

## Higher Education Leadership: The Faculty Response to Artificial Intelligence Usage by Students

Max Marc, Black Hills State University, [max.marc@bhsu.edu](mailto:max.marc@bhsu.edu)

Online published: July 2025  
Print published: July 2025  
Editor: Sue Kong

Authorship Roles and Conflict of Interest Statement is on file at the Journal of Leadership and Management offices, available on request. Contact [editors@jleadershipmanagement.org](mailto:editors@jleadershipmanagement.org)

### ABSTRACT

The availability of Artificial Intelligence (AI) has caused apprehension among higher education faculty concerning its use by students for academic assignments. This apprehension is centered on academic integrity, the cultivation of critical thinking, and wider ethical considerations; with many educators indicating they feel ill-equipped to manage this technological shift. In addressing this, institutions have predominantly concentrated on AI ethics education. There is, however, a scarcity of robust empirical evidence to suggest that AI ethics education effectively dissuades students from using AI for academic expediency; particularly when confronted with significant incentives such as efficiency and improvement of grades.

This paper posits the necessity for a pragmatic shift in perspective, arguing that AI represents an evolving educational landscape that requires adaptation rather than prohibition. An 'AI-First' approach is advocated, where it is assumed that students will partner with AI to learn, and to do their assignments and exams. This necessitates a fundamental redesign of curricula and assessment methodologies to presume and strategically integrate student collaboration with AI. Such an approach seeks to cultivate future-ready competencies and prepare students for a professional environment where AI proficiency is increasingly crucial.

Historical precedents of technological disruptions in education, such as the introduction of laptops in the classroom and online learning, reveal a pattern of initial "tech panic" succeeded by eventual adaptation and integration. The current concerns surrounding AI will follow a similar trajectory. By reframing AI as an empowering instrument for democratizing skills and augmenting human capabilities, higher education can progress beyond reactive measures. This paper contends that endeavors to police student AI-use represent an untenable long-term strategy. Instead, the focus ought to be on fostering an educational ecosystem wherein AI is leveraged constructively, enabling universities to adjust, adapt, and sustain their core mission of preparing students for a complex, AI-suffused future.

### KEYWORDS

*Artificial Intelligence, Higher Education Leadership, Student Use of AI, Faculty Concerns*

## Introduction

In October 2024, the faculty union of the California State University system, one of the largest university systems in the U.S., released a document containing the following statement (California Faculty Association, 2024):

“... the California Faculty Association will fight to protect academic labor from the incursion of AI...”

The adoption of generative Artificial Intelligence (AI) tools by students marks a watershed moment for higher education, requiring a critical reassessment of established pedagogical strategies and methods of assessment. This transformative development has engendered significant apprehension among faculty members. Principal concerns revolve around the potential erosion of academic integrity as students utilize AI for assignments, the conceivable detrimental impacts on the development of essential student learning processes and critical thinking faculties, and the broader ethical questions that student AI usage introduces. Moreover, many educators articulate a sense of unpreparedness, citing a deficiency in comprehensive institutional guidance and the requisite technical skills to adapt effectively. These anxieties are of such a magnitude that they prompt questions regarding the future viability of the traditional university model itself.

This paper, however, proposes a pragmatic and optimistic reframing of the discourse pertaining to student AI use, contending that an emphasis on restriction and prohibition will be ineffective and may obscure the potential advantages of these technologies. Through an examination of historical precedents of technological disruption within education, an analysis of stakeholder incentives using a game-theoretic framework, and by drawing parallels with the integration of AI in professional contexts, this article puts forth that an ‘AI-First’ approach is not only more practical but ultimately more beneficial. Such a paradigm shift entails a fundamental redesign of curricula and assessment methodologies to assume and strategically incorporate student collaboration with AI, thereby fostering vital future-ready competencies and equipping students for a workforce where AI proficiency, and collaboration with AI, will be required.

Ultimately, this paper aims to shift the conversation from one centered on threat mitigation to one focused on maximizing opportunities. It explores AI not merely as a challenge to academic norms, but as a potentially empowering agent capable of democratizing access to skill development and augmenting overall human capabilities. The imperative for higher education institutions, therefore, is to move beyond what can be characterized as an unwinnable game of policing student AI use. Instead, the emphasis should be on cultivating an educational ecosystem where a primary assumption is that, like it or not, students will use AI to learn, and to do their assignments and exams. Changes to curricula and teaching methods must be made such that through their inevitable use of AI, students develop the agency, critical engagement skills, and self-discipline necessary to leverage AI constructively. This perspective champions the thoughtful and strategic integration of AI to enhance, rather than diminish, the core mission of higher education: preparing students for a complex future wherein collaboration with intelligent technologies will be an integral aspect of professional and intellectual life.

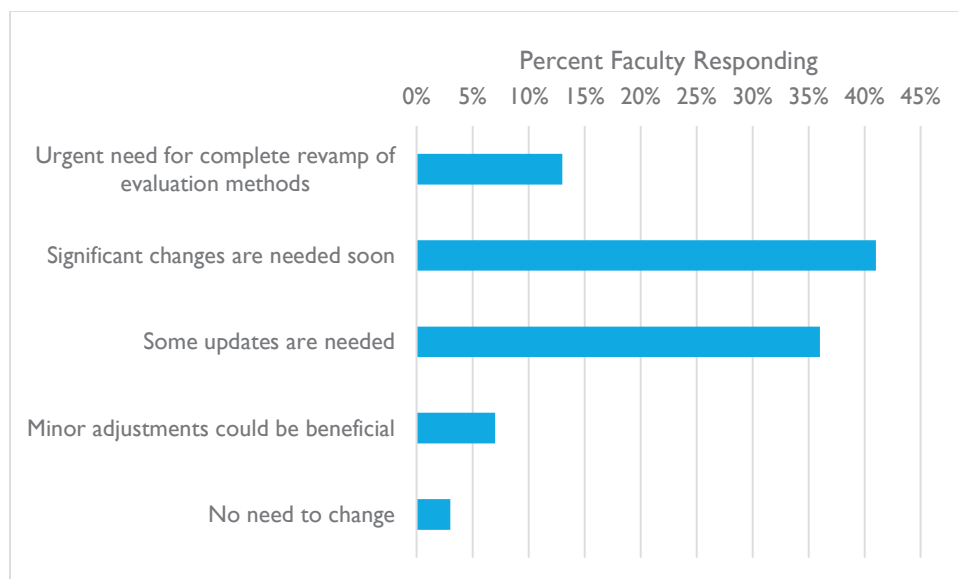
## Faculty Concerns about AI Usage by Students

Students use AI in various ways to help them achieve an improved course grade. This has ignited a spectrum of pedagogical and ethical questions within higher education, with faculty members expressing distinct concerns regarding student utilization of these potent new tools (Bond et al., 2024; Wang et al., 2024). These apprehensions are widely held; for instance, 95% of institutional leaders foresee increased issues surrounding academic integrity due to generative AI (Elon University & AAC&U, 2024).

A primary and immediate concern for faculty centers on academic integrity, particularly the employment of generative AI tools by students for the completion of assignments (Bond et al., 2024). This concern is highlighted by findings that 24% of students already use AI to generate first drafts of their work (Digital Education Council, 2024), and 59% of university leaders report an observable rise in cheating since AI tools became broadly accessible (Elon University & AAC&U, 2024). Consequently, half of all faculty members believe that it is necessary to redesign current assignments to be more “AI resistant” (Digital Education Council, 2025). This unease is also mirrored among students, with 35% of Harvard undergraduates expressing worry that their peers will use AI to secure an unfair academic advantage (Hirabayashi et al., 2024).

