The More Things Change: The Ethical Impacts of Artificial Intelligence in Higher Education

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Abstract

The release of ChatGPT and other Artificial Intelligence (AI) tools has raised significant and challenging questions around the ethics of artificial intelligence in higher education. The initial concerns regarding AI in higher education centered on academic integrity, and the literature reflects this initial response. However, the multifaceted nature of higher education institutions means that there are many domains that will be ethically impacted by the application and implementation of AI. The purpose of this literature review is to examine these many domains and stakeholders in terms of ethical impact to surface questions, concerns, and concepts that may help practitioners navigate this complex construct of education, technology, and ethics. The literature identifies several implications for practice, including academic integrity, assessment (including the concept of cognicy and the practice of authentic assessment), policies and syllabi, and frameworks, principles, and tools. It concludes with a rumination on how the work of ethics is often accomplished through questions, as well as with the recognition that, at this stage in the evolution of AI, it is difficult to identify black-letter answers. We must be prepared to adapt and evolve even as AI does.

Keywords: artificial intelligence; AI; AI tools; higher education; ethics; academic integrity; stakeholders; cognicy; authentic assessment

Introduction

When I began formulating the actual document of my dissertation, one of the required elements of the manuscript was the statement of positionality. For the program I was in, this statement served as a space to identify and articulate one's place relative to one's topic, to demonstrate possible personal biases and motivations that may frame one's research and approach. I think it also, perhaps unofficially or unintentionally, served as a personal statement of one's

philosophies and passions vis-à-vis one's topic of research. It may have also served as a place to list one's credentials and experiences or expertise vis-à-vis one's topic.

I feel like such a statement is a critical lens for this article. Ostensibly, this work is a literature review regarding the ethics of artificial intelligence in the context of higher education. On the surface, my credentials may not seem to connect me with the topic of AI and ethics. I have bachelor's and master's degrees in English. The degree I use the most is the Master of Library and Information Science (MLIS). My most recent degree is a Doctor of Education in Education/Higher Education Administration (Ed.D.). None of those would necessarily position me as an expert on or prompt me to explore such a topic.

However, my background in English makes me protective of notions of creative writing and predisposes me to value writing and textual analysis as channels for critical thinking. My area of librarianship is academic, specifically as a reference (research) and instructional librarian. One of my key areas of practice is information literacy, with a focus on what plagiarism is and how to avoid it (i.e., how to promote and preserve academic integrity). Moreover, plagiarism as part of information literacy practice has also involved me in digital literacy efforts. The Ed.D. has given me the opportunity to truly see and appreciate all the moving parts of an institution, not just the academic side. When one puts these somewhat disparate degrees and their relevant experiences together, it becomes clear why I have a vested interest in this topic.

In addition to these credentials, I was named the content expert for affordable and open education resources (AOER) and digital literacy for the University of Louisiana System in 2023. I previously served as an instructor in the System's "Bridging the Digital Divide" faculty enhancement summer program, where I focused on various topics such as AOER and copyright, Creative Commons Licensing (CCL), and fair use. In my capacity as a content expert this year, I found myself partaking in many wonderful conversations with my fellow content experts and a group of faculty members from system member institutions unofficially referred to as the "Innovation Group." I made the "mistake" during one of these conversations of mentioning my fascination with the ethics of AI.

From there, I wound up being a part of the AI programming in the summer of 2023, and from that participation I was recruited by my provost to give a presentation on those topics for faculty and instructors at my institution. My university paid for me to attend AI policy and syllabi writing seminars. Those experiences generated content that was included in the aforementioned

presentation, which I faithfully gave to faculty (in person and virtually, livestreamed and recorded) during the week before the fall semester began. I have since been recruited by our Faculty Senate and IRB to sit on committees to help articulate policies in those directions. I was also recruited to give a half-day seminar on these topics for the institution's College of Nursing, which counted for continuing education credit. Additionally, I have been working with a group of faculty from the State University of New York (SUNY) system to articulate a comprehensive statement on AI in higher education for their system, an effort in which I contributed to the ethics part of the overall document.

In other words: by expressing my curiosity, my capacity has been augmented. In augmenting my capacity, I have become more aware of the gaps in our understanding of the implications of artificial intelligence for higher education. Whereas the hot-button topic for AI in higher education tends to be academic integrity, I contend that we cannot be too focused on that particular boogeyman. Failure to fully appreciate the many ethical domains and implications of AI for higher education may make us more vulnerable to the challenges we already face, including declining enrollment and the enrollment cliff, decreasing budgets, credentialing competitors, and whatever other innovations and disruptions may arise. Using a literature review as a vehicle, I hope this piece shows that there are many other ethical elements of artificial intelligence in higher education which deserve equitable consideration and focus in our discussions. Additionally, I offer some resources and recommendations that may help address some of the concerns voiced in the literature (and anecdotally by our colleagues throughout higher education).

Academic Domains—AI Comes to the Ivory Tower

Although I said that we should not be too focused on academic integrity, I must do my due diligence as an academic librarian *and* an educator by recognizing that this topic troubles my classroom colleagues more than most other aspects of AI in higher education and therefore receives the most attention at present. In this section I address academic integrity, attempting to honor those concerns, while also looking at other facets of the academic side of higher education that AI does and will affect. Specifically, we must consider how AI may be a boon to both learners and educators, learning and teaching, meaning that to *prohibit* the use of AI in the context of higher education may be unethical.

Academic Integrity

My initial plan for this article was to focus on academic integrity policies related to AI in higher education. It was not hard to identify studies and articles examining academic integrity and AI in higher education. In fact, it was difficult to identify research in other aspects of the academic side of the AI ethics question, given the sheer volume of academic integrity articles. My initial impression of the tone of that latter chunk of the literature was *alarm*. Many of the articles I initially reviewed had titles that contained the words *academic dishonesty* (rather than *integrity*), *risks*, *cheating* (including *contract cheating*), *fraud*, *heresy*, and *plagiarism* (Abd-Elaal et al., 2019; Ascione, 2023c; Cotton et al., 2023; Currie, 2023; Keith, 2023; King & ChatGPT, 2023; Stoesz & Usick, 2023). This is just a representative sample from my initial searches in library databases and on the Internet.

Yet, I do not wish to dismiss or diminish the concerns expressed in these articles. Academic integrity *is* important. Çerasi and Balcioğlu (2023) articulate it well: "Academic integrity is a commitment to the fundamental values of truthfulness, fairness, respect, responsibility, and courage (Fishman, 2014). These principles serve as the cornerstone for what constitutes ethical academic conduct, promoting a community that is focused on information exchange" (p. 138).

One cannot ignore the ways in which, for better or worse, AI tools can be used to complete assignments (not just written assignments) and exams (Keith, 2023; Sabzalieva & Valentini, 2023). As Perkins (2023) so directly puts it, the current generation of large language model (LLM)-based AI tools "are already fluent in their output," making it difficult for adjunct faculty and full-time instructors "to correctly identify the amount of content produced by a student," which in turn makes it difficult to "provide an accurate evaluation of a student's comprehension and interpretation of the topic at hand" (p. 7). This concern is often repeated in the literature (Chávez et al., 2023; Cotton et al., 2023; Crawford et al., 2023; Mijwil et al., 2023).

It is the assertion of some scholars that, just as AI can be used to cheat, it can also be used to foster academic integrity (Chávez et al., 2023). Some may point to AI detectors that are built on AI tools as a means of upholding academic integrity, which is a valid approach. But at this stage, I do not have much faith in the detectors. They will require much more refinement and tweaking in order to be truly operational and useful (Flugum & Baule, 2023). Moreover, I see such tools as primarily a means to punitive measures. It is my contention that punitive measures are not necessarily the solution to academic integrity. Since AI can be used in teaching, learning, and

evaluation (Chávez et al., 2023), as well as cognitive offloading, it seems sensible to assume that AI can be used to promote academic integrity.

The key to using AI to promote academic integrity is by asking institutions of higher education to "reevaluate their roles, pedagogical approaches, and future relationships with companies that provide artificial intelligence (AI) solutions and their owners" (Chávez et al., 2023, p. 81). In other words, we must understand how AI will influence our relationships and dynamics with our students and adjust accordingly—that is, we must articulate our values and expectations around academic integrity and help our students understand the consequences of not doing their own work. It is not just that they could get in trouble. They need to understand how, by not doing their own work, they will likely fail to master critical content and skills, and therefore they will end up unprepared for both future coursework and the real world (Chávez et al., 2023).

