



The Final Frontier: AI in Higher Education

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Introduction

I grew up in the 1980s in Stone Mountain, Georgia, in a strict Fundamentalist Christian household. During my early childhood, TV, any type of music, pants, Saturday morning cartoons, and women reading the Bible in church (to name a few) were forbidden. My family opened Pandora's box when we decided to leave the church in the mid-to-late 1980s and we started to indulge in the highly educational late 1980s and early 1990's media culture, such as Teenage Mutant Ninja Turtles, ThunderCats (my favorite), and of course my dad's obligatory, Star Trek. And being the science geek (that he still is), my dad thought it would be paramount to introduce my older sister and me to other groundbreaking sci-fi flicks, such as Metropolis, and then later The Terminator at a very young age. Disrupting my entire understanding of the world up until then (which consisted of long summer days spent outside far removed from technology) these movies left me traumatized and with a strong, overwhelming impression that robots are my archnemesis. Ever since then, I have consistently maintained that robots and AI will contribute to the downfall of humanity. This is a healthy fear, right?

Recently, the Reinhardt faculty have had some wonderful conversations about these very fears. We discussed the role of technology in writing and the need for new pedagogical innovations. We danced around our fear of what is coming on the horizon and its implications on the intelligence economy sector. Indeed, many conversations in academia at the moment are fearful. Like many of you, I already have dug around, watched a few Youtube videos, conducted some research, and then I began poking around with Chat GPT.

Frankly, I was not sure if I was ready to play around with this tool quite yet (reference back to my crippling fear of robots). Usually, I love to tinker with new tools and technologies, but this one outright scared me. Taking a deep breath, I tried to access the platform and on a few occasions, I could not because it had crashed. Yes, that is how popular it has become! And at the time of writing the first draft of this whitepaper, the website was down again. Well, I finally gained access after a few attempts. From my research on Chat GPT, I had heard about its potential to evolve and that eventually, it could write entire courses. Curious, I tried; it would not let me. I also heard it could write entire lesson plans. Curious, I had it write a lesson plan on time management, and perhaps not surprisingly, it was not that bad. The lesson plan incorporated engaging

activities, and reflective practices, and even reminded me to make sure that the lesson objectives were tied to my learning outcomes and to program learning outcomes. I would not use the lesson, but it was a great experiment, nonetheless.

Then, I cheekily requested for it to write a whitepaper for me about the advantages and disadvantages of AI technology, like Chat GPT, in higher education. This is what it produced:

Chat GPT Response

I'd be happy to help you with a whitepaper on the advantages and disadvantages of AI technology like ChatGPT in higher education. However, it's important to note that a whitepaper is a type of document that is typically used to provide detailed information on a specific topic, such as a research study, product, or industry. Whitepapers are usually longer and more in-depth than other types of written materials and may include charts, graphs, and other types of data.

Here is a sample outline for a whitepaper on the advantages and disadvantages of AI technology like ChatGPT on higher education:

I. Introduction

- Overview of the current state of AI technology, specifically focusing on language models like ChatGPT
- Purpose of the whitepaper: to examine the impact of AI technology on higher education

II. Advantages of AI technology in higher education

- Discussion of the potential benefits of using AI technology in higher education, such as personalization, self-paced learning, and accessibility
- Examples of successful implementation of AI technology in higher education, such as tutoring systems, automated grading, and adaptive learning
- Discussion of the potential benefits for students, such as improved engagement and learning outcomes

III. Drawbacks of AI technology in higher education

- Identification of the limitations and potential negative impacts of AI technology in higher education, such as lack of human interaction, lack of critical thinking, and lack of accountability
- Discussion of ethical considerations and potential risks associated with the use of AI technology in higher education, such as data privacy and bias

IV. Current Challenges and Solutions

- Identification of current challenges in the field of AI in higher education, such as the need for effective integration, the need for teacher training, and the need for proper evaluation
- Discussion of ongoing research and development efforts aimed at addressing these challenges
- Best practices for responsible and ethical use of AI technology in higher education

V. Conclusion

- Summary of key points
- Recommendations for future research and practice in the field of AI technology in higher education
- It's important to note that this is a sample outline and it would require research and more in-depth information to complete a whitepaper. It's also important to consult with experts in the field, gather data and statistics, and have a clear structure and formatting for a whitepaper.

