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Against the Commodification of Education—if harms then not AI

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Abstract

The release of OpenAI's ChatGPT sent shockwaves through the education sector, sparking both excitement and concern. While some hail it as a breakthrough innovation, others sound an alarm. This dichotomy raises critical questions about the future of education, its impact on students, and the implications for the teaching profession. Key concerns revolve around preserving academic integrity, evaluating learning, and ensuring the quality of information provided by generative AI-based systems. Furthermore, the fact that these systems are developed using human content without permission, including copyrighted works, prompts questions about the respect for intellectual property rights and the exploitation of the common good and humans for private interests. The integration of AI-driven tools into educational settings ought to raise red flags about the influence of tech corporations, which have close ties with educational institutions. We contend that the adoption of AI in education, especially generative AI, is not inevitable. On the contrary, an urgent change of direction is essential. This critical reflection is intended as a call to action: rather than rushing to integrate AI tools into educational systems, we must *first* carefully consider their shortcomings, their ethical, environmental, legal, and technological issues, and the harms at hand. By prioritizing the needs of learners, educators, and communities, we ensure that education remains a public good, not a commodity to be exploited for profit. Not using AI in education becomes an act of resistance that reasserts the primacy of human values and critical thinking in the learning process, as we explain in this piece.

Keywords

AI; AI harms; AI revolú; education; techno solutionism

1 Introduction

The education sector was profoundly shaken in November 2022 with the release of OpenAI's ChatGPT, an artificial intelligence-based computer program (or chatbot) capable of generating human-like text responses to given inputs. While some see it as a breakthrough innovation, others sound an alarm. This mix of excitement and concern raises crucial questions about the future of education, its impact on students[1], and the consequences for the teaching profession. This critical reflection challenges the overly optimistic approach that prioritizes "not hindering innovation" over addressing the numerous and well-documented risks associated with the deployment of (generative) AI[2] technologies in education. Key concerns include the preservation of intellectual and academic integrity, the evaluation of learning, the quality of information provided by generative AI-based systems, the climate costs, the energy use, the water consumption, and, especially in the academic domain, the independence of educational institutions from Big Tech.

Like all sectors, education is experiencing both a change of direction and a crisis of legitimacy amplified by the widespread adoption of (generative) AI (e.g., UNESCO, 2025a; Watermeyer et al., 2023; Williams, 2024). We argue that unless proactive measures are taken, AI-driven tools will inevitably shape the educational landscape for the worse, dictating the terms under which learning and teaching occur. This is why we must question the motivations and interests of those pushing and driving its adoption. Contrary to the claims of a revolution, we are witnessing a corporate-AI coup (Schaake, 2024), a capture (Whittaker, 2021), a digital stratagem to reclaim control over education, taking over educational institutions' decision-making by promising technological solutions to systemic problems that are not solvable with them (e.g., Postman, 1992; Watermeyer et al., 2023; Williams, 2024; Xiao & Bozkurt, 2025). Knowing that (generative) AI-based systems are designed to meet commercial objectives for the benefits of their owners and shareholders, this raises concerns about the influence of powerful technology corporations, which seek close ties with educational institutions and cultivate "brand loyalty", i.e. vendor lock-in among organizations, educators, and learners. Few has changed about technology and/in/for education since Postman's prescient reflections about the latter "operated entirely on principles associated with a market economy" (Postman, 1992, p. 61). The integration by default of ChatGPT versions into Microsoft's Office software suite is a prime example of this trend. Furthermore, the fact that generative AI models are trained on a large-scale heist of human knowledge that exists in digital form, including copyrighted content, raises questions about this unprecedented theft and exploitation of the commons (Appel et al., 2023; Dornis & Stober, 2024; Jones, 2025; Reisner, 2025).

Those and other issues, combined with the seismic impact of generative AI's entry into schools and other educational institutions, command a profound re-examination of the very foundations of education and its role, not to mention its future and the place AI plays in it (for some related reflections, see Biesta, 2025; Cox, 2024; Eynon, 2024; McQuillan et al., 2024; Williams, 2024; Williamson et al., 2023). This re-examination is intended to spark a collective conversation around two fundamental questions among different groups in society: What is the purpose of teaching? What is the purpose of attending school? Our exploration of these questions and the subsequent

[1] We use students and learners indistinctly in this paper. Similarly, teachers and educators.

