The Good, The Bad, and The Ugly: The use of AI in Higher Ed

The use of technology and the subsequent integration in the classroom has been a hot topic for conversation among the academic community in the past few years. Generative AI, specifically, in higher education for students and academic professionals, comes with both advantages and disadvantages. It is becoming apparent that even within the relatively narrow population of Higher Education professionals, two camps are breaking out. On the one hand, we have a majority of enthusiasts who champion the great promise of AI to make all sorts of minor tasks easier. These attitudes are strengthened and even amplified by the institutional imperatives of tech developers in the private sector who compete for funding, fame, and proprietary rights.

On the other hand, there is a much smaller group of academic professionals who worry about humanistic, environmental, equitable, and even existential down-sides. While not wishing to exacerbate divides between the two camps, we do wish to signal certain realities and potentials that could develop into more grave concerns for which we all bear some responsibilities of thought if not action. HB3563 requires the development of a Generative AI and Natural Language Processing Task Force that charges the group to recommend model policies for schools to address the use of generative AI by students in the classroom. The technology group believes that this paper will provide valuable insight to the Generative AI and Natural Language Processing Task Force regarding the faculty's perspective.

The Good: Advantages of AI

> By good, we mean that some uses of AI are mundane, uninteresting, benign, and generally helpful in ways that don't threaten academic professionals or our students' habits of mind or productivity. AI's functions can be seen as helpful at relieving humans of somewhat ordinary, useful, and even beneficial tasks. Some of these tasks include:

Saving Time: AI can take the place of repetitive tasks and increase productivity.

Automating Content: AI can produce educational resources such as exercises, examples, quizzes;

Presenting Customizable Content**:** AI can answer questions or summarize and/or simplify text/ concepts;

Translating Texts**:** Increasingly AI can translate from one language to another, and it can suggest phrasing to improve or refine communicative tasks;

Providing Feedback: Certain well-trained AI apps can provide users with insights on how to restructure ideas, revise content, provide additional material, etc.;

Assisting With Educational Enhancements: AI can help deliver individualized learning that meets the specific needs of each student. It can adapt content, pace, and instructional approaches to match students' unique learning styles and abilities:

1. **Virtual reality** (VR) and augmented reality (AR) technologies can be used for field trips;
2. **Chatbots** can keep students engaged and motivated;
3. **Certain AI applications** can help collect and analyze data on student performance to help instructors to adjust the curriculum;
4. **AI** can provide students with fresh examples, scenarios, ideas, etc.
5. **Ethically Utilizing AI** provides educators the opportunity to teach and apply new/different critical thinking skills
6. **Narrow AI** currently assist with grammar, spelling, and usage checks/assistance for students (especially helpful in online courses)

The Bad: Disadvantages of AI

By bad, we mean that some uses of AI may threaten certain current practices or modes of working and thinking, but advancements may smoothen out the rough edges, improve productivity, and generally contribute to academic pursuits in beneficial ways.

Cost Implementation: Implementing AI technologies in higher education can be expensive and some institutions may not be able to afford the additional cost. These facts relate to the difficulties in providing equitable resources to students based on a college's financial resources.

Loss of Originality and Creativity: Students who use AI or rely solely on AI sources are not submitting original material.

Lack of Context and Accuracy: Since AI software uses source data, the results are based on the accuracy of that data. Many AI software will yield findings that are often inaccurate and do not have an associated context.

Lack of Human Interaction/ Impersonal: In person face-to-face interactions with professors and other students is a critical part of the college experience and necessary for a student's development as a whole. The use of AI and other online technologies threatens to diminish this development.

Accessibility: The use of AI and associated expenses raise issues involving equity particularly across different socioeconomic backgrounds. Funding will need to be provided for faculty and student training.

Lack of Social Skills Development in Class: When students solely rely on technology for problem-solving, they may become passive learners, lack the ability to think critically, avoid participating in class and answering questions or sharing their perspective, and have difficulty interacting with classmate and working in a group setting.

Risk of Algorithmic Bias: AI systems have bias in their source data. This can impact students differently based on socioeconomic status, gender, ethnicity, etc.

Inability to Assess Information's Currency, Authority, Accuracy, and Purpose: Student's who rely too heavily on AI often lose the ability to critically examine information and derive crucial conclusions based off of that information.

Potential Job Loss: As more tasks are automated, personnel required will decrease. Certain majors may no longer be needed; however, as is often the case, new technologies create new labor opportunities.

The Ugly:

By ugly, we mean that there are certain ethical, environmental, and even perhaps existential problems that rarely get focus but nonetheless should be addressed by academe.

Ethics and Accountability: Currently there are no universal guidelines for the use of AI at the institute or classroom level. A set of standards will need to be developed to ensure the use of AI is done responsibly. Students still need to develop and submit original work and need to be held accountable when this is not followed.

As of March 2024, the European Union proposed its AI Act, providing regulatory and legal guardrails for AI products, services,

and applications. Likewise, in October of 2023, the Biden administration issued an Executive Order pertaining to policies related to AI although at this time, no legislation in the US has been passed. However, workplaces in the US are discussing how employees need to be honest and transparent about products entailing the use of AI. We educators must at the very least emulate the corporate world in this regard. Teaching will, more and more, require that we hold students to a code of ethical AI use, but first we'll need to establish what that code consists of.

Privacy: AI programs often involve collecting and analyzing large amounts of a student's personal data. While it is true that many members of society willingly provide consent to businesses who wish to access users' personal data, students may not be aware of opt-in/opt-out options and other data-privacy concerns. Educational institutions should consider privacy implications and ways to mitigate default privacy settings and potential breaches of privacy and trust. We need to develop comprehensive ethical frameworks for AI use in education.

We cannot predict exactly how AI and other emergent, advanced technologies will continue to influence/change the educational landscape. Certainly, new and exciting developments will arise, but with them will come equal challenges to navigate. As educators, we must diligently stay abreast of each new advancement, and we must just as diligently guide our students in their ethical use of new technologies.

Regarding AI specifically, higher education faculty face two important tasks. As always, they will be responsible for discovering best practices where technology merges with education, and they will be responsible for conveying these practices to our students and training them to use them responsibly.

Each educational institution should be free to develop policies suitable to its specific context, student population, mission, etc. But as humans educating humans, the ease of use and power of AI must not eclipse our shared commitment to human flourishing, which education enhances when learners use their innate critical faculties in service to others and our institutions. The fruits of academic labor do benefit from the narrow uses of AI for mundane or more simple tasks. But a reasonable fear arises if we use AI in convincing students that those tasks are beneath their abilities or indeed beyond their capabilities. Such practices then undermine the educational endeavor and may even lead to unethically produced artifacts that do not reflect human ingenuity, best practices, or authenticity.

A clear set of informed guidelines/guardrails from the IBHE, based on these facts, would signal our shared commitment to the responsible use of all educative technologies.