collaborate with another student on a project, they can easily reach out to the professor or directly to the other student and arrange it. Collaboration and communication is much easier for students in an asynchronous environment and allows them to do their work at their own pace.

In addition to using technology as a tool, teachers also need to be able to teach students about technology, rather than making technology the teacher. In an article from *Education Week*, Arianna Prothero (2023) interviews Peter Stone: a professor at the University of Texas at Austin.

When asked how AI will change education, Stone explained how teachers should teach students how to use technology. He explains that this is important because "It's going to be a part of their [future] careers and working environment." Stone makes a very good point and when asked if teachers could be replaced in this situation, he uses the invention of the calculator as an example. He says, "The teacher [has] to teach how to do arithmetic without a calculator and then how to use the calculator appropriately." I remember starting algebra and the excitement at being able to use a calculator without it being considered "cheating". However, I had to spend years learning to do arithmetic on paper and in my head in order to fully appreciate its use. In this way, learning how to use technology is significantly more important than using technology to learn. AI can be a useful tool in the classroom, but it should not replace the teacher. Instead, it's the teacher's job to instruct students on how to use AI effectively so they can apply their knowledge to future situations.

While the use of technology in the classroom is effective, excessive use of technology for education can have a huge impact on students' mental health. Jody Passanisi and Shara Peters (2022) in an article from *MiddleWeb* talk about how the use of technology during the pandemic had hindered students. They explain how students experienced mental and emotional issues with being schooled online and having to be separated from other students by a screen and having to be exposed to a screen for large portions of their day. I think this is a good point that leads into their following points about online education and how it hindered students' social abilities. Passanisi and Peters (2022) explain how opportunities for interaction being planned and less random caused students to form a social bubble that prevented them from experiencing and developing the skills for random interaction. While these issues mostly stem from the pandemic and the necessity of online schooling during that time, it shows that too much use of technology

and not enough social interaction can have a huge impact on students' mental health. In-person teachers are vital in helping students overcome these challenges by providing a human presence and offering emotional support where technology is incapable.

While the use of technology in the classroom can be both a hinderance and a benefit to teachers and students, the same rules don't apply to homeschooling. The use of technology in homeschooling can be very beneficial to parents in need of ways to educate their children. Jessica Waldock (2022) in an article from *Simple Homeschool* talks about how technology has played a huge role in how they homeschool. She explains how the use of a tablet, online curriculums, documentaries, etc. has been extremely helpful and beneficial. While technology is extremely beneficial in the homeschool process, it's important to teach your kids not to rely on technology for everything. Reading books and writing essays can be just as beneficial as learning how to do online research. I grew up with the majority of my subjects being a stack of books and homework to go with it. In my writing subjects, I learned the basics of how to write business letters and checks, which would have been harder to learn on a computer or tablet. Technology has its benefits when homeschooling, but it's important to learn basic skills without relying too much on technology.

Initially, I was inclined to favor technology's benefits over its drawbacks because of my positive experiences learning with technology in one of my subjects. The subject I learned was math and for years during the time I spent homeschooling, me and my siblings used the disk version rather than the book. The voice of the "teacher" in the specific curriculum we used didn't belong to a specific person but was always associated with our math curriculum. This made me inclined to say that, yes, technology can be an effective teacher. What I didn't realize before was that it depends on the classroom. Technology in the public schools is different than technology in

homeschooling; and technology in one homeschool environment is different than technology in another homeschool environment. Technology also can't provide the same emotional support that teachers or parents can, nor can they assist in the same way when the student is struggling to understand the material. Technology can have different roles depending on the environment and the student and can't be responsible for every aspect of the schooling process regardless of where it's used.

Technology can be an extremely useful tool in both the public-school environment, and the home school environment. However, if it is relied on too much, it can end up hindering students' abilities to learn effectively. This essay taught me a lot about the pros and cons of technology and how it can affect different people in different situations. It made me realize how technology can benefit students differently depending on who is teaching them, how they are being taught, and where they are being taught. I learned a lot about how teachers can use technology effectively and how my experience with technology differs from others'. Despite my various experiences with education, there was still a lot I was able to learn about the use of technology in education. And funny enough, it was the use of technology that helped me realize this.

References

Bertrand, M. (2023, May 24). AI won't replace teachers – but a classroom revolution is coming. *Al Jazeera*. https://www.aljazeera.com/opinions/2023/5/24/ai-wont-replace-teachers-classroom-revolution-coming

College News. (n. d.). How Does Technology Impact Student Learning? *College News*. Accessed March 30, 2024. https://www.collegenews.com/article/how-does-technology-impact-student-learning/#:~:text=Technology%20positively%20and%20negatively%20impacts%20college%20students%E2%80%99%20learning,a%20powerful%20tool%20for%20enhancing%20the%20learning%20experience.

Heick, T. (2022, Nov. 7). Can Technology Replace Teachers? *TeachThought*. https://www.teachthought.com/technology/can-technology-replace-teachers/

McCarthy, J. (2021, Dec. 13). Using Gamification to Ignite Student Learning. *Edutopia*. https://www.edutopia.org/article/using-gamification-ignite-student-learning

Passanisi, J., & Peters, S. (2022, May 24). Can Tech Replace the Classroom? Should it? *MiddleWeb*. https://www.middleweb.com/47121/can-tech-replace-the-classroom-should-it/

Prothero, A. (2023, April 28). Will Artificial Intelligence Help Teachers—or Replace Them? *Education Week*. https://www.edweek.org/technology/will-artificial-intelligence-help-teachers-or-replace-them/2023/04

Spector, C. (2024, Feb. 14). How technology is reinventing education. *Stanford Report*. https://news.stanford.edu/report/2024/02/14/technology-in-education/

The Yale Wave. (2022, Oct. 11). How Technology is Changing the Education Landscape. *The Yale Wave*. https://campuspress.yale.edu/wave/how-technology-is-changing-the-education-landscape/

Waldock, J. (2022, Oct. 25). How Technology Has Changed Our Homeschool. *Simple Homeschool*. https://simplehomeschool.net/technology-and-our-homeschool/

World Economic Forum. (2023, May 1). How AI can accelerate students' holistic development and make teaching more fulfilling. *World Economic Forum*. https://www.weforum.org/agenda/2023/05/ai-accelerate-students-holistic-development-teaching-fulfilling/