[2] By (generative) AI we mean all types of artificial intelligence (AI)-based tools, especially those of the type generative but not only.

answers we provide illustrate that the deployment of generative AI is not an inevitability. Just because we can implement it in education, it does not mean we should. "Technology does not have a pre-ordained direction, and nothing about it is inevitable" (Acemoglu & Johnson, 2023, p. 263), something that Postman (1995) also critiqued in the context of education 30 years ago. In line with Biesta's (2025) perspective on teaching and teachers, we pose that AI-driven technologies, especially generative AI, undermine teachers' work, their role, and what educational institutions are for. Being able "to say 'no' and refuse to adapt and adjust" (Biesta, 2025, p. 182) thus means skills both teachers and learners must learn and critically apply, especially in the case of AI in and for educational contexts.

In response to the misleading claims made by AI and generative AI evangelists that systems like ChatGPT "are here to stay" and that their adoption is "inevitable", we ask the questions: Who are the ones who know education better and should make decisions about teaching and learning? Who should ultimately decide which technologies are more appropriate to support teachers and learners? Like any political or religious dogma where believers are not asked to understand in order to believe, but to believe in order to understand, we contend that the "inevitability" of generative AI is a form of obscurantism concealing "knowledge in order to make room for faith" (Kant, 1988, p. 117). Generative AI is also an enabler of *AI solutionism*, "the philosophy that, given enough data, machine learning algorithms can solve all of humanity's problems" (Polonski, 2018), a special case of *techno solutionism* (also tech solutionism or technology solutionism (Morozov, 2023). Inevitability is also tightly related to *techno determinism* (Postman, 1992). All of them lay the ground for anthropomorphism that favours bullshitting (Frankfurt, 2005; Hannigan et al., 2024; Hicks et al., 2024), and fuels wishful thinking (McDermott, 1976) and the AI hype (Duarte et al., 2024). Acting as a digital opiate, this obscurantism about the true capabilities of the technology preserves and benefits from a *status quo* aimed at entrenching inequalities, while discouraging debate and scrutiny of underlying power dynamics promoting the concentration of wealth and information by a few, to the detriment of the many (Eubanks, 2019; Noble, 2018; Zuboff, 2019).

Education is a collective treasure and a common good. From this perspective, our critical reflection serves as a basis for a desirable manifesto that advocates for a thoughtful, humanistic, and ethical approach, one that reasserts the primacy of human values, as well as of critical thinking and cognitive growth in and during the learning process. Our call to action is clear: rather than rushing to integrate (generative) AI tools into our educational systems, thereby reducing teachers and students to the 'stochastic parrots'-guided training (see Bender et al., 2021) of large language models that are in the hands of tech elites (what have proven to be dehumanising in its essence; e.g., Akingbola et al., 2024; Bender, 2024a; Chow & Celis Bueno, 2025), we must consider their shortcomings, their ethical, environmental, legal, and technological issues, and the harms at hand *before* rather than after procuring, implementing, and using them. We also need to consider other kinds of activities for students *prior to* (or instead of) them using insufficiently tested corporate AI products (Caines, 2023). By doing so, we not only make informed choices with knowledge and discernment, two essential benefits of education, but also preserve its core purpose of serving the public interest, rather than allowing it to become a commodity driven by a corporate culture that prioritizes financial gain.

In the sections that follow, we will go from setting and delimiting the context of this work by detailing the current and pressing issues endangering learning and teaching, showing thereby what some studies have found regarding the negative implications of AI-based technologies, especially those of the generative AI type. We will also present the warnings of other thinkers and scholars regarding the substrate of technological dominance. Then, we will differentiate and

analyse the factors contributing to the illusion of technology, especially AI, being perceived as revolutionary, along with their contrasting limitations. Finally, we will expand on acute, actual problems and the dangers technological solutions are posing to education, educators, and learners, and conclude with suggestions on how to reclaim agency and change the course.

2 First things first: Why do we teach and why do we go to school?

What might happen to the Enlightenment ideal of "Sapere aude" or "Dare to know" if education prioritized the teaching of specific skills and abilities in order to fill a pail, instead of sparking learners' curiosity and will to proactively want to know, reason, and reflect about them and the tools and methods needed to operationalise them? When absorption takes precedence over reflection, and a techno-utilitarian approach that neglects the development of intellectual curiosity, creativity, and autonomy is favoured, then this ideal is lost, and education fails to fulfil its role in empowering individuals to become active, engaged, and social citizens capable of making informed decisions as part of a group.