Beyond academic dishonesty, faculty are apprehensive about the potential adverse impacts of AI on student learning processes and outcomes. A significant 82% of faculty are concerned about students becoming over-reliant on AI tools (Digital Education Council, 2025). This concern is shared by students; 52% of students themselves concede that over-reliance on AI tools could negatively affect their academic performance (Digital Education Council, 2024). This over-reliance may manifest in behaviors such as diminished engagement with course material; for example, approximately a quarter of Harvard undergraduates using AI report being less inclined to complete required readings, opting instead for AI-generated summaries (Hirabayashi et al., 2024). Such trends fuel faculty fears that students may not cultivate deep analytical capabilities or internalize fundamental concepts. Furthermore, with 83% of faculty concerned about students' ability to critically assess AI outputs (Digital Education Council, 2025) and 90% of institutional leaders viewing diminished student learning outcomes as a significant challenge in AI adoption (Elon University & AAC&U, 2024), the imperative for educators to guide students in responsibly using and critically evaluating AI-generated information becomes paramount (Wang et al., 2024).

The ethical challenges posed by student AI use extend further, encompassing broader issues of data privacy, algorithmic bias, and student autonomy, all of which intersect with faculty responsibilities (Wang et al., 2024; Bond et al., 2024). Compounding these concerns is the matter of faculty preparedness and often inadequate institutional frameworks. Many educators report a deficiency in technical skills and uncertainty regarding pedagogical strategies for effectively integrating AI in response to student use (Wang et al., 2024; Bond et al., 2024). This difficulty is amplified by the fact that 80% of faculty do not find their institution's AI guidelines for teaching comprehensive enough, and a similar proportion feel their institution has not clearly communicated how AI can or cannot be used (Digital Education Council, 2025). This prevailing lack of clarity and preparedness can intensify faculty anxieties regarding the management of student AI usage. It underscores the urgent necessity for significant efforts in curriculum redesign and robust professional development to equip faculty to navigate this evolving and complex educational landscape (Bond et al., 2024; Crompton & Burke, 2023).



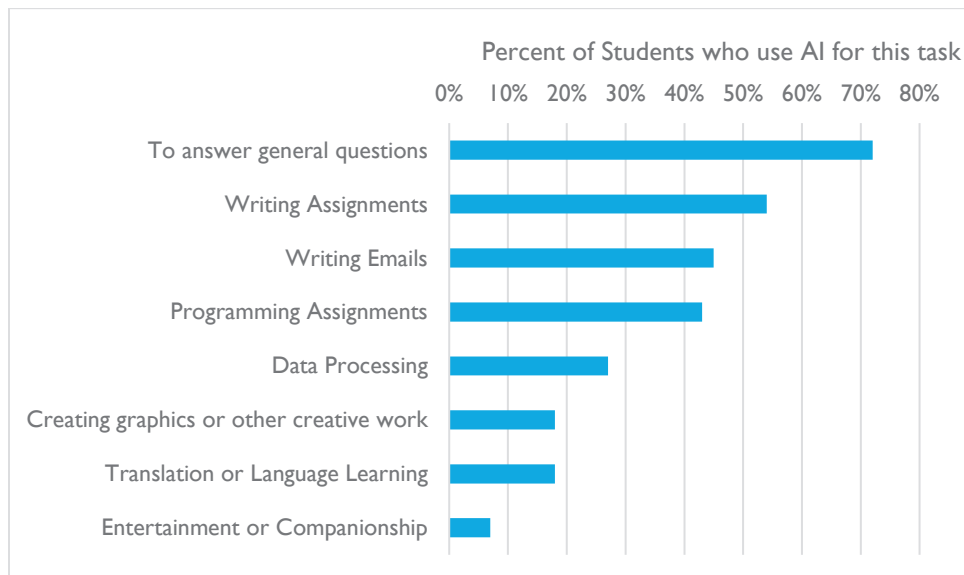
**Faculty view on the need to update student evaluation methods due to AI (Digital Education Council, 2025)**

#### Violation of the social contract

Use of AI by students to do their assignments and exams poses a considerable challenge to the implicit social contract established between educational institutions, students, and future employers. When students employ AI to complete assignments, particularly without genuine engagement with the material, they risk circumventing the learning process itself (Vieriu & Petrea, 2025). This practice, identified as a form of

academic dishonesty, can result in a deficit in acquired knowledge and, crucially, underdeveloped critical thinking and problem-solving skills (Vieriu & Petrea, 2025). Employers operate on the presumption that graduates possess a certain level of competence and knowledge commensurate with their qualifications. If students graduate lacking these foundational abilities due to an over-reliance on AI for coursework (Vieriu & Petrea, 2025), this undermines the value of their credentials and breaches the trust inherent in the social contract, potentially contributing to a skills gap in the workforce (Kenan Institute of Private Enterprise, 2025).

This scenario simultaneously creates an ethical dilemma concerning the fair assessment and reward of student effort and knowledge. If AI tools can be leveraged to inflate grades or complete assignments with minimal student input, traditional metrics of academic achievement, such as Grade Point Averages (GPAs), become unreliable indicators of a student's actual learning or capabilities (Sallam, 2023). This devalues the diligent work of students who engage authentically with their studies and endeavor to develop their understanding without undue reliance on AI. The study by Vieriu and Petrea (2025) found that a notable percentage of students acknowledge the potential for AI to “encourage cheating, as it makes tasks too easy” (p. 9). This situation calls into question the integrity of assessment processes and the equitable recognition of genuine academic merit (Bearman et al., 2024). Addressing how to ethically reward student effort in an environment where AI can obscure authentic learning represents a critical challenge for educational institutions aiming to uphold academic integrity and the meaningfulness of academic qualifications.