As previously noted, concerns over academic dishonesty have given rise to AI detectors as a means to catch students in the act or assess scholarly publications for the unauthorized use of AI (Flugum & Baule, 2023); however, AI detectors do not solve the ethical issue, which lies with the individuals using AI illegitimately. In other words, AI is not the problem; it is merely a means to an end, conceptually no different from contract cheating or employing ghostwriters. I have chosen the word "unauthorized" on purpose because there are plenty of *legitimate* uses for AI in the completion of student work and faculty research that do *not* qualify as academic dishonesty or misconduct. There are several disciplines and professions that will expect students to know how to use AI once those students join the workforce. In short, it is not the use of AI that is inherently unethical. Rather, the issue is the transparency—or lack thereof—on the part of the user about how they employed AI in the creation or completion of an assignment or project.

One man's cheating can be another man's innovation. It is incumbent upon institutions of higher learning to articulate what cheating and plagiarism are and to provide training on what those categories mean (Abd-Elaal et al., 2019). To assume that all students understand what qualifies as cheating and plagiarism is a mistake, as a great deal of research suggests that students do not actually know what academic dishonesty is or what qualifies as academic integrity. It is beyond the scope of this literature review to examine the ins and outs of why students behave dishonestly, as there are many (Abd-Elaal et al., 2019; Crawford et al., 2023; Stoesz & Usick, 2023), but it seems certain that in some cases, students simply do not know what plagiarism is or what qualifies as academic dishonesty (Abd-Elaal et al., 2019; Çerasi & Balcioğlu, 2023; Cotton et al., 2023;

Miron et al., 2023; Perkins, 2023). In some cases, what qualifies is determined by the nature of the course or the expertise of the professor, rather than something more objective. Students' use of AI muddies these waters further, especially since AI can have legitimate applications in learning and academic support. Furthermore, it is worth echoing one author who questioned combating academic dishonesty by using AI: "is technology always the best solution to the problems it creates?" (Keith, 2023). In other words, we should probably be careful about looking to AI to help us identify solutions.

I have hinted that academic integrity does not apply solely to students; the standard applies to adjunct faculty and full-time instructors as well, as we expect faculty to model academic integrity in their work and research. Currie (2023), Mijwil et al. (2023), and Naik et al. (2022) note that academic integrity applies to the scientific and research communities, as well, and is of significance to the publishers of that research. Here we arrive at a critical juncture about the *severity* of academic misconduct in research contexts that underlines how important it is to focus on the importance of academic integrity rather than bemoaning the availability of AI. As Abd-Elaal et al. (2019) observe, "misconduct in research caused by fabrication and falsification destroys the scientific enterprise, undermines trust and is a misuse of public funds." These transgressions can and have occurred without the intervention of AI, as cheating and plagiarism have a long history in education and academia (Crawford et al., 2023; Currie, 2023; Stoesz & Usick, 2023).

Depending on the type of research, academic misconduct can affect quality of life or even cost human lives (Currie, 2023; Naik et al., 2022). We know that AI tools can hallucinate or manufacture inaccurate or false outputs. Ignoring the risks involved in using AI material as a way to ease one's workload is simply irresponsible and unethical. But this has always been the case when a researcher has used false results or tweaked their findings in research—again, the issue is academic *misconduct* and not merely the use of AI. The ethical boogeyman is the researcher who chooses not to do their own work or misrepresents their work—not the fact that an AI may produce hallucinatory garbage.

Learning and Learning Environments

Another academic domain of the higher education house in which the ethics of AI should be considered is *learning*. This forms the greatest part of the purpose of an institution of higher learning. It is easy to get caught up in valid ethical concerns about academic integrity and miss how AI can impact learning on multiple fronts. Because it can be so easy for students to use AI to

complete assignments, which in turn makes it difficult for faculty and instructors to accurately assess their students to gauge their comprehension and ability to apply what they've learned, it is not inappropriate or an invalid strategy for the educator to prohibit the use of AI in their courses and assignments.

However, the proscription of AI in courses and assignments is *potentially* unethical. AI has the *potential* to function as adaptive technology and to improve accessibility, equity, and inclusivity in education in unprecedented ways (Çerasi & Balcioğlu, 2023; Hutson et al., 2022; Klutka et al., 2018; Moya et al., 2023; Sabzalieva & Valentini, 2023). AI can be used to support and augment student learning and learning outcomes; support cognitive offloading (positively reducing cognitive load), including tutoring, personalized learning systems/environments (PLS/E), and intelligent tutoring; and support creativity and innovation (Çerasi & Balcioğlu, 2023; Currie, 2023; du Boulay, 2022; Hemachandran et al., 2022; Hutson et al., 2022; Moya et al., 2023; Nguyen et al., 2023; Perkins, 2023; Sabzalieva & Valentini, 2023). Given these opportunities, it seems equally problematic to broad-stroke eliminate AI as a tool for learning.

Some of the concerns about students using AI to learn also surrounded earlier technologies. A familiar example is using calculators in math classes. The analogy is not necessarily a one-to-one comparison, as what AI tools are capable of far outstrips how calculators help with student learning. Nonetheless, some of the same concerns about skill and content mastery and deep learning arose when calculators were introduced. Furthermore, given the number of educational platforms, learning management systems (LMSs), and software programs that have opted to automatically integrate AI into their products (Currie, 2023; du Boulay, 2022; Hutson et al., 2022; Nguyen et al., 2023; Perkins, 2023), it is becoming increasingly difficult to utilize educational technology that is AI-free.

As in the case of the aforementioned researcher who uses AI without considering the risks, the issue is transparency. Are the creators of these educational technologies making it possible for users to opt out of the use of AI within their products? Are they transparent about the integrations of AI? Again, therein is the problem: not the AI itself but how it's being integrated. If students cannot opt out of these technologies and their automatic integrations of AI, the students can potentially become confused about how AI is or can be used—or not used—in their coursework. We put them between the ethical rock and the ethical hard place.

Teaching

Learners are not the only ones who could be negatively affected by the prohibition of AI usage. Another domain of the academic side of the house that will be ethically impacted by AI is *teaching.* Preventing faculty from using AI tools in the teaching process could potentially be unethical. Educators too can potentially benefit from the use of AI tools—those same platforms and software programs have another side, the instructor side (du Boulay, 2022; Hutson et al., 2022). Much of the same research that supports the use of AI for learners also supports educators. Educators can use AI to design assignments and assessments, make use of learning analytics, and benefit from the support that students can get from AI tutors and resources (du Boulay, 2022; Hemachandran et al., 2022; Hutson et al., 2022; Ungerer & Slade, 2022).

Furthermore, many industries are already using AI. Consequently, we have an obligation to expose our students to AI and prepare them to use it ethically. While there are without a doubt disciplines and professions in which AI may not ever surface—or will surface much later—the reality is that *right now* professions and industries for which we are preparing our students are using AI. In good conscience, we never let our students in technical fields or allied health fields—or even education—go into the world with degrees that are not underlined by experiential learning and exposure to real-world settings and tools. There are reasons education majors student-teach and nursing students do clinical labs. Our resistance to engage with AI, particularly in applied areas, can lead to underprepared students—and if I have to point out the practical or ethical problems with that, then we have greater problems. We must prepare them for the use of AI and the ethical concerns about it within their own professions as much as we have to contend with that same struggle within our institutions.

While students should be trained in vocational applications of AI, we will need to be conscious of the cost. Google Gemini (formerly Bard) is free, as is Bing's CoPilot, which is integrated into its search engine. HuggingChat and YouChat are also free. However, ChatGPT has free and premium versions; Chatsonic has different tiers of pricing plans; and OpenAI Playground has a token-based system, to mention just a few programs. Educators who are considering using and authorizing use of AI by students in their courses need to bear in mind that not all AI are created equally, and not all students will be able to afford an additional expense if you ask them to pay for a specific AI program for class. I will not belabor the point regarding how costly attending college is, nor how expensive course texts and materials are. I merely pose the question: Is it ethical

to add yet another price tag to the collection of price tags already attached to a college education? Additionally, is taking such a step—to require a premium or subscription-based version of AI—reducing equity in the course? As more and more AI tools are commodified and disappear behind paywalls, their accessibility reduces, with ethical implications for our students in contexts where they may be expected to use cost-based AI.