As a "training facility for the workforce," from a place to learn how to learn, and how to think, the school has become an educational supermarket where customers select among an assortment of degrees leading to a job, fuelling what Postman (1995) called "the god of Economic Utility". Colonized by the language of economics which takes its idioms and arguments from the discourse of management, business, and finance, education is centred on the acquisition of information and standardized assessments that validate the "mastery" of data and the "execution" of skills in response to the needs of organizations looking for "top talents" on the job market. When education is nothing more than a sector of the economy producing knowledge (Karpov, 2013), the commodification of cognitive activity, which turned knowledge into an item that can be traded, bought, or sold in a market, radically alters educational practices and what it means to know. The shockwave caused by the intrusion of AI, especially generative AI, into schools is the culmination of this commodification of education. However, a salutary look back at history teaches us that it was not always so — we have forgotten.

According to a long philosophical tradition going back to Plato, three conditions must be met before we can say we *know*. First, we must think a certain idea to be true; second, this idea must be true; and third, we must think it for good reasons. Knowledge, then, is (correctly) justified true opinion (Baillargeon, 2023). If the student knows something, he must think it, it must be true, and he must have good reasons for thinking it. Simply repeating what generative AI-powered chatbots regurgitate is insufficient. The student must be able to argue, and by doing so, to reason, to draw conclusion from premises, and to be able to remember and apply what was learned.

Knowing that arguing with other humans may be reduced or disappears if technology (e.g. chatbots) substitutes those interactions, and that debating has become a free-for-all on social media where automated answers might be programmed, is it any wonder that reasoning has become an "endangered" faculty? Fortunately for some, chatbots like ChatGPT come to the rescue even though they do not reason (Kambhampati, 2024), do not understand language (Bishop, 2021), are indifferent to the truth of their outputs (Frankfurt, 2005), and carry all kinds of biases inherent in the training data (Birhane et al., 2024). Nevertheless, who cares since their purpose is not to be true, but to provide convincing lines of text in response to a *prompt*? It is not surprising that more and more learners see generative AI as a silver bullet to their inability to write, reason, and argue (Baek et al., 2024; Bogost, 2024; Coldwell, 2024; Freeman, 2024; Khan, 2025; Lee et al., 2024; Moore, 2024; Nguyen & Goto, 2004). Partly victims, partly proactive doers,

some can now pretend and "fake it till they make it" in accordance with the globalized motto nurtured by the Silicon Valley's gospel of tech solutionism or AI solutionism (Polonski, 2018). What is the point of spending several years on a school bench if we can pretend to know in seconds?

Studies show, however, that people rely more on generative AI-produced answers than learn from them (Darvishi et al., 2024). Stadler et al. (2024) found, for instance, that students demonstrate lower-quality reasoning and argumentation skills after using large language models compared to students who do not use them. Other authors report on learners failing to develop necessary literacy skills (Anson, 2024) or compromising their critical thinking skills, which are reduced with higher AI tool usage (Gerlich, 2025; Valcea et al., 2024). Learners' creative writing abilities are also affected when using generative AI-based chatbots (Niloy et al., 2023), and so are their attention, focus, and executive functioning (Moshel et al., 2024). In addition, students might even "develop tendencies for procrastination and memory loss and dampen [their] academic performance" due to AI (Abbas et al., 2024, p. 1) and generative AI can harm their learning and educational outcomes (Bastani et al., 2024).

In addition, Steiss et al. (2024) have demonstrated that the feedback provided by ChatGPT is of much poorer quality than feedback given by well-trained evaluators, and Ringel Morris (2024) even affirms that "prompting" has many limitations and is considered to be harmful. On top of this, it is already known that language models-generated outputs pose psychosocial harms to students, especially to users with marginalized and minoritized identities (Vassel et al., 2024), and that they are biased against non-native English writers (Liang et al., 2023). Chatbots are, moreover, academically dishonest (Wong, 2025).

Those serious issues are undermining both learning and teaching. Yet, if writing is fundamental to learning, academic research, and creativity, that does not mean that the solution to not writing well is using chatbots or AI-based tools. It might mean the solution is figuring out why some students, for instance, are so poorly trained in expressing their ideas in written form, an essential skill in any educational setting, especially higher education, and in finding ways to counter that. Educational problems are metaphysical in nature, not technical (Postman, 1995, p. 27).

