ARTIFICIAL INTELLIGENCE IN HIGHER EDUCATION

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Abstract

The following policy memo will analyze the current and future role for Artificial Intelligence (AI) in higher education, emphasizing the need for a policy solution. As AI continues to grow and develop in society, it is important for higher education to adapt alongside technological advancements. The memo explores the shortcomings of outright bans on AI usage in academic settings and highlights the increasing use of AI for administrative tasks and grading processes. Proposed policy solutions include defining clear guidelines for AI usage, integrating AI literacy into the curriculum, and hiring specialists to educate both faculty and students. Ensuring effective AI coexistence and preparing students for a future where AI is prevalent in the workforce might become a new purpose for higher education.

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Problem Definition

There is no doubt that the influence of Artificial Intelligence (AI) on society is growing bigger and more prominent everyday. Historically, the purpose of higher education has been to prepare students to get jobs, establish real life skills, and set them up for success post graduation. But as the world evolves and AI begins to transform the job market, the question we are now faced with is how do we best prepare students to coexist with AI and utilize it as a valuable resource rather than resisting it?

According to UNESCO, AI in higher education is expected to be worth $6 billion by 2024, as of 2023. Additional predictions show that by the year 2030, AI will have replaced as many as 2.4 million "white-collar" jobs (O'Sullivan, 2023). Instead of viewing higher education as a place to train students for these jobs that will ultimately be gone in 7 years, the role of higher education needs to be reevaluated to incorporate AI.

60%	**31%**	**43%**
of higher education institutions have provided no guideance on AI	of students say their school has an explicit ban on the use of AI	of students admit to using ChatGPT to assist them with assignments

The current stance on AI, taken by many professors and administrators in higher ed, is an explicit ban on the use of AI. This approach, however, proves ineffective and fails to equip students with essential AI literacy skills and ability to navigate AI systems that will inevitably be necessary upon entering the workforce. Currently, 31% of students say that their school has an explicit ban on using AI and 60% report that their schools have provided them with no guidance (Welding, 2023). It is imperative for educational institutions to remember that even though they are banning it or discouraging the use of AI, students may still use it. By not acknowledging the existence of it they are

arguably, not setting their students up for success post graduation. Already, 43% of students admit to using chatGPT or another form of AI to assist them with their school assignments (Welding, 2023). One of the main concerns regarding AI and ChatGPT for students is the loss of academic integrity. With the ability to use computers to answer questions, do calculations, and come up with paper structures, some fear that we are losing the ability to formulate our own academic work (United Nations Educational, Scientific, and Cultural Organization [UNESCO], 2023).

Second, to the ban on students using it, many professors, administrators, and admissions offices are using it to streamline their tasks. The reasonable integration of AI into education can help reduce administrative burdens. For example, at one university the IT department has developed an automated service ticket platform to help streamline requests (Koczera & Pushard, 2023). AI tools can also help to automate the grading process, allowing more time for individualized attention to students (Marquis, 2023).

Role For Government

 As AI grows more expansive the impact on the economy and workforce will become unavoidable. As mentioned earlier, AI threatens to replace 2.4 million 'white collar" jobs by 2030 (O'Sullivan, 2023). It is crucial to learn to coexist with artificial intelligence and harness its potential as a tool now, before it displaces too many of our jobs. Education, particularly higher education, plays an important part in the well being of our society, especially higher education. In the United States, the unemployment rate for individuals with a bachelor's degree or higher is consistently lower than the rate for those with less education. In 2020, the unemployment rate for individuals with a bachelor's degree was 5.5%, compared to 9.7% for those with only a high school diploma.