**Primary Purposes of Generative AI use by Students (Hirabayashi et al., 2024)**

### Students' need for mental effort in learning

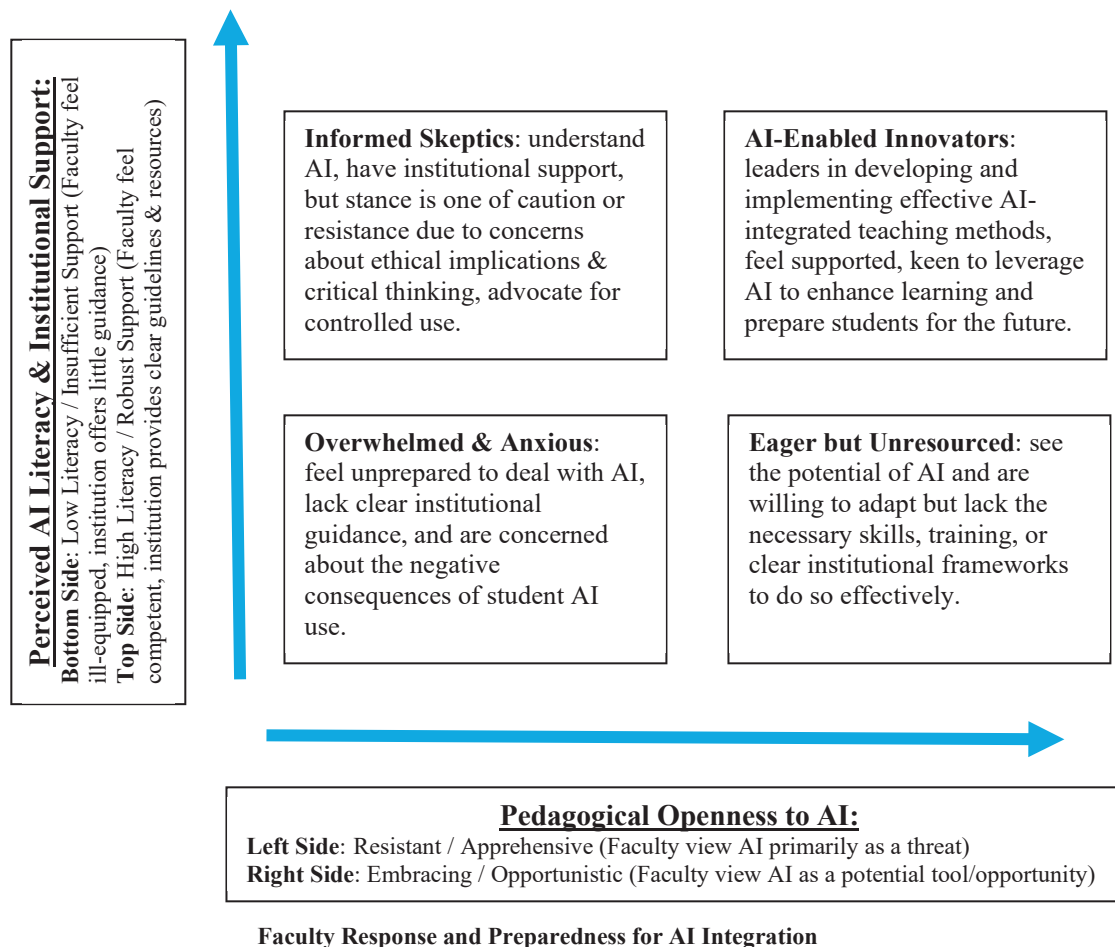
Students' use of AI to help with their deliverables, while offering efficiency, may inadvertently diminish the mental effort crucial for deep learning. Psychological theories underscore that certain cognitive struggles are instrumental for understanding and skill acquisition. Cognitive Load Theory, for instance, suggests that learning is optimized when tasks appropriately challenge working memory; should AI excessively simplify tasks, it may fail to stimulate the mental work necessary for schema development (Sweller, 1988; Sweller, van Merriënboer, & Paas, 1998). Similarly, Vygotsky's concept of scaffolding involves temporary support that is progressively withdrawn as learners internalize knowledge (Vygotsky, 1978). If AI consistently furnishes answers, students may forgo the opportunity to build independent problem-solving skills. Vieriu and Petrea's (2025) study indicates students themselves identify challenges such as “over-reliance on AI, diminished critical thinking skills”, with 16.5% worried about AI's negative impact on critical thinking and another 16.5% concerned about becoming overly dependent on technology.

Furthermore, Embodied Cognition theory posits that cognitive processes are linked to physical interactions with the world, rendering sensory experiences integral to learning (Wilson, 2002; Shapiro, 2019). Consider the abacus; its physical manipulation is believed to aid users in conceptualizing numbers and operations, even to the extent of forming a mental abacus (Stigler, 1984; Hatano, Miyake, & Binks, 1977). This contrasts with calculators, which, if utilized without comprehension, can function as a “black box,” providing answers without revealing the underlying processes (Brown, 2000). If AI tools excessively automate research, writing, or problem-solving, they might eliminate the effortful cognitive engagement necessary for genuine knowledge retention.

#### **Fear of the end of the university system**

The swift development and growing sophistication of AI have stirred profound anxieties among various stakeholders concerning the future viability of the university system in its traditional form. A considerable segment of the academic community perceives AI not merely as an instrument for pedagogical enhancement or research acceleration, but as a disruptive force possessing the potential to fundamentally dismantle established educational structures and practices (Selwyn, 2019). This apprehension is particularly acute among faculty, who harbor legitimate concerns regarding the devaluation of their expertise, the automation of core academic tasks such as lecturing and assessment, and, consequently, the specter of widespread job displacement. Such fears resonate with historical precedents wherein technological innovation has precipitated significant labor market disruptions. For instance, the invention and dissemination of the printing press in the 15th century, while revolutionizing access to information and fostering intellectual ferment, simultaneously rendered the centuries-old profession of the scribe largely obsolete, compelling a painful societal and economic adjustment for those whose livelihoods were contingent on manual transcription (Eisenstein, 1980).

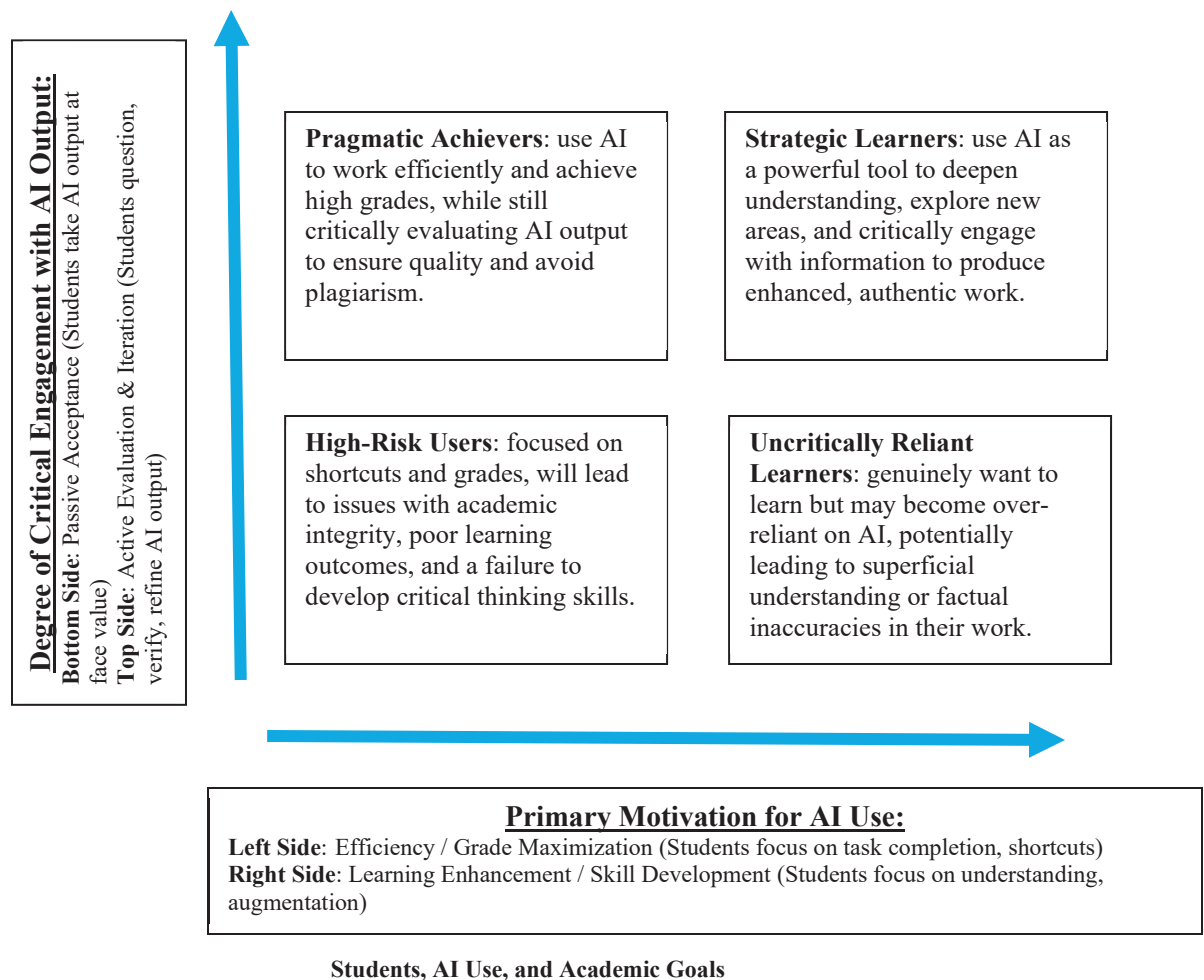
The prospect of a radically altered or diminished university system extends beyond the immediate concerns of academic staff, prompting broader societal unease about the potential erosion of an institution that has historically served as a cornerstone of intellectual development, critical inquiry, and socio-economic advancement (Altbach et al., 2009). Universities have long been entrusted with cultivating informed citizens, generating foundational knowledge, and credentialing professionals across myriad fields. Should this system undergo a precipitous decline due to AI-driven transformations, a significant vacuum may emerge, with considerable uncertainty surrounding the nature and efficacy of whatever alternatives might arise to fulfill these crucial societal functions. This contemporary trepidation mirrors the anxieties of earlier eras of technological upheaval, such as those expressed by the Luddites in early 19th-century England. These skilled textile artisans, confronted with the proliferation of automated looms and weaving machinery, engaged in organized resistance, not merely out of an irrational fear of technology, but from a profound concern for their livelihoods, the integrity of their craft, and the social fabric of their communities, which they perceived as existentially threatened by industrial mechanization (Jones, 2006). The Luddites’ actions underscore the deep-seated human response to technological changes that threaten established socio-economic orders and the sense of insecurity they furnish.