Returning to educator use of AI, some of the same ethical considerations arise here, similar to those concerning learning: if educators let the AI do the heavy lifting, are the educators really doing their due diligence to design meaningful assessments for their students? If students can benefit from positive cognitive offloading, reducing cognitive demand, so can faculty and instructors. Surely, AI could help with grading and other forms of assessment, right? Absolutely. However, there can be a thin line between cognitive offloading and capitulating one's professional and ethical diligence to instruction and assessment. That line can be as thin as the one between students using AI because it seems an appropriate tool for an assignment and their committing deliberate academic misconduct. Faculty can walk as thin a rope as the students can. Furthermore, the question of *transparency* arises again. Are faculty communicating clearly with their students about the faculty's expectations regarding the students' use of AI? Are the faculty transparent with their students about their own use of AI? All of these questions can be further complicated by a faculty member's lack of experience with AI (Irfan et al., 2023b).

Educational Administrators

A sometimes-overlooked group of individuals involved in the academic side of the house are educational administrators—department heads, program directors, deans, etc. As du Boulay (2022) notes there has been an increase in analytics "applied to data generated in educational contexts at the class or cohort level and aimed at" administrators and their needs (p. 7). Others have identified domains of application for AI for administrators including (1) profiling and prediction, (2) intelligent tutoring systems, (3) assessment and evaluation, and (4) adaptive systems and personalization (Moya et al., 2023; Ungerer & Slade, 2022; Zawacki-Richter et al., 2019). Some of these systems may also do double-duty for upper administrators as well in the pursuit of academic policy and practice (Hutson et al., 2022; Sabzalieva & Valentini, 2023; Ungerer & Slade, 2022). In these cases, the benefit of AI rests in its ability to process large datasets and facilitate decision-making.

However, such systems raise ethical concerns about how administrators may use that data, and how they will ensure its protection and confidentiality (Sabzalieva & Valentini, 2023; Ungerer & Slade, 2022). There are ethical concerns about surveillance practices, privacy breaches, consent to the collection and use of data, equity, biases, and accountability (Ascione, 2023a; Drachsler & Greller, 2016; du Boulay, 2022; Nguyen et al., 2023; Zawacki-Richter et al., 2019). Again, we return to the notion of *transparency* in how these practices and needs are accomplished and affected by AI use. Again, though, I return to the point that these issues existed prior to the introduction of AI. Ethical concerns about these issues existed even prior to the advent of technology in these spaces, where privacy and security meant ensuring that filing cabinets and the rooms they were in remained secure against unauthorized access and use. Again: the issues aren't new. The addition of AI in the mix makes them seem new, but the ethical concerns themselves aren't necessarily new.

Additionally, while on the surface it seems fascinating and useful to use data for prediction in terms of examining cohorts and classes, there can be ethical problems with using such data owing to false negatives, false positives, and biases or when in reality the data is insufficient to generate truly meaningful or useful predictive results (du Boulay, 2022), especially where the AI fails to contextualize the data in light of possible factors (such as the impact of COVID on students' academic performance). Where administrators use AI-generated analyses without being in the loop—what is often referred to as human-in-the-loop in these contexts (versus human-on-the-loop)—there is a risk of critical information loss, statistical apophenia, and intersections of emotional intelligence and socio-cultural-historical context, never mind the sacrifice of ethics and equity in the face of efficiency.

The Non-Academic Domains—Taking Care of Business

An institution of higher learning can conceptually be organized into three broad areas: academic, student (ResLife, RSOs, etc.), and business. Much in the way that it is easy to focus on one aspect of AI in the academic area (that is, academic integrity), it is also easy to focus only on the academic area when it comes to AI in higher education. This is a dangerous blind spot when one considers how many business features common to institutions—like human resources, purchasing, payroll, auditing—will inevitably reflect their counterparts in industry, utilizing platforms that will incorporate AI (if they do not do so already).

Additionally, when one considers how many features unique to educational institutions—financial aid, institutional effectiveness, and Title IX—will or do utilize platforms that will inevitably integrate AI, one must realize that the ethical considerations go beyond the academic side of the house. Concepts such as diversity, equity, inclusion, and belonging (DEIB) and climate and culture have been threaded through all sorts of organizations, including higher education, and there are ethical implications for the use of AI in those contexts. Undoubtedly, some of these same platforms used on the business side may be integrated with student life and academic sides. And many of those platforms are used for the same purposes on the academic side in terms of data analytics and support for decision-making (Ayling & Chapman, 2022; du Boulay, 2022; Hutson et al., 2022; Ungerer & Slade, 2022).

Admittedly, my expertise and experiences in my career in higher education have largely been on the academic side of the house until the last couple of years, when I began intersecting more with the business and student life sides. Consequently, I feel less capable of commenting coherently on those facets, practically speaking. Nevertheless, I raise them here and acknowledge them because institutions of higher learning are multifaceted organizations with many non-academic entities contained within them to carry out the business and practical needs and operations of the institution. I also feel that it is important to highlight those facets because the focus has been more on academic integrity than on these other critical areas, including the ethics of teaching in the context of AI (Moya et al., 2023; Nguyen et al., 2023; Zawacki-Richter et al., 2019).

All of the points made about learners, teachers, and administrators, concerns raised about use versus abuse, and questions raised about ethics and transparency thus far, apply to the non-academic domain. We have to examine the ethical issues of AI *throughout* higher education to ensure that AI is employed ethically, equitably, responsibly, and appropriately, and not just for the sake of novelty, pressure, or budgetary reasons. All of these applications require that we consider how unsurfaced biases of many sorts, including language, culture, race, gender, and orientation, can potentially shape the AI outputs employed across these various dimensions of the institution (Ascione, 2023a; Ayling & Chapman, 2021; Hutson et al., 2022; Naik et al., 2022; Nguyen et al., 2023; Sabzalieva & Valentini, 2023; Ungerer & Slade, 2022; Zawacki-Richter et al., 2019), once again compromising or sacrificing ethics, equity, social justice, and other values critical to education.

Stakeholder Domains—The *Who* of the *What*

Just as ethical concerns with AI overlap between the academic and non-academic sides of the house, various stakeholders can and will be affected ethically by AI, as well. Besides the obvious stakeholders of students, educators, and administrators, a university relies on custodians and physical plant workers, human resources employees, campus police, administrative assistants, and various other support groups. We cannot ignore the possible impact of AI on these operations of an institution of higher learning, including the impacts on labor and economy and the environment in the ecological sense (Ayling & Chapman, 2022; Hutson et al., 2022; Nguyen et al., 2023; Ungerer & Slade, 2022). Furthermore, universities do not operate in vacuums, since our ethical obligations go beyond our campuses, physical and virtual. We have partners of all sorts, ranging from donors and alumni to local K-12 schools, business and industry partners, hospitals and other clinical environments, community organizations, third-party providers, state and federal entities, and other individuals and entities who make use of public services offered by the institution.

To all of these people and groups, we have ethical obligations that mirror those we have as and to our students, as and to our educators, and as and to the institutions themselves. Wherever AI may be integrated into processes, policies, and practices pertaining to any of these stakeholders, we have an obligation to consider how AI may affect those relationships, for better or worse. We have to consider many of the same dimensions we've discussed thus far, especially those around data collection and use, surveillance, security of data, accessibility, inclusivity, equity, and biases that may arise in those contexts related to the use of AI. Thus, we should also frame our conversations and ethical questions about the use of AI in higher education from the stakeholder perspective. While there may be overlap of considerations, such as data collection and use and consent around those activities, there may also be unique considerations as well. As is so often said in conversations about AI in higher education: one size does not fit all. Not all AI applications currently available are adaptable or applicable to higher education, nor were they designed with education in mind (Nguyen et al., 2023). Because of this, some AI that we might use may not be ethically appropriate for our uses, depending on the stakeholder group to which it may apply (Nguyen et al., 2023).

Moreover, one should consider that the current of ethical responsibility flows in both directions between student and educator, student and institution, educator and institution, educator and external stakeholder groups, institution and stakeholder groups, and so forth. This flow of ethical responsibility may not be equitable in the context of AI—in a given situation, the institution may have far more ethical responsibility than the student. The consideration of ethical liability in such circumstances can give rise to meaningful conversations, questions, and policies/guidelines that can inform our implementation or integration of AI.