Although some AI practitioners use the term generative AI to imply the "creation" of something new, now generalised as a deep learning-based type of AI technique, it deserves to be called *degenerative AI*. This is not only because what is produced distorts actual and feasible solutions from the search space, but also because it often falsifies the content of the information contained in the databases that are used for training the algorithms (what some people call "hallucinations"). It also affects learners' cognitive skills and behaviours, as argued above. We furthermore concur with Williamson (2023) and the other meaning he gives to the word degenerative in the educational context: "deteriorating rather than improving classroom practices, educational relations and wider systems of schooling."

Some people believe ChatGPT can or will solve their writing problems or those of their students by outsourcing the writing process to the tool (or to other similar tools). Others do not know or understand how ChatGPT and the algorithms underneath such chatbots actually work. Others have found some useful uses of the technology. Yet, any chatbot or AI-based technology may do some "writing" for them (e.g., autocomplete sentences depending on a given input), but users

still will not know how to write themselves or how to develop their ideas in written form or how to interact with other peers, if those cognitive abilities are outsourced to technology.

Gretzky and Dishon (2025), for instance, draw on existent theories to analyse authorship of knowledge produced by humans, algorithms, or both; they refer to "algorithmic-authors" in their work. However, "any attribution of authorship carries with it accountability for the work, and AI tools cannot take such responsibility" (Nature, 2023, p. 612). Moreover, what comes out from the chatbots are the ideas of others who wrote those texts before, texts that were mostly taken without the original authors' consent (Appel et al., 2023; Reisner, 2025) to train the algorithms (Dornis & Stober, 2024) and that are now cannibalized to produce good-enough pieces of new texts disregarding the context and backgrounds of the new uses.

Fassbender (2025), on the other hand, refers to mythological elements to imagine other possibilities for human-machine interactions that are based on generative AI. Although providing an interesting perspective, such narratives might exacerbate misconceptions and fallacies regarding what AI algorithms can do, by ascribing them capabilities they do not have. *Anthropomorphism* in AI has been thoroughly studied in the literature. We refer the readers to Duarte et al. (2024), for instance, where some works included in the collection address the ethical and hype-favouring aspects of anthropomorphic narratives.

Other people use generative AI to write entire research papers or even books in just hours (e.g., Mewburn, 2024). We side with the original authors who have seen their works plundered and advise against supporting the questionable for-profit practices of corporate AI. Some international conferences and academic journals have updated their author guidelines accordingly: "the word 'original' is enough to signal that text written by ChatGPT is not acceptable […] The scientific record is ultimately one of the human endeavor of struggling with important questions" (Thorp, 2023, p. 313).

Furthermore, what the chatbots produce cannot be trusted; it would always need revision (Al-Sibai, 2025; Huang et al., 2025). In addition, Weidlich et al. (2025) caution about the validity of recent research concerning the potential of AI tools to enhance learning which have demonstrated to be fundamentally flawed: "[most of the analyses] explicitly make causal claims, despite methodological limitations […] the rush to generate findings risks premature conclusions based on weak evidence" (Weidlich et al., 2025, p. 2). Other authors warn, "the current publication boom partly reflects a tendency to overhype recent developments, driven by a neglect of previous theoretical and empirical insights about instructional mechanisms and learning, the way arguments are framed, and the study methods used" (Bauer et al., 2025, p. 3).

3 An AI revolution or an AI revolú?

Since academic success might mean to some success tailored to the needs of the job market, providing convincing lines of text might be all it takes for sounding knowledgeable without having to know. From writing to prompting and from understanding to regurgitating information, the so-called revolution of AI in education might be nothing more than the gradual loss of what it means to teach and what it means to learn. AI is essentially a form of automation, and automation is the substitution of capital for labour. In such a scenario, what does history teach us?

- The goal of automation has always been efficiency.

- Efficiency means reducing bandwidth costs (e.g., workforce) by any means.
- This vision "embraced the top-down design of digital technologies aimed at eliminating people from the production process" (Acemoglu & Johnson, 2023, p. 296).

Turning education into a "knowledge business" stems from a vision of technology as a powerful tool to cut labour costs. The goal is not to make education better, but cost-efficient. Whether the goal is to automate an assembly line, a weaving loom, or teaching, the logic is the same, and AI pitchmen are explicit about it:

> The purpose of AI, the source of its value, is its capacity to increase productivity, which is to say, it should allow workers to do more, which will allow their bosses to fire some of them, or get each one to do more work in the same time, or both (Doctorow, 2023).