## Beyond Good Intentions: The Ineffectiveness of AI Ethics Education in Deterring Students' use of AI to do Assignments

In response to pervasive use of AI by students within academic settings, higher education institutions have championed AI ethics education as a primary strategy to address concerns surrounding academic integrity and responsible student usage (Chan & Tsi, 2023; Lo, 2024). These initiatives are tasked with the burden of discouraging students from circumventing learning objectives by leveraging AI to complete assignments and examinations. However, the reliance on ethics education as a principal deterrent mechanism warrants closer scrutiny, particularly when confronted with the tangible benefits offered to students by AI for completing academic tasks.



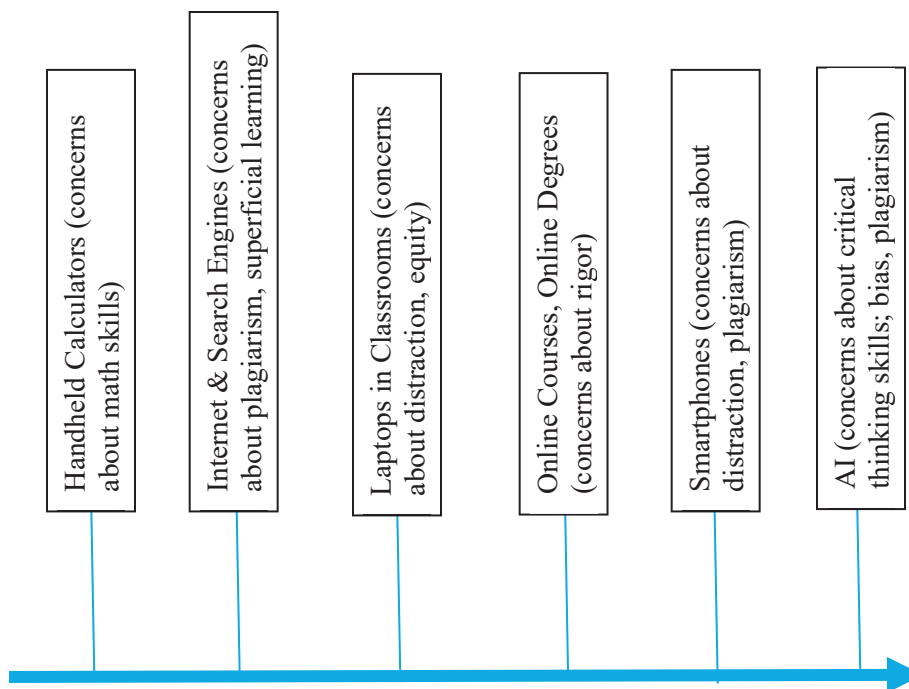


A significant challenge to the presumed efficacy of AI ethics education as a deterrent is the conspicuous absence of robust empirical evidence directly linking such instruction to a measurable decrease in students' academically expedient use of AI. Whereas developing ethical digital citizenship awareness is an undeniably valuable educational outcome (Facer & Selwyn, 2021), translating this awareness into behavioral modification, especially when pitted against strong countervailing incentives, is a complex endeavor. The literature on ethics education in various fields, including business, has long highlighted the gap between ethical knowledge and ethical action, particularly when individuals face pressures or perceive significant personal advantages from ethically ambiguous choices (McCabe, Treviño, & Butterfield, 2001). There is currently little to suggest that AI ethics education, in its nascent stages of widespread implementation, will uniquely overcome this fundamental challenge given the underlying advantages of AI (mis)use.

From a pragmatic standpoint, student incentives to utilize AI for academic tasks are compelling and deeply rooted in the structural realities of higher education. Students, often operating as rational actors in a high-stakes environment, are driven by the pursuit of favorable grades, the efficient management of demanding workloads, and the pressures of time constraints (Cotton, Cotton, & Shipway, 2024). Generative AI tools offer unprecedented academic convenience, providing immediate assistance with information synthesis, content generation, and complex problem-solving, thereby presenting a highly attractive value proposition (Baidoo-Anu & Ansah, 2023). This inherent utility and efficiency suggests that for many students, the perceived benefits of using AI to complete assignments are likely to outweigh abstract ethical injunctions, particularly if the risk of detection is perceived as low or the ethical guidelines appear disconnected from the immediate pressures of academic performance. Consequently, a pragmatic approach must acknowledge that convenience and perceived academic advantage are powerful motivators, unlikely to be neutralized by ethics education.

## Higher Education has had Technological Disruptions before: AI simply is another one

The current discourse on AI in higher education, particularly concerning its use by students for assignments, mirrors historical patterns of pedagogical apprehension that often accompany significant technological advancements. Such periods of heightened concern, sometimes termed “moral panics” in broader sociological contexts (Cohen, 2011), and more specifically “tech panics” in the realm of technology, are not unprecedented in academia and tend to resolve through processes of adaptation, policy development, and pedagogical innovation. Historically, new technologies that challenged existing educational norms have frequently elicited skepticism and resistance before eventually becoming integrated, and in many cases indispensable, tools (Cuban, 1986). The current debate surrounding AI, therefore, can be contextualized as another iteration in this recurrent cycle of disruption and eventual assimilation within the higher education landscape.



**Recent Controversial Technological Adaptations in Higher Education**

For instance, the introduction of laptops into classrooms was initially met with considerable debate, with concerns focused on potential distractions from learning, the facilitation of disengagement, and equitable access (Fried, 2008; Hembrooke & Gay, 2003). Many institutions and faculty members grappled with policies regarding laptop use, with some initially banning them from lecture halls. Over time, however, strategies for integrating laptops as learning tools emerged, and their presence in classrooms is now largely normalized, often supported by institutional infrastructure and pedagogical approaches that leverage their capabilities (Kay & Lauricella, 2011). Similarly, the concept of online courses and online degree programs sparked vigorous opposition from some faculty, unions, and established institutions, questioning their pedagogical rigor, the potential erosion of traditional academic values, and the quality of student learning experiences compared to face-to-face instruction (Allen & Seaman, 2017; Hawkins & Rudy, 2008). Despite these initial reservations, online education has become a mainstream component of higher education offerings globally, driven by student demand, technological maturation, and evolving institutional strategies (Dhawan, 2020).