My honest reflection on this outline is it is not too bad. Chat GPT gave me some great ideas on how I could structure this whitepaper. Reflecting on my strengths and weaknesses as a writer for many, many years (perhaps too many), I often like to start drafting first, just letting words flow from my brain to the paper, which can sometimes be haphazard and unwieldy. This is what my daughter

would refer to as “spitting facts.” But this tool gave me some ideas for structuring my paper, which helped me overcome the burden of writer’s block that I developed after writing my dissertation for {clears throat} five years... I thought, why not try to incorporate its suggestions into my next whitepaper? So, here goes nothing...

Advantages of AI Technology in Higher Education

Higher education is at a crossroads. The Covid-19 pandemic has reshaped our institutions and led students to consider the value of higher education. Based on my observations, faculty are increasingly lamenting that their students do not want to learn. Students do not want to complete the readings. Indeed, it seems students are just not as motivated to learn, indeed

while humans are naturally curious and will often pursue out-of-school learning with great fervor, much in-school learning feels trivial and tedious. The pandemic brought even more students to the conclusion that much of the educational endeavor is not worth the considerable amount of time it requires (Alby, 2023).

Anyone who is looking out right now on the horizon of higher education is aware that ground-breaking change, whether positive or negative, is coming to higher education. We do not have to go much further than our institution and our commitment to deciding upon a new vision, to understand that it is vital that we reconsider our pedagogical practices. This is difficult, however,

at a time when it may feel like AI is stripping away our humanity, I wonder if it might be possible that it is handing us an opportunity to work with students far more than we talk to them. What if students bring strengths, interests, technical knowledge, and comfort in thinking outside the box and we pair that with our own substantial learning and talents and then bring what AI can contribute into the mix? What could we accomplish then? (Alby, 2023)

I might argue, could there, in fact, be a silver lining to AI technology to support new approaches to learning? AI technology could provide us with an excuse to distance ourselves from the rote, assembly-line-type learning that was the foundation of the American school system, spawned from the dawn of the Industrial

Revolution. No, this is not just me being radical, quite honestly, educational scholars have been calling for a change to this system for a long time. You do not believe me? Just do a quick Google Scholar search, if you will, and you will find plenty to read about this subject.

I would go further to argue that this call- to- action is even more urgent than ever. We live in an ideas economy; we no longer need to prepare our students to go into an assembly line-type economy. Scholars have predicted for a while that the biggest influencers and the most successful people will be those who have ideas, who can challenge the norms, and who can solve big problems. So, “might this be an opportunity to turn away from assembly line efficiency and toward a model where we help students use AI to extend their capabilities, allowing them to pursue interests and solve wicked problems” (Alby, 2023)?

I am not ignoring that foundational knowledge is required to develop higher-order thinking skills to assist students’ progression along Bloom’s Taxonomy. Yet, this new paradigm involves moving students through the foundational stages of the course more quickly,

into problem/project/case-based learning, much of it personalized and experiential or field-based. We would be mostly working with, working alongside, facilitating, and supporting...” (Alby, 2023).

What can this look like? In my EDU 164 (Values, Character, and Leadership) course, only the first two weeks are foundational; a survey, of important things to cover. I lay the foundation within the context of the Georgia Professional Standard (GPS) Code of Ethics, to make way for more important work. Self-directed learning experiences that include:

- Conducting research and participating in lively debates
 - ◇ i.e. debating whether middle school students should be drug-tested.
- Analyzing ethical case studies
 - ◇ i.e. exploring whether gene editing is ethical within the framework of certain normative ethical theories.
- Playing with educational tools
 - ◇ i.e. hands-on exploration of VR technology and discussing the advantages and disadvantages of gaming and VR technology in classrooms

- Practicing leadership skills
 - ◊ i.e. taking a field trip to R.M. Moore to read to elementary school students.
- Exploring real-world ethical problems within GPS ethical standards
 - ◊ i.e. creating board games to teach each other about required ethical standards

Additionally, students think critically about their moral foundation throughout the course. I encourage them to understand what they believe. I want them to be able to understand their moral foundation, and why they believe what they believe, which helps them better navigate the adult world so that they can skillfully stand up for what they believe in.