Given the precarious situation in many educational institutions worldwide, especially in underdeveloped countries, big tech companies and top consulting firms (Mance, 2023) are strongly advocating the "digital transformation" of education as a solution to solve its chronic "bandwidth costs" problem by bringing automation into education. As systems that automatically respond to human prompts and "can easily provide a focused, personalized, and result-oriented online learning environment, which is exactly what today's educational institutions need" (Okonkwo & Ade-Ibijola, 2021, p. 2), generative AI-powered chatbots are promoted as the solution to this recurring issue. Technology scholars have warned about the underlying historical contexts, the possible causes, and the several implications, though (Acemoglu & Johnson, 2023; Reich et al., 2021). Merchant (2024) reveals: "Your boss isn't concerned with the philosophical question of whether generative AI is so good it can replace or replicate human workers, your boss is concerned with whether its output will be 'good enough'". Being unable to deal with "good enough" solutions to critical everyday problems might be something learners should be learning to detect, avoid, and even contest (McQuillan, 2022; Merchant, 2023).

By integrating AI into education, it becomes not only possible to automate teaching by breaking it down into a set of tasks that can be programmed from start to finish, but also to eliminate workers (i.e. teachers, support staff, special educators, etc.) from the production process of knowledge. Once automated, the entire "education value chain", from admission to graduation, can be accessed via a classroom platform or through an online software-as-a-service platform where students can learn using chatbot-based technology or "intelligent" tutors. Such a "fix" is what we call an *AI revolú*, a short-lived, illusion-based, dreamt-of gullible wish to have technology "finally" solving the many systemic problems in education worldwide. The AI revolú in education emphasizes shallow activities centred on the technology rather than on learners or teachers, on what is necessary for the technology to function well rather than on the mental growth of its users, on repetitive tasks that are automatized rather than on deeper cognitive abilities through which struggle and learning encounter. The AI revolú is Morozov's (2013) technological solutionism from the lens of the latest AI hype wave; it is an unfinished, one-sided illusion of what AI could do in the context of education as long as its users are educated on what technologists profit from.

Actually, there has not been, there is not, and there will probably never be a true revolution of AI in education. There is no sign of a revolution of AI in education nor in academia, only in the media and corporate outlets. What we have is a corporate-AI coup (Schaake, 2024; Whittaker, 2021), a digital stratagem to reclaim triumph in an already devastated sector (Ikusika, 2024; Paglayan, 2024; Schapira, 2019; UNICEF, 2020; World Bank, 2018), an attempt to appropriate leadership, taking over decision making in educational institutions and making the educational sector even more dependent on brittle technology by promising a solution to problems that are not solvable with it (Postman, 1992; Watermeyer et al., 2023). What develops is an *exogenous*

technological autocracy with a corporate kratos that moves the threads of technological developments related to education and diversifies them at its will. Yet, the ability of these coup-makers to convince the already-in-need sector to believe in their "dreams" is disguised as digital skills opportunities for all, abundant set-in-the-future promises of AI progress, although actually transforming digital progress into more space for human deskilling and regress.

Corporate AI aims to maintain an invisible control, its *kratos* [3], over learners, educators, administrators, policymakers, and the whole education system through indoctrination and propaganda mostly accompanied by AI hype (Duarte et al., 2024), the (still non-seen) future potential of AI in education, anthropomorphic language (Placani, 2024), and promises of democratizing education and access to digital empowerment "for all". To maintain their kratos, AI autocrats enjoy the unpaid support of educational elites, e.g., educators constantly using and beta-testing AI technologies. They offer their labour for free (Bender, 2024b; Caines, 2022, 2023), hold influence in their educational institutions when promoting the use of those AI technologies at all costs (Bender, 2024b; Watermeyer et al., 2023), and contribute to accept "exaggerated claims of their power and productivity [which leads] to their uncritical adoption" (Muldoon et al., 2024, p. 54). The sole narrative of "AI democratizing education" (Wieczorek, 2025) is a masquerade, an insult to what democratization or democracy mean. In democracies, any society member can decide, at least with their vote, what society they want to live in and how to govern it. However, "democratizing AI" and any reference to it give only the illusion of choice, of a power position that is nowhere possible (Sætra et al., 2022).