Further parallels can be drawn from the introduction of handheld calculators, which ignited debates about the potential decline in fundamental mathematical skills and concerns over their use in examinations (Ellington, 2003). Although anxieties were pronounced, calculators eventually became accepted as tools that could, when used appropriately, support more complex problem-solving by reducing cognitive burden. Likewise, the widespread availability of internet access and powerful search engines in the late 1990s and early 2000s generated significant anxiety regarding plagiarism and the potential for students to engage in superficial learning, merely retrieving information rather than critically engaging with it (Rowlands et al., 2008). While these challenges persist and require ongoing attention, the internet has undeniably become an essential resource for academic research and learning, with institutions developing policies and instructional methods that promote information literacy in internet usage (Head & Eisenberg, 2009). The historical trajectory of these technologies suggests that initial anxieties surrounding AI are likely to be addressed through similar processes of critical evaluation, policy adaptation, and the development of new pedagogical frameworks, rather than outright rejection.

## Beyond Adaptation: Adopting an ‘AI-First’ Approach to Foster Learning in the Age of Student-AI Collaboration

The integration of AI into higher education necessitates a paradigm shift in pedagogical approaches, moving beyond mere reactive adaptation to a proactive, ‘AI-First’ stance. The reality is that students already, and will increasingly, leverage AI tools for their academic tasks, a trend substantiated by numerous observations of current student practices (Ng & Chu, 2024; Rudolph et al., 2023). Resisting or attempting to prohibit student engagement with AI is not only a Sisyphean endeavor but also a missed opportunity to cultivate essential future-ready competencies (Bearman & Ajjawi, 2023). Pragmatism dictates that faculty acknowledge this ingrained presence of AI and fundamentally redesign curricula and assessment methodologies to assume, and even strategically incorporate, student collaboration with AI. This proactive stance involves critically examining how learning objectives can be achieved not despite, but *through* student use of AI, thereby fostering an environment where students are encouraged to use these tools effectively to deepen understanding and enhance critical skills, rather than to circumvent learning processes (Kasneci et al, 2023).

### It is impossible to police student use of AI

The widespread availability and increasing sophistication of AI tools presents a formidable challenge to traditional methods of ensuring academic integrity in higher education. Nevertheless, attempts by faculty to police student usage of AI are, realistically, exercises in futility. AI is not a scarce or prohibitively expensive resource; rather, it is inexpensive, plentiful, and offers undeniable convenience for students navigating heavy academic workloads (Tlili et al., 2023). Consequently, a significant proportion of students will inevitably leverage these tools, regardless of institutional policies or extensive instruction on the ethics of their use for academic assignments.

The re-emergence of invigilated “blue book” examinations, while understandable as a reactionary measure, represents a regression that is largely unsustainable in terms of logistical resources and scalability across diverse higher education contexts (Henry, 2025). Such methods fail to address the core issue: students have access to powerful AI outside the examination hall, and the pedagogical focus must shift from prevention to integration. Furthermore, technological interventions designed to create controlled assessment environments, such as “lockdown browsers”, offer a superficial sense of security that is easily circumvented. While a primary device may be “locked down”, the ubiquity of personal secondary devices, such as smartphones or additional laptops, provides ready avenues for students to access AI assistance undetected (Morehouse, 2024). Moreover, attempts to escalate control by banning such devices, as seen in some K-12 settings (Closson, 2025), are impractical and unlikely to succeed. Students are routinely permitted laptops for in-class activities, and the functionality of a banned smartphone can be replicated on these permitted devices. Moreover, the miniaturization of technology means that smartwatches and other less conspicuous devices will increasingly possess the capabilities of banned smartphones, leading to an unwinnable “arms race” with students. Such bans also risk fostering a culture of defiance, where circumventing restrictions becomes a challenge rather

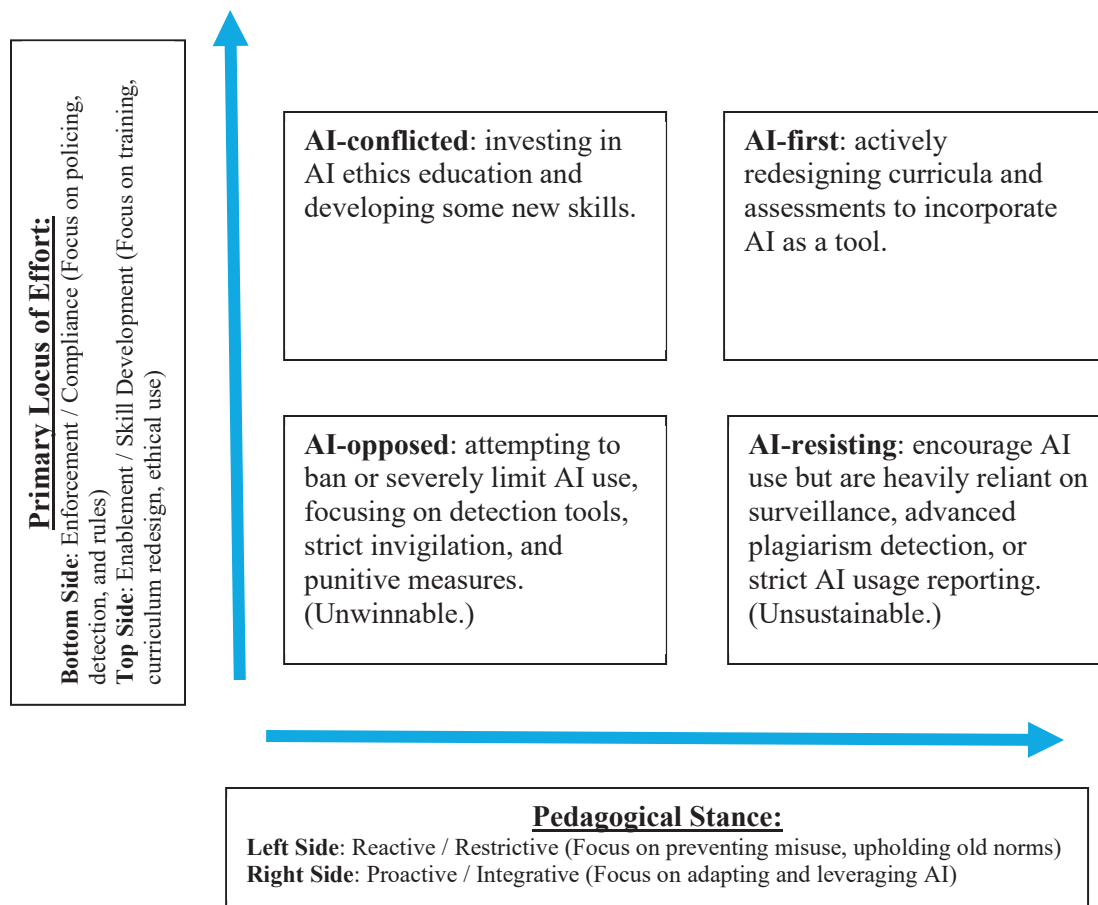
than a deterrent, ultimately undermining the educational environment. The pragmatic reality is that policing AI use is an untenable long-term strategy, necessitating a fundamental shift towards pedagogical approaches that embrace AI as a collaborative tool.

### **Embracing a Pragmatic and Informed AI Optimism**

A pragmatic reevaluation of the pessimism surrounding student AI adoption in higher education can be initiated by considering workplace expectations and analogous technological histories. In professional settings, an employee who markedly improves a core competency -- for instance, mastering persuasive communication with assistance from AI -- would typically be encouraged, even mandated, to leverage such tools for sustained high performance (Luo et al., 2025; McKinsey, 2023). This outcome-oriented, capability-enhancing workplace paradigm contrasts sharply with the prevailing hesitancy often observed in higher education regarding students' use of AI to ameliorate skill gaps.