Examples of Implementation in Higher Education

Role	Description	Example of Implementation
Possibility engine	Ai generates alternatives ways of expressing an idea	Students write queries in ChatGPT and use the Regenerate response function to examine alternative responses
Socratic opponent	AI acts as an opponent to develop an argument	Students enter prompts into ChatGPT following the structure of a conversation or debate. Teachers can ask students to use ChatGPT to prepare for discussions
Collaboration coach	AI helps groups to research and solve problems together	Working in groups, students use ChatGPT to find out information to complete tasks and assignments
Guide on the side	AI acts as a guide to navigate physical and conceptual spaces	Teachers use ChatGPT to generate content for classes/courses (e.g. discussion questions) and advice on how support students in learning specific concepts.
Personal tutor	AI tutors each students and gives immediate feedback on progress	ChatGPT provides personalized feedback to students based on information provided by students or teachers (e.g. test scores)
Co-designer	AI assists throughout the design process	Teachers ask ChatGPT for ideas about designing or updating a curriculum (e.g. rubrics for assessment) and/or focus on specific goals (e.g. how to make the curriculum more accessible).
Exploratorium	AI provides tools to play with, explore and interpret data	Teachers provide basic information to students who write different queiries in ChatGPT to find out more. ChatGPT can be used to support language learning.
Study buddy	AI helps the student reflect on learning material	Students explain their current level of understanding to ChatGPT and ask for ways to help them study the material. ChatGPT could also be used to help students prepare for other tasks (e.g. job interviews)
Motivator	AI offers games and challenges to extend learning	Teachers or students ask ChatGPT for ideas about how to extend student's learning after providing a summary of the current level of knowledge (e.g. quizzes, exercises).
Dynamic assessor	AI provides educators with a profile of each student's current knowledge	Students interact with ChatGPT in a tutorial-type dialogue and then ask ChatGPT to produce a summary of their current state of knowledge to share with their teacher for assessment

(UNESCO, 2023)

Recommended Policy Solutions

 Potential policy solutions for higher education's AI problem should learn from the pitfalls of another historically controversial technology, the internet. While the rise of the internet led to a load of new ways for students to cheat, it also introduced practical ways to aid in student learning. Similar to the way that students use things like online calculators, spell checkers, and citation generators, students will use AI tools available to them to make their work easier. Through a regulatory lens, AI can be treated similarly to these other technology based tools.

 In order to address the problem of AI head on, institutions need to clearly define what they consider to be "cheating" in relation to AI. This clarification will allow students to understand what guidelines they are expected to work within. Honor codes and class syllabi should reflect what tools (and possibly even what hypothetical tools) students can use in their assignments and how they may use them. An all out ban, as currently seen in 31% of institutions (Welding, 2023), will likely be ineffective and unrealistic as AI gains popularity.

 Academic institutions must also take the lead in AI education, not just regulation. As AI becomes a more and more integral part of society, it will be essential for educators to have faculty specialized in AI who are able to effectively teach AI usage and AI literacy. In the current intermittent period, hiring an AI specialist to train faculty and students on emerging technology is an important step. Students will almost certainly interact with AI "in the real world," so it's imperative to provide them with interaction while on campus. Students will need to understand how to work with AI and identify misleading AI generated content in order to function effectively as a member of society. Again, this approach is similar to teaching internet literacy on finding reliable sources and identifying misleading content. Colleges and universities should also find ways to allow and incorporate AI in administrative tasks to give faculty practical experience and a better understanding of its applications. Professors themselves need to work to understand AI if they are to be teaching it as part of their curriculum.

Conclusion

Though many academic institutions are currently engaged in a fruitless fight against AI in higher education, the incorporation of this new technology is all but inevitable within schools and universities. Education must evolve alongside this technology instead of trying to prevent it. Allowing students to use (but not be reliant on) AI technology in their academics is essential in preparing them for a workforce where AI will most certainly be a factor. Focused teaching regarding AI literacy in general and in their respective fields will also teach students to identify and understand misleading or possibly inaccurate AI generated content. It will be up to colleges and universities to respond to the use of AI on their campuses quickly to set the standard around uses of AI in higher education.

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