Instead, it is *AI Slavery, AI Colonialism* (Hao, 2022). For instance, when it is engrossing the group of people who work as testing servants in the role of annotators (Greenbaum & Gerstein, 2025; Hao, 2023; Hao & Hernández, 2022; Hao & Seetharaman, 2023; Muldoon et al., 2024)[4] under deplorable conditions with serious negative implications for their mental health and lives. Some scholars have already studied and discussed how to *decolonise* the practices, legacies, and contexts under which disadvantaged and historically marginalised populations have been controlled, exploited, and unfairly treated, including also how to decolonise AI. We refer the readers to the works of Adams (2021), Benjamin (2019), Birhane (2023), Katz (2020), Mboa Nkoudou (2023), Mejías and Couldry (2024), and Zembylas (2023) for more on those topics.

Crawford (2021) makes the point that artificial intelligence is nothing artificial but that it is very human behind its curtains, maintained by millions of such underpaid annotators and content moderators (Muldoon et al., 2024). Furthermore, corporate AI is not only exploiting labour in vulnerable countries, but also outsourcing testing to non-paid (slave) labour, e.g., when used by educators or when students have to work on ChatGPT-related projects in the classroom at the expense of getting a bad grade if they do not want to. A double sword, forcing the use of combinatorial and statistics-based AI on the one side, with the real damage, biases, and ecological dysfunction of such technologies as an afterthought on the other.

It is *AI Feudalism*, too, structuring the educational sector's needs around products and tools derived from the holding of licenses and promised digital developments in exchange for service or labour. For example, when educators and learners beta-test those products even without payment, learners carry a heavy, invisible yoke for the duration of their studies and beyond that will accelerate their dismissal in the future for the lack of those same skills they are not learning now or for convenience of those for whom they do the unpaid service.

[3] Greek: κράτος; "power."

[4] See thread with other cited works at https://twitter.com/_KarenHao/status/1769006784273101074.

4 Reading, writing, thinking: Bots must not apply

What are the consequences of students not reading books, articles, reports, etc. by themselves and delegating such activities to others, machinistic and mechanistic (i.e. explicitly machine and mechanically programmed what to do) chatbots included? Reading between the lines, i.e. discovering a message or meaning implicitly rather than explicitly stated entirely disappears; the interpretation of ideas and phrases with apparently less or subtle importance vanishes. Statistics-driven algorithms do not (and never will because that is their technological nature) extract, summarize, or consider such pieces of implicit information unless explicitly programmed, instructed, or trained with it. They lack social and real-world experiences completely and are unable to interpret or recall such experiences concerning the limited text they process, whatever the billions of *tokens* they are sold with in corporate narratives. This is mainly because only-digitally-performing algorithms do not have such experiences despite the tons of words they tokenize and are pattern-detecting trained with.

Human interpretation of written text is not mechanically tokenizable; it depends on the ever constantly updated experiences and behaviours of the readers, their lived and social experiences, and even their emotional ones. Humans do not consume written or spoken language the same way at two different moments in their lives. Human interpretation, deep thinking, understanding, consumption of text, citations, and quotations of occasional sentences and passages change and are affected by many different factors. For example, they may change with time, experience, relationships, education, news, political changes, successes, drawbacks, as well as even mood, weather, and an uncountable number of other factors — in short, life. Human experiences and how humans consume written language, for instance, is not a mere on-stone-set random or statistical highlighting of tokenized symbols depending on reality-reductionist utilitarian theories and corporate algorithms in place.

On the other hand, Carchidi (2024) illustrates the importance of having *a voice* in writing to reflect the author's "considered opinions and speculations [in telling the readers] that they are engaging with the thoughts of a mindful human being," something which neither chatbots nor any software or hardware-based machines are or can by far (Hicks et al., 2024). Carchidi (2024) also asserts that "[h]aving a voice means knowing what one is about — knowing who they are, what they believe, and where they want to position themselves in a broader community of individuals who have similarly carved out their niche." Such a niche or community is paramount to academic (e.g., scientific, scholarly) writing disregarding the discipline, as also creative writing is. A database or a corpus of examples is not such a niche and nor are software programs that operate on them.

Similarly, Rosenzweig (2023) warns that we are becoming assistants of those (wrongly named) AI "assistants" during the process of writing and, thereby, also watering down or even losing our thinking capabilities and related skills. She states, for example,

> If we turn to AI to do the writing, we're not going to be doing the thinking either. […] if we no longer value doing our own writing […] we may get to the point when we don't know how to think for ourselves anymore (Rosenzweig, 2023).

Other scholars suggest refusing the use of generative AI in writing studies explicitly (Sano-Franchini et al., 2024), which we concur with.