Two points of concern emerged from the literature in terms of stakeholders and voices: a lack of student and educator voices (Sullivan et al., 2023; Zawacki-Richter et al., 2019). A couple of studies investigating how students feel about the ethics of AI in higher education have been conducted (Irfan et al., 2023a; Irfan et al., 2023b), but there is a need for more study, particularly to help us understand the students' understanding of these tensions.

There is much need for that from educators' and administrators' perspectives as well. A couple of resources examined for this review discuss how leadership is critical for the ethical application of AI in higher education (Ascione, 2023a; Crawford et al., 2023). Some examine administrator-facing tools and uses (du Boulay, 2022). At least one study looked at students, teachers, and institutions, but only in the context of distance learning (Holmes et al., 2023). But by and large, administrators' experiences with ethics, AI, and higher education are under-represented. Given that administrators are often the points of contact with external stakeholders and policy-authoring and/or -implementing and -enforcing entities, examining administrators' experiences with and perspectives on ethics, AI, and higher education would be very useful in creating ethical guidelines and policies, both internal and external to their institutions.

External stakeholders are not meaningfully represented in the literature either. Given the relative newness of AI in the context of higher education, this particular gap—or gaps, if one parses them out as distinct groups—is understandable. However, this gap in the literature also represents a gap in our understanding of the ethical impact of AI on higher education in a critical area that needs addressing.

Implications for Practice—Across Domains

Unfortunately, I do not have the answers to all of the concerns and questions about the ethics of AI in higher education. But my answers would, by necessity and design, be quite limited,

and AI is not one-size-fits-all, from application to policy. However, certain approaches in higher education may address some of these concerns. These suggestions are not exhaustive or AI-proof, but they may serve to quell some practical concerns about AI usage in higher education. Threaded through these suggestions is the consideration of transparency and oversight; political impact; environmental impact; diversity, nondiscrimination, and fairness; and privacy, data governance, technical robustness, and safety (Center for Teaching Innovation, 2023).

Academic Integrity

While some practitioners regard AI as a threat to academic integrity, others see AI as a tool for promoting academic integrity. Chávez et al. (2023) examine the use of AI to support and encourage academic integrity. Keith (2023) recommends incorporating AI tools into one's pedagogy to demonstrate the dangers and shortcomings of AI in terms of academic integrity.

However, one of the literature's most repeated strategies regarding AI and academic integrity is to ensure that students understand what plagiarism and cheating are and look like and connect that to AI (Abd-Elaal et al., 2019; Çerasi & Balcioğlu, 2023; Cotton et al., 2023; Miron et al., 2023). The literature suggests that some students do not understand the thin line between using AI for assistance and using it for academic misconduct (Chávez et al., 2023; Crawford et al., 2023; Perkins, 2023). If students do not know what academic misconduct looks like, they will not know how to avoid it effectively and authentically. Students must be provided with leadership and a model of academic integrity (Crawford et al., 2023; Perkins, 2023). It is incumbent upon the institution and its educators to clearly articulate and explain honest and dishonest behaviors and to communicate expectations on academic integrity to students .Those values can be communicated through academic integrity policies and syllabi (but more on that shortly). By necessity, such documents must be updated or modified to reflect the complications that AI can bring to the table. Educators must also explicitly articulate the values regarding academic integrity in courses, programs, and across campus, through conversations with students, instead of relying on the students to read the policies and syllabi.

One of the reasons this review is called "The More Things Change" is that many people think that AI will necessitate a change in the values associated with academic integrity. I argue that it won't—our values regarding academic integrity remain the same. Just as cheating has always been with us, academic integrity has as well, and it has remained largely unchanged throughout the years. Its significance to higher education remains untouched. The only thing AI

has truly changed in that regard is *how* students cheat—not *why*. And there are many reasons proposed in the literature for why students cheat, but they are beyond the scope of this discussion.

Pedagogy & Assessment

One of the more concerning aspects of AI's integration into education is the question of how education will remain relevant when AI can do so many things. It is not simply a concern about job security (though that is assuredly part of it). I return to a point that has been made time and again by myself, my colleagues, and researchers in the literature: AI cannot truly teach. Certainly, it can hold conversations with users, but learning is far more complex than such exchanges. AI cannot understand the unique, human factors and contexts that influence the capacity of any student to learn and the talent of any educator to teach. AI lacks the ability to understand those factors and contexts and adjust accordingly, not to mention address and navigate the complex intellectual, emotional, psychological, and social elements that influence learning. For example, AI cannot understand and adjust to the needs of a student who is disabled and/or has recently experienced trauma. Neither can AI clarify a confusing concept for a student by appealing to the student's lived experience. These kinds of adjustments and accommodations are currently beyond AI.

However, these kinds of adjustments and accommodations are NOT currently beyond educators and education professionals. In order to pursue ethical pedagogical applications and implementations of AI in higher education, faculty must pursue AI literacy and familiarize themselves with AI tools and resources (Çerasi & Balcioğlu, 2023). Furthermore, while a standard AI-responsive pedagogy has not yet fully emerged, we must be mindful of the impact that AI will have on teaching, learning, and research. Unfortunately, there is not yet sufficient research to truly understand the impact that AI will have on pedagogy (Eaton et al., 2023).

Nevertheless, Han et al. (2023) do offer some research that may help us reconsider our pedagogical approaches. In their study of student perspectives regarding AI tools, Han et al. were able to identify five major areas of pedagogical impact, each of which features several sub-categories. The first area is learner status, and the subcategories include decreased learner autonomy, passive learning pathways, forced learning initiatives, limited exploration opportunities, over-reliance on AI in education, decreased learning independence, restricted freedom, and system manipulation (Han et al., 2023). The second area is learning experience and

environment. The subcategories include scary and intense learning environments, which assume strict rules and supervisions and cause students to experience significant fear; more engaged classes; assumptions that more effort is needed to meet standards; scores that are result-oriented, which can lead students to lose the enjoyment of learning/exploration; educational disruption; and over-digitized learning (Han et al., 2023).

The third area of impact is educational processes and approaches. This area features subcategories including equity/equal attention for individual learners, improved effectiveness in self-learning, the provision of analytical power and insights to inform education, and active help for introverts (Han et al., 2023). The fourth area is educational interactions and relationships. This area has the fewest subcategories, with two, but those two subcategories are fairly dense. One subcategory is affected communication, with two qualifiers of "among students" and between students and teachers (Han et al., 2023, p. 3). The other subcategory is affected social and emotional relationships, with essentially the same two qualifiers of between students and between students and teachers (Han et al., 2023). The fifth area is pedagogical roles, which features three subcategories: student role, teacher role, and the role of other teaching agents (Han et al., 2023). These categories and subcategories offer an excellent way of considering the many elements which inform pedagogy and the educational process. As we consider—or reconsider—pedagogies, andragogies, and curricula in light of AI, Han et al.'s work can help guide us in a thoughtful and mindful manner that considers student concerns.

Perhaps we should consider, as recommended by the Critical AI Pedagogies project (CAP) at the Leverhulme Centre for the Future of Intelligence (2023), that ethics work in the context of AI in education is the "work of care, repair, harm reduction, risk mitigation, and responsibility in the shaping of AI." Consequently, as education practitioners, we can reconsider our curricular and assessment approaches, learning methods, and meta-epistemological perspectives when considering the impact of AI (*AI Ethics & Pedagogy*, 2023). One of the main foci of CAP is to demonstrate how "different kinds of pedagogical practices are influential, or not, in stimulating . . . fluencies in organisational contexts re-shaped by the introduction of AI technologies" (*AI Ethics & Pedagogy,* 2023). Of course, this work focuses on AI rather than education, but filtering our experiences through this approach can be helpful.

Without a doubt, the use of AI to augment learning has already emerged (Hemachandran et al., 2022). As previously mentioned, learning analytics and prediction, intelligent tutoring

systems, assessment and evaluation, and adaptive systems and other ways of customizing and personalizing teaching and learning are currently being examined and developed (Ascione, 2023c; Hutson et al., 2022; Ungerer & Slade, 2022; Zawacki-Richter et al., 2019). Many applications to teaching and learning have the capacity to increase equity and more effectively provide for the needs of diverse learners, which in turn can lead to increased student retention and persistence and provide more holistic support for students (Ascione, 2023b; Hutson et al., 2022). Indeed, incorporating AI into our teaching methods and assignments *as an assistant to student learning* has the potential to reduce the likelihood of student misuse of the technology (Crawford et al., 2023).