Further challenging a pessimistic outlook, historical parallels, such as the introduction of word processing software, invite a more optimistic interpretation of technological impact. While a conventional narrative might focus on the displacement of stenographers by technologies such as Microsoft Word (Autor, 2015), an alternative and more empowering perspective suggests that these tools did not merely make stenographers redundant but rather democratized the crucial skill of document creation, effectively equipping a broader populace with capabilities previously confined to specialists (Gobble, 2018). This reframing from job displacement to skill democratization provides a crucial lens through which to view the impending AI-driven transformations.

It is undeniable that artificial intelligence will catalyze substantial shifts within the labor market and reshape numerous industries, leading to the evolution and, in some cases, obsolescence of existing job roles (Acemoglu & Restrepo, 2019). However, a purely pessimistic focus on these displacements overlooks the significant potential for AI to augment overall human capabilities and productivity. The historical arc of technological innovation suggests that while some tasks are automated, new tasks are invariably created, and human labor is often complemented rather than purely substituted, leading to higher levels of economic output and new avenues for human endeavor (Autor, 2015; Acemoglu & Restrepo, 2019). Consequently, the integration of AI, much like previous general-purpose technologies, promises not just disruption but a considerable expansion of collective human potential and societal advancement, a prospect that higher education should proactively embrace in its pedagogical models.



### Institutional Strategies for Addressing Student AI Use

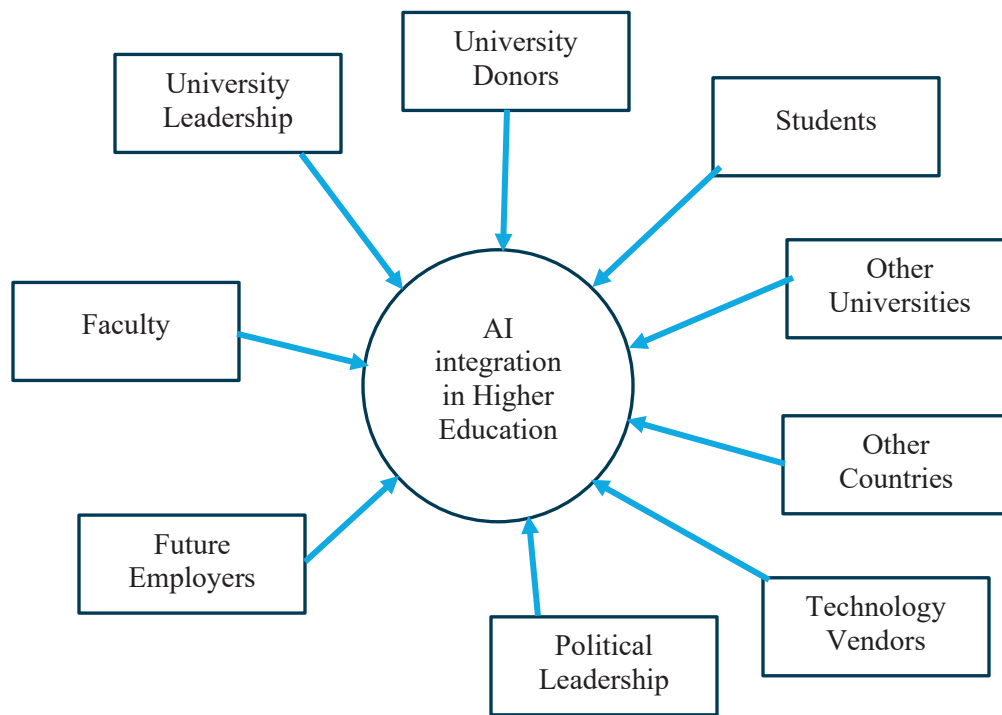
#### The Unwinnable Game: Examining the Futility of Restricting Student AI Use Through a Game Theoretic Framework

A pragmatic examination of AI integration in higher education, framed through a simple game-theoretic lens, reveals the inherent difficulties in significantly restricting student AI use. This model considers four primary stakeholders: technology companies, students, sponsors (including parents, future employers, and governmental bodies), and providers (universities and their faculty/staff). Each operates with distinct, sometimes conflicting, yet ultimately converging incentives.

Technology companies, as innovation engines, relentlessly develop and disseminate more sophisticated AI tools, inherently driving their adoption (Cuban, 2001). Students, motivated by efficiency and academic performance, are increasingly likely to leverage AI, particularly when they perceive it as beneficial and can do so without penalty. This aligns with findings by Ma et al. (2024), who note students' desire to improve their educational experience through effective technology incorporation and found that perceived usefulness (PU) and perceived ease of use (PEOU) significantly influence students' attitudes and behavioral intentions toward AI. Sponsors also exert considerable pressure; for instance, employers increasingly expect graduates to possess AI literacy and practical skills, viewing AI proficiency as a key competency for the future workforce (World Economic Forum, 2023). Furthermore, nations like China are actively promoting AI integration in education as a strategic imperative (Yuan, 2024), creating a competitive global landscape where restricting AI access in other regions could disadvantage students.

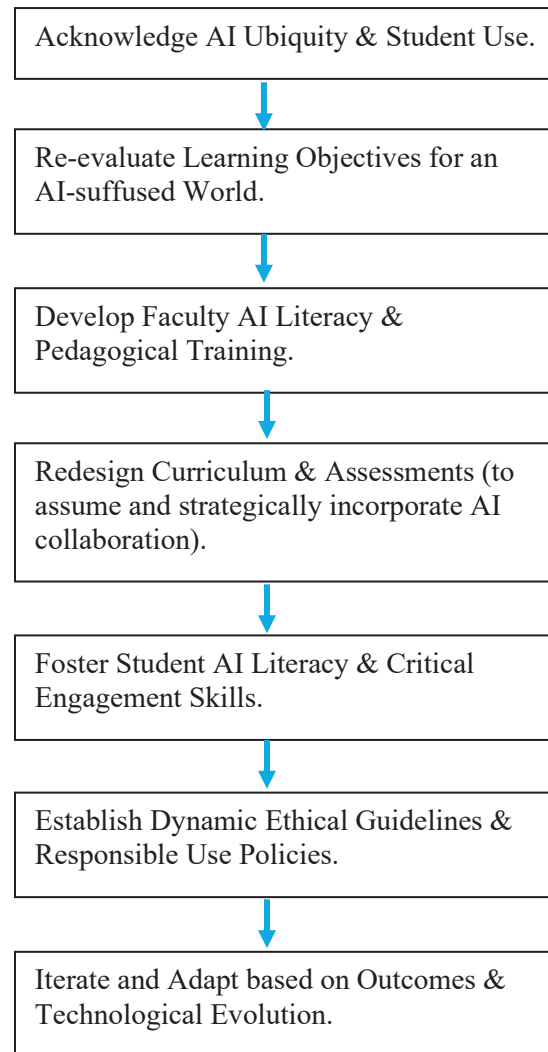
The providers of higher education -- universities and faculty -- face a complex dilemma. While faculty rightly prioritize academic integrity and the development of foundational skills, institutional history suggests that resistance to disruptive technologies is often short-lived when faced with overwhelming external pressures and student demand. The initial skepticism surrounding online courses and even the integration of laptops in

classrooms eventually gave way to widespread adoption, driven by the need to remain competitive and meet student expectations (Garrison & Vaughan, 2008). A similar trajectory can be anticipated for student AI use. Universities that attempt to impose severe restrictions risk not only appearing anachronistic, but also potentially disadvantaging their students, who will compete with peers from institutions -- and indeed, nations -- that have embraced AI. Notably, international students often exhibit higher AI adoption rates, potentially driven by a need to stay competitive in a global job market (Ma et al., 2024). Moreover, in contexts where educational resources may be perceived as limited, such as in some developing countries facing challenges with textbook quality or consistent instructional support (Fagbola, 2020), AI tools can be viewed by parents and students as vital for supplementing learning and bridging educational gaps. Therefore, the interplay of these stakeholder incentives suggests that efforts to broadly prohibit AI use by students constitute an unwinnable game, potentially exacerbating global educational inequities rather than fostering genuine learning or integrity.