Now learners (in general, users) can pretend they read the articles because chatbots may "summarize" or present some yet-to-be-validated information (Hannigan et al., 2024) that is extracted without consent (Reisner, 2025) from statistically mixed-up sources probably not findable in that combination anymore. Uninformed people end up gravitating towards unrealistic expectations (Al-Sibai, 2025), accepting what they are told about all that AI-based tools "could" do, arguably manipulated by those who are the ones making money, or their supporters, selling brittle and untested technology. The more the public, in general, and those most affected by AI, in particular, know about the power structures and the true intentions behind the tools they use or that are used against them, the better. On the contrary, the more learners use ChatGPT or any other tool for learning, writing and similar tasks instead of learning or writing themselves, the poorer those skills at the time of doing it alone, the more mediocre behaviour they will master (Hicks et al., 2024), the less prepared they might be in the future (Lin et al., 2023). Some learners have such concerns already. In a recent international study, although most students acknowledged the dangers of becoming over-reliant on AI, 86% admitted already using AI in their studies (DEC, 2024).

Why would we like to outsource writing about our very own experiences, concerns, or even invented fiction or any scientific thoughts related to our lives or most recent research work, to a soulless thing that has not lived a single millisecond of any of our entire existences? For someone who does not know how a chatbot is programmed or how the programming language, software-based techniques, or hardware circuitry behind that piece of code work, it might sound like magic or a human-like entity. Yet, they should be careful: these tools are easy to manipulate (Tully et al., 2025). Chatbots are just software programmed to pick up already existing candidates of dialogue pieces from extensive piles of available text. Such "picked-up" text strings together possible combinations of words entailed in the data that was extracted from some tiny part of what others have already written, experienced, and lived. The data comes not only from humans, extracted mostly without asking the actual originators for consent, i.e., by appropriating their thoughts and work, but also from artificially generated datasets (aka *synthetic* data) depending on how often such stitched-together words may appear in a specific context. Forget particularly appealing mastering of any language in a form non-seen before. A words-stitchery software program will not suggest that; singular language beauty would be irrelevant to a statistics-based "search" (Shah & Bender, 2022). AI-based programs cannot embrace actuality, nor distinguish appearance from reality or take care about the difference (Smith, 2019).

5 Which factors contribute to the illusory AI revolú?

The more we rely on (generative) AI, the closer we might be to a point of no return in outsourced learning and disempowered humans. Educators beware! *AI literacy* becomes thus important, though it has mostly been centred on how to use the technology. Much more essential in and to education is *critical AI literacy*, i.e., being aware of its harms, questioning its limitations, contesting its results, engaging critically with AI (Veldhuis et al., 2025), or even refusing to use it completely.

To help with understanding some of the problems underlying AI, we now list some of the factors that might be contributing to the adherence of the education sector to the corporate-AI coup we mention above:

- *Silicolonisation* (Sadin, 2020) of the university.
- Banalisation of the basic functionality of the algorithmic black box, mainly due to AI illiteracy (Tully et al., 2025).

- Downgrading of academic competencies and deprioritisation of much more important ones. If learning can be outsourced, why care to do the heavy lifting?
- Deskilling of learners and declassification of important research-related competencies which learners should rather master. It costs much more effort and time to teach them how to do it themselves!
- FOMO ("fear of missing out") of the university and FOMO of the educators, evidenced also at a larger geopolitical scale (Markelius et al., 2024). Feeling ashamed if their command of technology is not relevant or "cool" enough. Also, imposed distress for not dominating or knowing the mathematics, coding structures, algorithms, low-level hardware functioning, and/or related terminology.
- Trusting a technology that promises more than it can actually do. At the same time, neglecting or underestimating the technological limitations, actual harms, and ethical issues of those technologies (Duarte et al., 2024; Luccioni, Jernite et al., 2024; Luccioni, Trevelin et al., 2024). "AI is an 'extraction machine'" (Muldoon et al., 2024, p. 7).
- Lack of expertise in areas learners and/or educators cannot easily contest but trust their results, together with ignorance, digital illiteracy, AI illiteracy: the spectre of the AI myth is still too powerful. Actually, the current AI "momentum" has less to do with advancements in AI (Monett & Grigorescu, 2024).
- Unnecessary anthropomorphism: ascribing chatbots (and algorithms, apps, systems, computers, machines and similar technology) capabilities they do not or cannot have (Placani, 2024) which, as also FOMO, is considered one of the mechanisms of the AI hype (Barrow, 2024; Markelius et al., 2024).
- Still no solution to the many precarious systemic issues in the education sector, aggravated in countries with much fewer resources to counter them. Issues that have no technological fixes, as mentioned above.
- Increasing number of learners (Galan, 2024a, b) whilst the government expenditure worldwide remains insufficient or is even decreasing in many countries (UNESCO, 2025b).
- Imposing rapid adoption of exogenous skill sets (e.g., AI-related and digital ones) even in situations where they are not needed (Postman, 1992, 1995).