By and large, most assessments, even those in the creative arts, focus on the end product—the research paper, the capstone project, the exam, the finished painting, etc. The threat of AI in education, in most cases, is that students can immediately and conveniently obtain the end product without going through the process of doing the work, a practice which I have heard referred to as *sweat equity*. This is what troubles many educators: if a student uses AI to complete an assignment, there is no way of knowing if the student actually mastered the skills or comprehended the content that the assignment was meant to assess (Chávez et al., 2023; Mijwil et al., 2023). The deep learning that is vital to critical and analytical thinking, mastery, and competent application is bypassed. This has prompted the creation of AI detectors, which are not without problems, as noted earlier. Consequently, some educators simply prohibit the use of AI in their courses, which, as discussed, is not necessarily an ethically sound approach.

There are two possible and general approaches to these concerns which I will address. The first is *cognicy*, an idea proposed by my colleagues Dr. Elizabeth Robertson Hornsby (formerly of Southeastern Louisiana University) and Meredith King (University of New Orleans). They developed this concept in the summer of 2023 after being approached by Nicholls State University to give a convocation speech on the impact of AI in higher education. While preparing their presentation, Hornsby and King came across the idea of uncoupling learning from outputs or products and focusing more on the process, an idea which they shared during their presentation. The second approach is authentic assessment, which is a type of assessment "that requires application of what students have learned to a new situation, and that demands judgment to determine what information and skills are relevant and how they should be used" (Center for Innovative Teaching and Learning, 2023).

Cognicy

Cognicy is "the foundational ability to think and understand in a process that decouples cognitive processes from the tangible outcomes" (King & Hornsby, 2023). Because it is relatively easy for people to use AI to generate outputs undetected, the focus on the final product or outcome as *the* measure of skill or content mastery or evidence of completion of a research study has become paramount. King and Hornsby (2023) propose that in our efforts to teach students critical and analytical thinking skills, as well as discipline-specific content and skills, in the context of AI, our focus on the end product has interfered with the cultivation and development of those skills.

In other words, we need to revisit our notions of assessment in order to be responsive to AI while maintaining ethical practice. Çerasi and Balcioğlu (2023) note that "academics have stressed the necessity of concentrating on humans' ability to solve issues, criticize, and ask questions *despite* [emphasis added] breakthroughs in AI" (p. 141). When we focus on end products only, we are overlooking the need to cultivate within our students the actual skills involved in problem-solving and critical thinking. We ourselves are only focused on the solution, much in the way our students get focused on providing the *right* answer or a completed project or assignment without appreciating the *reason* or *purpose* for the project or assignment.

One way educators can employ cognicy in their courses is to reconsider how they assess their students. One assessment method is *ungrading*, for which King and other colleagues of mine across institutions have expressed support. Ungrading is an assessment method by which "students do not receive grades for assignments or other assessments, rather, they receive helpful, qualitative feedback that spurs further learning instead of halting it" (Academy for Teaching and Learning [ATL], n.d.). This prompts the students to focus on how they accomplish their work rather than the work itself.

This approach does not necessarily reduce the likelihood of academic misconduct, but it creates a space where students "can take risks, fail, and improve upon their work" (ATL, n.d.), which allows the students to see the effectiveness or ineffectiveness of their approaches to the task or problem. Ungrading eliminates the pressure of grades, which is sometimes what motivates students to cheat. And, most importantly, ungrading "places the focus of education back on what is being learned and why, rather than what is being produced and for whom" (ATL, n.d.). Ungrading places emphasis on the cognitive processes (shaping one's abilities and applications of knowledge and skills), which cognicy argues are the most critical part of the learning process.

Educators fear that cognitive processes will be lost to AI, but cognicy argues that we can still cultivate them, as long as we remember that the *learning* is what's important, not necessarily the final product.

Authentic Assessment

As suggested by the previous section, one way we may counter our concerns about the impact of AI in higher education, particularly those about academic integrity, is to reconsider how we assess our students. The concept of cognicy and how it may be applied through ungrading was discussed in the previous section, but that is merely one approach. Another approach that faculty can use to reduce or prevent cheating is authentic assessment.

For an assignment to be considered an authentic assessment, it must meet certain criteria. The Center for Innovative Teaching and Learning (2023), adapting the work of Grant Wiggins, offers those criteria as a bulleted list—an assignment is considered an authentic assessment

if it:

- is realistic.
- requires judgment and innovation.
- asks the student to "do" the subject.
- replicates or simulates the contexts in which adults are "tested" in the workplace or in civic or personal life.
- assesses the student's ability to efficiently and effectively use a repertoire of knowledge and skills to negotiate a complex task.
- allows appropriate opportunities to rehearse, practice, consult resources, and get feedback on and refine performances and products.

It is implied that authentic assessments provide instructors with a more direct way to evaluate a student's comprehension of a subject or skill. As with the concept of cognicy, the focus in authentic assessment is on the student's actual ability to "do the thing" rather than their ability to memorize and regurgitate material.

Authentic assessments represent a pedagogical response to the challenges of AI; they can be used to "foil" AI, which deprives the student of a reason or justification to use AI dishonestly. But AI can also be incorporated into authentic assessment in a way that supports cognicy and student learning. The practitioner must decide which approach is more appropriate for their assessment needs in a given course and within their discipline or subject area.

Regardless of the level of permissiveness an individual faculty member or academic unit may implement for the use of AI in assignments, all assessments and assignments must contain "clear and detailed instructions to students regarding how to structure" their responses and submissions (Cotton et al., 2023, p. 3). Without transparency and a model of appropriate behaviors toward AI usage in higher education, we do our students no favors (Keith, 2023). Without explicit guidance, we leave our students unclear about appropriate approaches to completing assignments, which creates a barrier to effective learning and mastery. Though this barrier can occur quite independently of AI, AI underlines the importance of effectively communicating our expectations with students, which is a critical part of pedagogy.

Policies and Syllabi

While policy articulates consequence/cause-and-effect, it also expresses values and expectations we espouse, like academic integrity. As noted earlier, academic integrity is a value which we must communicate to our students (and colleagues) beyond the academic integrity policy. Nevertheless, policy is also a vehicle for explicitly articulating those values and the consequences for failing to uphold them. Additionally, it is the foundation on which we develop procedures and practices that ensure consistency and reliability in what we do.

One key element to bear in mind when developing policy is that "not all technologies impact all users in the same way" (Center for Teaching Innovation, 2023). It is easy to solely focus on students in the context of higher education, but it is also imperative to understand how AI will impact educators, administrators, and other stakeholders. If we want to ensure the ethical use of AI while also ensuring equity, we must remember this. To that end, any area of an institution which will be or is affected by AI must have a policy or policies which articulate that area's feelings and attitudes toward AI and its uses within their domain. Furthermore, such a policy or policies should articulate acceptable AND unacceptable uses of AI in that domain and the consequences of failing to adhere to the policy or policies. A single policy on AI for an institution *will not work*. I am not sure that I believe in a unified AI policy for an institution. Just as AI is not one-size-fits-all, AI policy cannot be one-size-fits-all.

The academic integrity policy may need the most immediate modification in response to AI (no surprise there). Many universities have already modified theirs; of the many I reviewed, one that I thought worked quite well is Ohio State University's (OSU) *Artificial Intelligence and Academic Integrity* policy. I will not reproduce the whole policy here, but I want to highlight one

specific part of it. This part, reproduced below, creates latitude and flexibility for different disciplines and modalities while offering guidance and space for innovation:

> To maintain a culture of integrity and respect, these generative AI tools should not be used in the completion of course assignments unless an instructor for a given course specifically authorizes their use. Some instructors may approve of using generative AI tools in the academic setting for specific goals. However, these tools should be used only with the explicit and clear permission of each individual instructor, and then only in the ways allowed by the instructor. (OSU, 2023)

A few simple sentences like these can be added to an existing academic integrity policy without necessitating too much prescription (or proscription) or hamstringing the academic freedom of faculty (or students). As other examples, I recommend reviewing Miami University's (2023) *Academic Integrity and Artificial Intelligence* policy and the recommendations suggested by Turnitin (2023) on updating one's academic integrity policy in response to AI (*Updating your academic integrity policy in the age of AI)*.