**Ecosystem of Influences on AI Integration in Higher Education**

The confluence of these stakeholder dynamics -- students seeking efficiency, tech companies driving innovation, sponsors demanding relevant outcomes and skills, and educational institutions navigating competitive pressures -- indicates that the pervasive integration of AI tools by students is not a matter of 'if' but 'when' and 'how.' A restrictive stance by universities may prove futile and counterproductive, whereas an 'AI-First' approach, where student use of AI to help with homework is assumed, becomes a more pragmatic and ultimately beneficial strategy. This approach acknowledges the inevitability of AI use (by students) and seeks to prepare students for an AI-suffused future, rather than attempting to preserve an educational paradigm that is rapidly being reshaped by technological advancement.



#### **Proposed ‘AI-First’ Institutional Response Framework**

## **Conclusion**

The integration of artificial intelligence into higher education undeniably presents a complex array of challenges, prompting significant concerns among faculty regarding academic integrity, the depth of student learning, and the very structure of the traditional university system. These anxieties, arising from issues such as potential over-reliance on AI, the circumvention of genuine engagement with course material, and difficulties in assessing authentic student effort, are valid and echo the apprehension that often accompanies transformative technological shifts.

However, as this paper has argued, viewing the current landscape through the lens of historical technological disruptions -- from the printing press to the internet -- suggests that a trajectory of adaptation and integration, rather than outright resistance or attempts at prohibition, offers a more pragmatic and ultimately more fruitful path forward. The contemporary “tech panic” surrounding AI, while understandable, is likely to evolve, much like previous anxieties, towards assimilation and pedagogical innovation. A pragmatic and optimistic perspective emphasizes AI’s potential as an empowering tool, capable of democratizing skills and enhancing human capabilities, rather than merely displacing them.

Faculty and institutional leaders are increasingly recognizing that policing student AI use is largely a Sisyphean endeavor, given the pervasive availability and utility of these tools. Success in this evolving landscape will hinge on fostering an environment where students cultivate self-discipline, agency, and their own cognitive capacities while strategically leveraging AI for enhancement. A crucial challenge for the educational establishment will be to encourage students to develop “neurons in their own brains,” fostering critical thinking and deep understanding, even as they use AI (“neurons outside their own brains, in an artificial neural network”). While some students may misuse these tools, the predominant response should be a proactive redesign of curricula and assessment to assume and strategically incorporate student collaboration with AI.

The game has indeed changed; the imperative now is to learn the new rules and empower individuals to enhance themselves within this new paradigm. While some educators may fear this path leads to their own obsolescence, the opposite is more likely. As AI automates certain functions, it will inevitably increase the value of human mentorship, guidance, and critical inquiry, creating new opportunities for educators to engage with more students than ever before. Ultimately, students’ use of AI is not an existential threat, but a catalyst. It challenges higher education to address long-standing issues of cost and access, and to evolve into a more resilient, equitable, and effective version of itself, truly prepared for a complex, AI-suffused future.

## References

- Acemoglu, D., & Restrepo, P. (2019). Automation and new tasks: How technology displaces and reinstates labor. *Journal of Economic Perspectives*, 33(2), 3–30.
- Allen, I. E., & Seaman, J. (2017). Digital learning compass: Distance education enrollment report 2017. Babson Survey Research Group, Quahog Research Group, and WCET.
- Altbach, P. G., Reisberg, L., & Rumbley, L. E. (2009). Trends in global higher education: Tracking an academic revolution. UNESCO.
- Autor, D. H. (2015). Why are there still so many jobs? The history and future of workplace automation. *Journal of Economic Perspectives*, 29(3), 3–30.
- Baidoo-Anu, D., & Ansah, L. O. (2023). Education in the era of generative artificial intelligence (AI): Understanding the potential benefits of ChatGPT in promoting teaching and learning. *Journal of AI*, 7(1), 52–62.
- Bearman, M., Tai, J., Dawson, P., Boud, D., & Ajjawi, R. (2024). Developing evaluative judgement for a time of generative artificial intelligence. *Assessment & Evaluation in Higher Education*, 49(6), 893–905.
- Bond, M., Khosravi, H., De Laat, M., Bergdahl, N., Negrea, V., Oxley, E., Pham, P., Chong, S. W., & Siemens, G. (2024). A meta systematic review of artificial intelligence in higher education: a call for increased ethics, collaboration, and rigour. *International Journal of Educational Technology in Higher Education*, 21(1), 4.
- Brown, J. S. (2000). Growing up: Digital: how the web changes work, education, and the ways people learn. *Change: The Magazine of Higher Learning*, 32(2), 11–20.
- California Faculty Association. (2024). “Resolution for a New Collective Bargaining Agreement Article Governing the Use of AI”, October 2024. Last accessed on 7 June, 2025, <https://www.calfac.org/wp-content/uploads/2024/10/Resolution-for-a-New-CBA-Article-Governing-the-Use-of-AI-with-Friendly-Amendments-10.2024.pdf>
- Chan, C. K. Y., & Tsi, L. H. Y. (2023). The AI Revolution in Education: Will AI Replace or Assist Teachers in Higher Education? *arXiv*.
- Closson, T. (2025, April 29). New York Bans Smartphones in Schools, Joining National Movement. *New York Times*. <https://www.nytimes.com/2025/04/29/nyregion/nyc-schools-cellphone-ban.html>
- Cohen, S. (2011). *Folk devils and moral panics* (3rd ed.). Routledge.
- Cotton, D. R. E., Cotton, P. A., & Shipway, J. R. (2024). Chatting and cheating: Ensuring academic integrity in the era of ChatGPT. *Innovations in Education and Teaching International*, 61(2), 228–239.
- Crompton, H., & Burke, D. (2023). Artificial intelligence in higher education: the state of the field. *International Journal of Educational Technology in Higher Education*, 20(1), 22.
- Cuban, L. (1986). *Teachers and machines: The classroom use of technology since 1920*. Teachers College Press.
- Cuban, L. (2001). *Oversold and underused: Computers in the classroom*. Harvard University Press.
- Dhawan, S. (2020). Online Learning: A Panacea in the Time of COVID-19 Crisis. *Journal of Educational Technology Systems*, 49(1), 5–22.
- Digital Education Council. (2024). Digital Education Council Global AI Student Survey 2024: AI or Not AI: What Students Want. Digital Education Council. Last accessed on 7 June, 2025, <https://www.digitaleducationcouncil.com/post/digital-education-council-global-ai-student-survey-2024>