And, I have found, just like Alby (2023), that

when a student is pursuing learning, almost nothing can stop them. When they are forced, developing the intrinsic motivation needed for quality learning is a tall order. What could we imagine if we move beyond our fears that teaching in our particular field might need to drastically change?

So, could AI encourage us to grasp this fear and take charge of learning innovations? Could we use AI to support instruction and innovate it in new ways? Could we use it to develop information literacy, critical thinking, and research skills? Could AI help us teach students metacognitive skills by reflecting on their writing? Could we have “loads of discussions on what constitutes ethical use of AI in this brave new world and ethics in general? [Could we ask questions like] what do we want our world to be like?” (Alby, 2023)? The possibilities to embrace AI to forge change in higher education are endless!

Drawbacks of AI Technology in Higher Education

Even more pertinent than our inherent, deep, human fear (at least mine) of being replaced by AI, is the fact that there are some other serious disadvantages to using AI technology that we need to consider. According to Elana Zeide (click [here](#)) Associate Professor of Law at the University of Nebraska, there are three dangers of using AI technology in the classroom:

1. Automated composition applications- automated composition applications such as Grammarly can be powerful learning tools if students are taught how

to use them appropriately to support their writing. However, these tools can easily become a crutch, leading students to over-rely on them to improve their writing. Zeide (2022) says it's a matter of "being attentive to the line between providing help and reducing students' motivation to improve their own work".

2. AI for Grading and Evaluation- when we use AI to grade and evaluate student work, this could encourage teachers' overreliance on AI technology. Further, teachers might not have been trained on how to interpret AI-generated evaluations. Zeide (2022) states this is automation bias, which leads us to Zeide's (2022) third point:

3. Automated Online Proctoring Tools- of particular concern to Zeide (2022) are "the automated monitoring systems that detect when students cheat." Zeide (2022) argues that these technologies are not monitoring tools but more surveillance-type tools...however,

these tools [often] don't have enough evidence supporting their accuracy or their efficacy. And they're based on a questionable assumption that there is some normal profile of student behavior that artificial intelligence can identify that normal profile. And that deviations from that baseline indicate that something suspicious is happening, rather than just the foreseeable diversity of student physiology and environments. During the pandemic, this has led to unacceptably high rates of false flags for innocent behavior.

Teachers usually do not receive adequate training on how to interpret or equitably use these technologies. Which begs the question, what safety nets should we have in place to protect students who are falsely accused of cheating? And how might we define cheating differently in the face of AI (Alby, 2023)?

Current Challenges and Solutions

The innovation potential in higher education is no longer something that is just on the horizon. It is here, it is now. We cannot pretend that AI does not exist, even though the little girl in me wishes I could! We cannot pretend that students are not going to use AI, it is too late for that. Chat GPT had more than a million users within less than a week of its launch. More controversially, we also cannot inhibit learning because of our inherent fear of being replaced.

Rather, we need to take charge and pioneer this new educational frontier. We need to teach students how to use these tools, how to experiment with them, how to think critically about them, and how to use them in responsible ways that support learning and support innovative approaches to learning. Additionally, we need to train our faculty on these innovative approaches to learning, and on how to use these tools to support students ethically and equitably, particularly, those who come from historically underserved or marginalized populations. We must proceed with caution and enthusiasm to rethink the future of higher education.

Conclusion

In conclusion, the purpose of this whitepaper was to circle back to the conversation with you about how we can better interpret and better prepare for what is coming next. It is by no means meant to be a comprehensive literature review on all the advantages or disadvantages of AI technology. Through this whitepaper, it was also my mission to deliver the urgent call-to-action to you. It is going to be up to us to figure out the next steps. If we do not, we will surely be left behind. We must remember to not entirely let go of what has worked for generations of learners, but we must draw on our strengths and experiences as lifelong educators to reshape the next educational revolution. To fatefully quote Star Trek, our job is “to explore strange new worlds, to seek out new life and new civilizations, and to boldly go where no man has gone before.”



References

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