Similarly, syllabi can be modified to reflect both the academic integrity policy of the university *and* the professor's own position on AI. If a professor does not wish for their students to use AI in their classroom, they should include a statement in their syllabus to that effect, articulating their expectations to their students and what the penalties will be for failing to meet those expectations. If a professor allows students to use AI in their classroom but only in certain circumstances and in certain ways, those circumstances and ways must be explicitly articulated in the syllabus.

Some of my colleagues let students use AI on some assignments but not others. To those individuals, I recommend an overall statement in the syllabus on AI regarding academic integrity, which includes the detail that exceptions will be articulated in individual assignments. Within those assignments, the faculty should explicitly articulate what will and won't be permitted regarding the use of AI in those circumstances. My colleague Meredith King (of King and Hornsby) has shared a model syllabus statement that is flexible and adaptable, which I have shared in my own presentations on the topic of AI in higher education. I reproduce it here:

> Using any AI generated content (such as that generated by large language models like ChatGPT or Bard) must be authorized specifically and correctly attributed. Failure to

> correctly acquire permission and/or attribute generated content is plagiarism and will be treated as such.

At the time of the writing of this review, my institution is in the process of developing and implementing AI policies where appropriate. Faculty who are concerned about transparency regarding the use of AI in their courses have asked how to accomplish that. I have referred them to the above policy, and many have expressed their intention to use it in their own syllabi until the institution and individual units and departments within it have fully articulated AI policies in place.

It is beyond my purview and would be irresponsible of me to dictate an ideal policy to a specific faculty member, department, or program, especially outside of my spheres of experience and expertise. The examples I have shared here are adaptable to the needs and concerns of any faculty member, program, or discipline, at any level. Furthermore, as noted in the last section on pedagogy and assessment implications, there is not yet sufficient research to truly understand the impact of AI on those facets of higher education. Consequently, any policies related to pedagogy and practice must be flexible and responsive. And it bears repeating: any policy or syllabus content related to AI must be unequivocally clear. It is incumbent upon faculty to articulate within their syllabi—even to the assignment level—what their expectations are regarding the use of AI in their courses (Cotton et al., 2023).

By extension, any policies related to non-academic areas of the institution must include legal and ethical considerations on the use of AI in their processes and procedures/practices. Frankly, in all the months I have been applying myself to the question of AI ethics in higher education – having conversations, reading research, talking practice with colleagues at my own institution and beyond – I have not seen much, if anything, about AI policies beyond Academic Affairs; consequently, I do not feel comfortable prescribing policy approaches to Student Affairs or Business Affairs. However, I must emphasize the need for strong leadership and transparency when it comes to authoring and implementing policies related to AI in those areas. Additionally, not much research is currently available on enterprise approaches to AI implementation in higher education. Regardless, should such approaches be implemented, privacy, consent, tracking, and transparency as they pertain to data must be considered (Ascione, 2023c).

UNESCO offers seven recommendations when it comes to AI policymaking in the context of education. These seven recommendations are presented here as they appear in *ChatGPT and Artificial Intelligence in Higher Education: Quick Start Guide*:

1. A system-wide vision and strategic priorities
2. Overarching principle for AI and education policies
3. Interdisciplinary planning and inter-sectoral governance
4. Policies and regulations for equitable, inclusive, and ethical use of AI
5. Master plans for using AI in education management, teaching, learning, and assessment
6. Pilot testing, monitoring and evaluation, and building an evidence base
7. Fostering local AI innovations for education. (Sabzalieva & Valentini, 2023, p. 12)

These guidelines are broad enough to allow for flexibility for the needs of any educational organization. While a single academic department may not feel the need to articulate a vision and strategic priorities for AI, considering the rest of the guidelines within the larger context of its parent institution's and parent system's visions and strategic priorities is critical.

Frameworks, Theories, Principles, and Tools

Because I cannot and should not attempt to identify a singular framework, set of principles, or tool to ensure that an institution is operating ethically in regard to AI. I offer several resources that may assist in ethical policy and practice. Not all of these resources are based in the United States, so adjust accordingly if applying or implementing them. Though I decry the idea of a unified AI policy for institutions, Floridi and Cowls' (2019) "A Unified Framework of Five Principles for AI in Society" identifies five core concepts—four of which emerge from bioethics. The five principles are beneficence, non-maleficence, autonomy, justice, and explicability, which they characterize as a combination of intelligibility and accountability (Floridi & Cowls, 2019). While this resource is not a sufficient policy document for an institution, it can serve as a framework on which such a document could be based.

The Institute for Ethical AI in Education (IEAE; n.d.) was founded in 2018 by Sir Anthony Seldon, Priya Lakhani OBE, and Professor Rose Luckin. Over two and half years, the Institute undertook "a programme of wide consultation," which ultimately yielded *The Ethical Framework for AI in Education* and its subsequent *Annex* which updated several aspects of the original framework. The IEAE (n.d.) consulted "a wide range of stakeholders" during discussions at The Global Summit on the Ethics of AI in Education, yielding a document which brings together "their

views and values" and "support[s] leaders and practitioners in any educational setting to make decisions related to the procurement and application of AI in education."

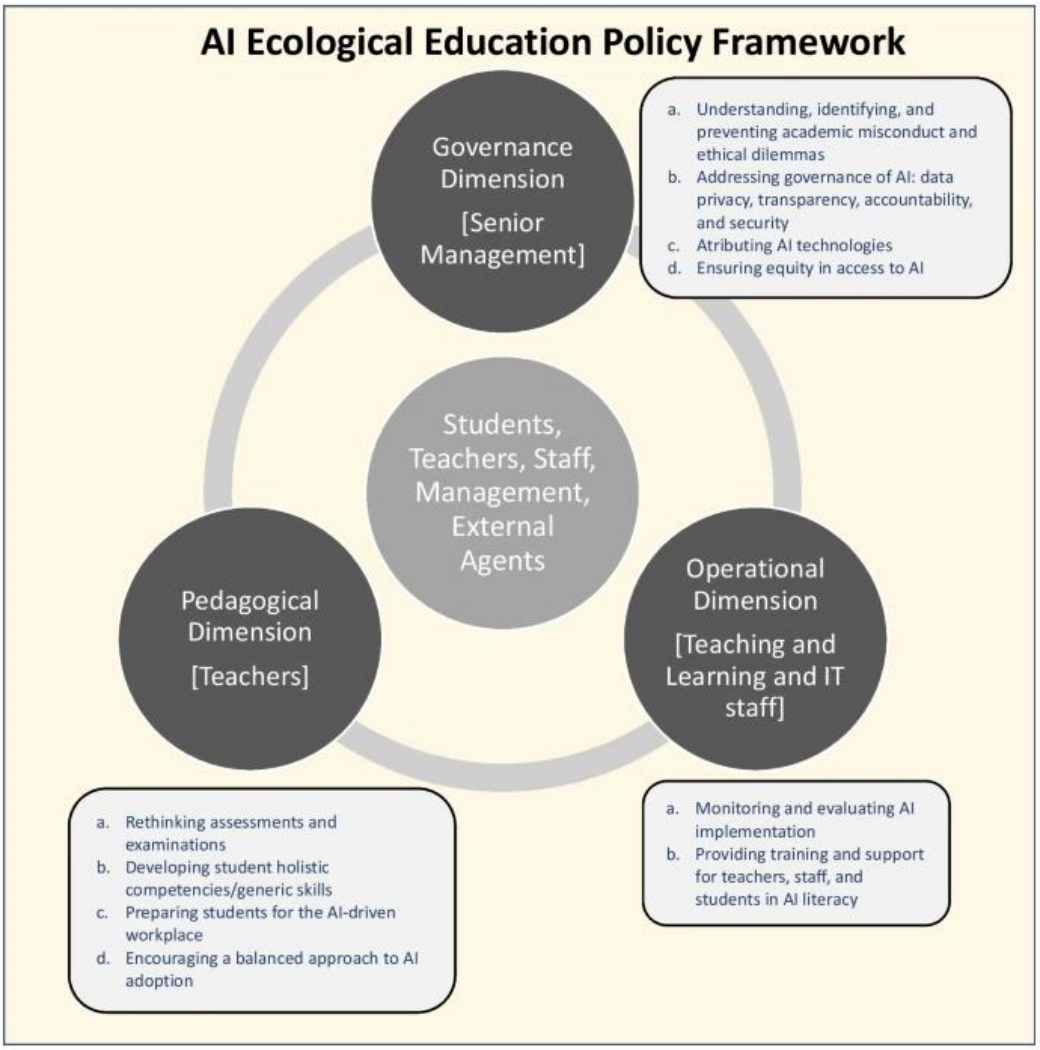
The Ethical Framework for AI in Education is a collection of nine objectives related to the Institute's intentions. Each objective has a set of criteria, which vary in number, and a checklist meant to support action. The objectives include achieving educational goals, forms of assessment, administration and workload, equity, autonomy, privacy, transparency and accountability, informed participation, and ethical design (IEAE, n.d.).