- Digital Education Council. (2025). Digital Education Council Global AI Faculty Survey 2025: AI Meets Academia: What Faculty Think. Digital Education Council. Last accessed on 7 June, 2025, <https://www.digitaleducationcouncil.com/post/digital-education-council-global-ai-faculty-survey>
- Duffy, C. (2024, February 20). First Neuralink human trial subject can control a computer mouse with brain implant, Elon Musk says, CNN. Last accessed on 7 June, 2025, <https://www.cnn.com/2024/02/20/tech/first-neuralink-human-subject-computer-mouse-elon-musk>
- Eisenstein, E. L. (1980). The printing press as an agent of change: Communications and cultural transformations in early-modern Europe (Vol. 1-2). Cambridge University Press.
- Ellington, A. J. (2003). A meta-analysis of the effects of calculators on students' achievement and attitude levels in precollege mathematics classes. *Journal for Research in Mathematics Education*, 34(5), 433–463.
- Elon University & AAC&U. (2024). Survey of College and University Leaders - presidents, provosts, chancellors, rectors, academic affairs officials, and high-ranking academic deans (Topline Results, Fielded Nov. 4-Dec. 7, 2024). Elon University Center for Engaged Learning & Association of American Colleges and Universities. Last accessed on 7 June, 2025, [https://imaginingthedigitalfuture.org/collaborations/ai\\_higher\\_ed\\_survey\\_jan2025/](https://imaginingthedigitalfuture.org/collaborations/ai_higher_ed_survey_jan2025/)
- Facer, K., & Selwyn, N. (2021). Digital technology and the futures of education: Towards 'Non-Stupid' optimism. Futures of Education initiative, UNESCO.
- Fagbola, B. O., & Onasanya, B. O. (2020). The perception of teachers on the quality of primary school mathematics textbooks in Oyo state, Nigeria. In J. L. Sarasola Sánchez-Serrano, F. Maturo, & Š. Hošková-Mayerová (Eds.), *Qualitative and Quantitative Models in Socio-Economic Systems and Social Work* (pp. 183–192). Springer International Publishing.
- Fried, C. B. (2008). In-class laptop use and its effects on student learning. *Computers & Education*, 50(3), 906–914.
- Garrison, D. R., & Vaughan, N. D. (2008). *Blended learning in higher education: Framework, principles, and guidelines*. John Wiley & Sons.
- Gobble, M. M. A. (2018). Digitalization, digitization, and innovation. *Research-Technology Management*, 61(4), 56-59.
- Hatano, G., Miyake, Y., & Binks, M. G. (1977). Performance of expert abacus operators. *Cognition*, 5(1), 47-55.
- Hawkins, B. L., & Rudy, J. A. (2008). *Educause core data service: Fiscal year 2007 summary report*. Educause.
- Hembrooke, H., & Gay, G. (2003). The laptop and the lecture: The effects of multitasking in learning environments. *Journal of Computing in Higher Education*, 15(1), 46–64.
- Henry, T. (2025). The Uses and Challenges of Teaching Writing with Artificial Intelligence. *The Utah English Journal*, 53(1), 11.
- Hirabayashi, S., Jain, R., Jurković, N., & Wu, G. (2024). Harvard Undergraduate Survey on Generative AI. Harvard Undergraduate Association. Last accessed on 7 June, 2025, <https://arxiv.org/abs/2406.00833>
- Jones, S. E. (2006). *Against technology: From the Luddites to neo-Luddism*. Routledge.
- Kasneci, E., Seßler, K., Küchemann, S., Bannert, M., Dementieva, D., Fischer, F., ... & Kasneci, G. (2023). ChatGPT for good? On opportunities and challenges of large language models for education. *Learning and individual differences*, 103, 102274.
- Kay, R. H., & Lauricella, S. (2011). Unstructured vs. structured use of laptops in higher education. *Journal of Information Technology Education: Innovations in Practice*, 10, 33–42.
- Kenan Institute of Private Enterprise. (2025, February 26). *Artificial Intelligence and the Skills Gap*. Frank Hawkins Kenan Institute of Private Enterprise. Last accessed on 7 June, 2025, <https://kenaninstitute.unc.edu/kenan-insight/artificial-intelligence-and-the-skills-gap/>
- Lo, C. K. (2023). What is the impact of ChatGPT on education? A rapid review of the literature. *Education Sciences*, 13(4), 400.
- Luo, X. (2025, January 16). AI won't take your job; it will make you better at it. Temple Now. Retrieved from <https://news.temple.edu/news/2025-01-16/ai-won-t-take-your-job-it-will-make-you-better-it>
- Ma, D., Akram, H., & Chen, I-H. (2024). Artificial Intelligence in Higher Education: A Cross-Cultural Examination of Students' Behavioral Intentions and Attitudes. *International Review of Research in Open and Distributed Learning*, 25(3), 134-157.
- McCabe, D. L., Trevino, L. K., & Butterfield, K. D. (2001). Cheating in academic institutions: A decade of research. *Ethics & Behavior*, 11(3), 219–232.
- McKinsey & Company. (2023, June 14). The economic potential of generative AI: The next productivity frontier. McKinsey Global Institute. Last accessed on 7 June, 2025, <https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/the-economic-potential-of-generative-ai-the-next-productivity-frontier>
- Morehouse, E. (2024). *Ogletree v. Cleveland State University and the Future of Remote Learning*. Loy. LAL Rev., 57, 833.
- Ng, D. T. K., & Chu, S. K. W. (2024). AI literacy for university students: A review of the literature. *Computers and Education: Artificial Intelligence*, 6, 100202.
- Rudolph, J., Tan, S., & Tan, S. (2023). ChatGPT: Bullshit spewer or the end of traditional assessments in higher education? *Journal of Applied Learning & Teaching*, 6(1).

- Sallam, M. (2023). ChatGPT utility in healthcare education, research, and practice: Systematic review on the promising perspectives and valid concerns. *Healthcare*, 11(6), 887.
- Selwyn, N. (2019). *Should robots replace teachers? AI and the future of education*. Polity Press.
- Shapiro, L. (2019). Embodied cognition. In L. Shapiro (Ed.), *The Routledge Handbook of Embodied Cognition* (2nd ed., pp. 3-14). Routledge.
- Stigler, J. W. (1984). "Mental abacus": The effect of abacus training on Chinese children's mental calculation. *Cognitive Psychology*, 16(2), 145-176.
- Sweller, J. (1988). Cognitive load during problem solving: Effects on learning. *Cognitive Science*, 12(2), 257-285.
- Sweller, J., van Merriënboer, J. J. G., & Paas, F. G. W. C. (1998). Cognitive architecture and instructional design. *Educational Psychology Review*, 10(3), 251-296.
- Tlili, A., Shehata, B., Adarkwah, M. A., Bozkurt, A., Hickey, D. T., Huang, R., & Agyemang, B. (2023). What if the devil is my guardian angel: ChatGPT as a case study of using chatbots in education. *Smart learning environments*, 10(1), 15.
- Vieriu, A. M., & Petrea, G. (2025). The Impact of Artificial Intelligence (AI) on Students' Academic Development. *Education Sciences*, 15(3), 343.
- Vygotskij, L. S. (1978). *Mind in society: The development of higher psychological processes* (M. Cole, V. John-Steiner, S. Scribner, & E. Souberman, Eds.). Harvard University Press.
- Wang, S., Wang, F., Zhu, Z., Wang, J., Tran, T., & Du, Z. (2024). Artificial intelligence in education: A systematic literature review. *Expert Systems With Applications*, 252, 124167.
- Wilson, M. (2002). Six views of embodied cognition. *Psychonomic Bulletin & Review*, 9(4), 625-636.
- World Economic Forum. (2023). *Future of jobs report 2023*. World Economic Forum.
- Yuan, L. (2024). Where does AI-driven Education, in the Chinese Context and Beyond, go next?. *International Journal of Artificial Intelligence in Education*, 34(1), 31-41.