The Academic Integrity Council of Ontario published an information sheet entitled *Supporting Academic Integrity: Ethical Uses of Artificial Intelligence in Higher Education Information Sheet* (Miron et al., 2023). The document articulates the creators' intention "to provide all higher education stakeholders general information" regarding AI and to "outline some considerations for its ethical use" in that context. It provides a list of stakeholder considerations, taking into account the many perspectives and affected populations relative to the use of AI in higher education. It also provides many resources for educators and features several points for instructors to contemplate when considering using AI as an assessment.

Chan (2023) offers a sweeping and comprehensive ethical framework for education policy that features three dimensions: pedagogical, governance, and operational. Chan connects these dimensions to different stakeholder groups. The pedagogical dimension involves teachers/educators, while the governance dimension involves senior management. Both of these dimensions contain four respective areas of focus. The operational dimension involves teaching and learning and IT staff and has two areas of focus. In the center of this three-dimensional structure are students, teachers, staff, management, and external agents. These elements combine to create what Chan calls an AI ecological education policy framework, as seen in Figure 1.

Figure 1

AI Ecological Education Policy Framework



(Chan, 2023)

Given the comprehensive approach to this framework, this is a good foundation for policy and practice for higher education with regard to AI; it also addresses several significant ethical considerations. This framework was generated via analyses of various AI policies and the examination of their common themes. The limited areas of focus in the operational dimension represent a weakness in the framework and could use expansion. “Monitoring and evaluating AI implementation” does not do sufficient justice to the many tasks such application and implementation will involve, starting with security and ranging through privacy and confidentiality

concerns and everything in between. Senior administration should also be involved in that dimension, especially where decision-making about AI products and solutions will involve significant cost and investment.

Nguyen et al. (2022) offer eight ethical principles for the use of AI in education. These eight principles can be applied to any aspect of an institution of higher learning, academic or not, and take into account the wide variety of stakeholder groups affected by the use of AI in education. These eights principles include:

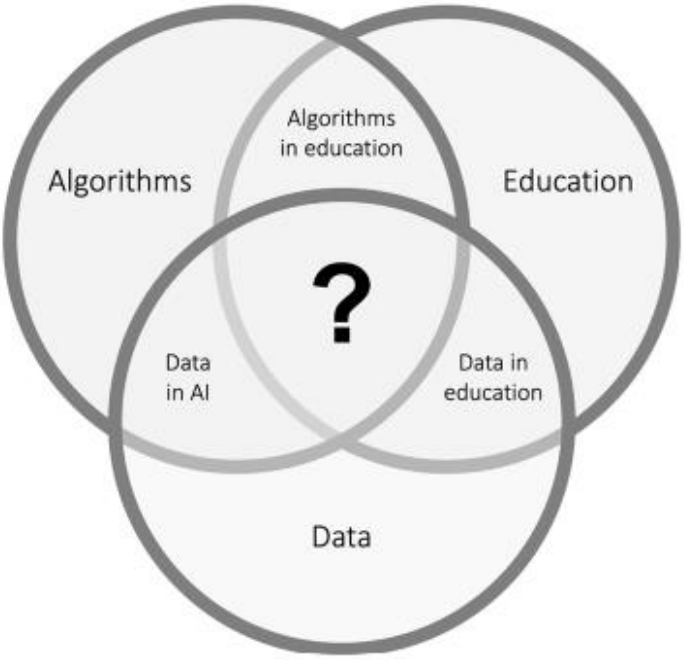
- Governance and stewardship
- Transparency and accountability
- Sustainability and proportionality
- Privacy
- Security and safety
- Inclusiveness
- Human centered AI for education (AIED)

This is one of the better frameworks that could be used in the creation of policy and practice in institutions of higher learning across the board. Nguyen et al. (2022) provide a table which connects these principles to other documents and frameworks, including several UNESCO resources (Ethic AI 2020 and Education & AI), the Beijing Consensus, the OECD, the European Commission, and the European Parliament Report AI Education. Given how connected these principles are to these myriad organizations and resources, Nguyen et al.'s framework provides a solid foundation for integrating AI into policy and practice.

Holmes et al. (2023) created a "Framework for the Ethics of Learning with AI," which features overlapping areas of consideration, as seen in Figure 2. This framework was adapted from earlier work by Holmes et al. The question mark in the center represents what Holmes et al. (2023) refer to as "*unknown* unknowns," while they refer to the other elements as "*known* unknowns," which means they know what the factors are, but the content of the factors is not always known nor remains stable (p. 100).

Figure 2

Framework for the Ethics of Learning with AI

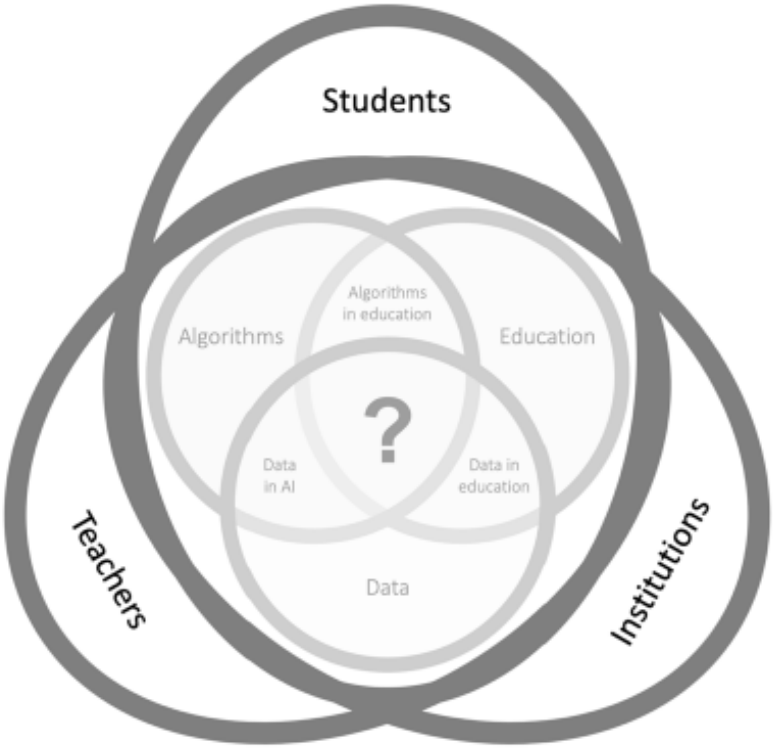


(Holmes et al., 2023)

Holmes et al. also offer another version of this framework which adds three stakeholder groups to the image, as seen in Figure 3. The framework seen in Figure 1 remains but is overlaid with three primary groups. Both frameworks have limitations, not the least of which is that limiting the stakeholder groups to three—students, teachers, and institutions—misses some critical partners and contributors to higher education. Though this framework is meant to be community-focused, it does not account for the actual communities which often accompany institutions—city and local governments, community organizations, industry partners, etc.—so it is difficult to regard this as an effective community-wide application. Nevertheless, it is an excellent visualization of many intersecting features of AI in higher education.

Figure 3

Stakeholder Framework for the Ethics of Learning with AI That Involves the Ethics of Data, Algorithms, and Education



(Holmes et al., 2023).

Drachsler and Greller (2016) create a checklist for trusted learning analytics that supports "researchers, policy makers, and institutional managers" in the process of adopting and implementing learning analytic systems. Given the date of publication of this resource, it does not address AI. However, it does address some of the key ethical concerns related to the collection, use, and surveillance of data, not to mention user consent to those activities in the context of education. Therefore, when implementing platforms or systems which include those activities and involve the application of AI, Drachsler and Greller's checklist may be a useful tool to support ethical use.

Their checklist is referred to as "DELICATE" and is built on various ethical and legal frameworks and based on several key concepts (such as data privacy). Each letter in DELICATE

stands for a domain of consideration and is accompanied by questions or actions that can be taken to ensure ethical practice. The considerations are:

D = Determination

E = Explain

L = Legitimate

I = Involve

C = Consent

A = Anonymize

T = Technical

E = External

Each of the domains contains two to three questions or actions/tasks related to the domain to ensure ethical data protection practice. Ayling and Chapman (2022) identify and review 39 AI ethics tools to determine their effectiveness at evaluating and auditing (two very separate types of assessments). They based their study on several frameworks related to the assessment of "the effects of technology on the environment, information privacy, data protection, and human rights," and they created a typology used to assess the identified tools. The authors highlight the strengths and weaknesses of these various tools, many of which are available for internal self-assessment. Unfortunately, the authors find many of them wanting and indicate that their use may not be as helpful as initially imagined. It is worth consulting this resource if an institution considers using one of these possible tools as a means of evaluating or auditing the ethical use of AI at their institutions.

Legal Implications

The legal implications of AI in higher education are complicated. As of the writing of this review, the U.S. Copyright Office has taken the stance that AI cannot be designated authors, while the Patent Office has taken the stance that AI can be recognized as inventors/contributors to invention and patent applications. Obviously, such conflicts are problematic but understandable, given the still-evolving nature of AI legislation and law. Regardless, this suggests that laws about copyright, patents, and intellectual property must evolve, and institutions of higher learning must evolve along with them to ensure that the facets of both student and faculty rights and work are adequately acknowledged and protected, not to mention those of the institution itself.

Undoubtedly, current laws about data security and cybersecurity will evolve to include language about AI to ensure continued compliance regarding privacy and confidentiality (Ascione, 2023a). This theme—how AI will affect current laws about data privacy and confidentiality, security, fraud, and consumer protections—repeats throughout the literature. However, there are very few answers to be had. At the end of the day, such protections and laws exist and must evolve to reflect the capacities and potential of AI.

Conclusion: Final Thoughts and Observations

I have been marinating in this article and its research for quite a while. I am quite over the authors who use ChatGPT to write parts of their works to make a point about its fluency (for what it's worth, no part of my own work here was created using ChatGPT or any AI tool). I am concerned that much of the academic side of these conversations is focused on academic integrity. Again, that is a legitimate and valid concern, but that hyper-focus is taking away needed focus and energy on other aspects of academics, not to mention the other areas of the institution (business affairs, student affairs, etc.).

I am also overwhelmed by the hyper-focus on ChatGPT, though other tools exist and more seem to emerge all the time. There is a very real need for research on these other tools and their applications, not just ChatGPT. I am troubled by the lack of educator and student voices regarding the ethical use of AI in teaching. I am troubled by the lack of administration-side conversations about the ethics of AI in higher ed. I am troubled by the lack of focus on other stakeholder voices. And I am troubled by the uncertainty that surrounds so much of this. It is a very dense sauce in which I marinated and continue to marinate, as my willingness to engage in these conversations and offer education and training on these topics, and my own curiosity regarding our evolving understanding of AI continue. Unfortunately (if the editors will forgive this joke), I have, to some degree, gotten lost in the sauce.

I am also concerned that we are not seeing more research and discussion about AI literacy and pedagogy. Admittedly, AI usage in higher education is still relatively new, so that lack of research and discussion is not surprising. But it is troubling—we as educators need to educate ourselves so that we can educate our students. A structured AI literacy framework is needed to effect both of those things meaningfully, educating both educator and student. Furthermore, we need to understand how AI can and will affect our pedagogical (and andragogical) practices before we start shifting policies related to teaching and curriculum.

My most reliable sounding board is my husband, who is not an academic; he works at a brewery. Despite his valiant efforts, he often glazes over when I start talking about these things at home, trying to arrange my thoughts. Toward the end of writing this piece, I unsurprisingly got too much into my own head about the ethics of AI in higher education. I was complaining about my frustrations with trying to get my ideas down on paper. I was talking through some of the common ethical challenges represented here when I uttered the following quote to him, preluded with a warning that it might sound like I was splitting hairs: there is a difference "between doing ethical things and doing things ethically" (Nguyen et al., 2023, p. 4224).

That quotation earned me a head tilt and a shrewd look. "You know what that sounds like to me?" he replied. "It sounds very much like Dr. Ian Malcom [from *Jurassic Park* (1993)], when he says, 'Your scientists were so preoccupied with whether or not they could, they didn't stop to think if they should.'" Given my deep and abiding love for Dr. Malcom (and Jeff Goldblum), I appreciated the sentiment, which is echoed in at least one publication examined for this review. Currie (2023), in examining ChatGPT and academic integrity, wrote, an early hype phase [of AI] saw widespread use of AI "if we can, let's do it" which quickly devolved to a more focused approach to areas of actual benefit "just because we can does not mean we should."

The husband, Dr. Malcom, and Dr. Currie are all right (despite Dr. Currie being the only actual, real doctorate-holding person among that lot): at the heart of the question of the ethics of AI in higher education is just that—questions. The husband reminded me that Dr. Malcom talks about how his job as a mathematician specializing in chaos theory is to ask questions. And this is truly important, not just because I keep using the word *impact* in this paper. *Impact* is the word used most often in titles regarding the ethics of AI in higher education. It is not the AI itself that troubles us ethically; it is how that AI can be, is, and may be used in our higher education context. And we cannot penetrate that trouble without asking questions.

As I noted in the Implications for Practice section, the solutions and answers to some of the questions are not the "gotchas" of AI detectors or wholesale prohibition of the use of AI. The solutions and answers are about affirming/reaffirming our values around the processes and mechanisms which serve as the foundation of a college, like academic integrity and teaching. The solutions and answers are about effectively, meaningfully, and intentionally articulating and communicating those values and expectations to our students, colleagues, and other stakeholders.

Elana Zeide (2019), writing for *EDUCAUSE Review*, identifies five elements to consider and six questions to ask in terms of implementing AI in higher education. I offer them at this point in the discussion because I think they are a good distillation of the many topics and themes explored throughout this review. The five elements needed for an equitable and optimal implementation are procurement, training, oversight, policies and principles, and participation. This list covers the big bases of integrating AI into higher education. The six questions are represented here as Zeide (2019) poses them in her article, though without the qualifying explanations:

1. What functions does the data perform?
2. What decisions don't we see?
3. What controls the content? Is it you, or is it the technology provider? How comfortable are you with that? How comfortable are your professors with that?
4. How do we check outcomes in terms of efficacy, in terms of distribution, and in terms of positive and negative outcomes?
5. What gets lost with *datafication*?
6. What – and whose – interests do we prioritize?

We have to keep a lot of plates in the air when considering the implementation AI in higher education. The questions and elements provided by Zeide demonstrate that. Though the questions can be overwhelming, if we take one step at a time—one element, one question at a time—considering the ethical use of AI in higher education can be revolutionary, revelatory, innovative, and illuminating.

I was able to attend several productive and useful seminars on policy and syllabi writing for AI over the summer of 2023. Two of these seminars were conducted by Dr. Jim Castagnera, co-founder of the International Artificial Intelligence Association and the Center for Cybersecurity and Compliance. In both of the webinars, Dr. Castagnera made a powerful statement regarding AI in higher education: "There are no black letter answers." At this point in time, I believe he is right. I also believe that this will change later, but for now we must operate in spaces where the ink hasn't yet dried—and even where the sketches are just in pencil, not yet fully fleshed out and formed, where there are more thoughts and ideas than there are concrete representations and manifestations.

Consequently, grace and flexibility are needed in those spaces. As AI evolves, our understanding and application of it will evolve too. The ethics regarding AI, whether in or out of higher education, will evolve. At this time, we can only do the best we can with what we know and what we have available to us. Legislation and regulation are still developing and evolving at this time, and information about legality and liability regarding AI is still limited. The answers to some of the questions posted in this article remain unclear. And we have to be comfortable with that, adapting to the best of our ability—doing better when we know better.

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