However, serious limitations of the technology are considered as an afterthought, if at all, and include:

- Massive ethical problems with training data and intellectual property; ongoing and upcoming legal procedures regarding copyright issues (Panwar, 2025).
- Massive waste of natural resources for training such technologies, as well as massive ecological and energy problems and unsustainable systemic issues (Fergusson et al., 2024; Luccioni, Jernite et al., 2024; Luccioni, Trevelin et al., 2024).
- Unnecessary support (with taxpayers' money!) and excessive attention such technologies do not deserve, without considering the negative implications for learners, societies, and the planet *before* procuring and/or using them.
- Exploitation of people who annotate the data or moderate algorithms' results or content in general (see Section 1; see also Gebrekidan, 2024; Muldoon et al., 2024).
- Massive limitations of the available content in the form of training data: societies and their social interactions in their variety and dynamism cannot be quantified nor completely modelled (Collins, 2018).
- Extreme reduction and simplification of life, social behaviour, and interactions through limited mathematical formulae (Landgrebe & Smith, 2022).

- Excessive reliance on only one AI subfield (machine learning) and dismissal of other AI subfields or even other Computer Science subfields and careers, equally or even more important for the future of the discipline.

Despite those and other limitations, such technologies are widely accepted and introduced in the classroom and other contexts. Where did personal responsibility, pillar of modern societies and democracies go? Sadly, those that point to the many existing problems are usually mocked online, absurdly called pessimists or anti-technologists, ridiculed for their criticism, or fired from their jobs (Hicks, 2025).

Consequently, an AI monoculture is promoted *ad absurdum*, a disaster for any field if developing in only one direction. News, books, courses, and even entire careers are almost completely developed in only one Computer Science field (i.e. AI) and in only one of its subsubfields (i.e. one type of machine learning). Furthermore, the promotion of everybody-can-be-an-AI-expert courses in a few hours, days, or weeks distorts the true complexity and richness of the field. Moreover, important terminology is misappropriated (Floridi & Nobre, 2024) and even rebranded or misused. For example, prompt engineering, a technique used when interacting with chatbots, has nothing to do with engineering as in traditional software engineering (Walsh, 2024). Mitchell (2024) dives into similar topics and analyses the disagreements in the AI field when referring to its terminology, what can be traced back to the concept of *wishful mnemonics* as defined by McDermott (1976) almost 50 years ago.

As if it were not enough, a big army of educators, now converted AI soldiers or preachers of technology who only know its surface, prevent the development of the AI field in a very needed breadth, all of which contributes to the unnecessary support of the AI hype (Bender, 2024b) despite it "[increasing] the possibility of bad consequences for society" (LaGrandeur, 2024, p. 653) and despite (generative) AI's planetary and social costs (Crawford, 2021; Markelius et al., 2024; Walther, 2024). "[N]owhere do you find more enthusiasm for the god of Technology than among educators", warned Postman (1995, p. 38).

6 The trust-nothing era is already here

If we had Cervantes, Shakespeare, Goethe, Mary Shelley, Virginia Woolf, or Toni Morrison in the past, then we will have fewer and fewer transcendental voices and unique writers and thinkers in the future if we are to depend on chatbots' string-stitching of human language for writing, thinking, arguing. What hurts is not only excellence bleaching, but also humans recklessly coding those chatbots and eagerly selling them as if human creation had reached a ceiling. The current world's picture regarding AI's use (not only when writing) points to a collective massification of digital stupidity (actually nothing new in AI, e.g., McDermott, 1976), to the trust-nothing era (see also Inie et al., 2024), and to the acceleration of the lack of talent and the normalisation of homogeneous knowledge production to still not seen levels. Some fraudsters do not even "write" using chatbots for entertaining readers anymore, but use them to scam users and make a profit from it (Knibbs, 2024).

Chatbots are transitioning to a digital opium for the masses, for example, in the education sector, with some educators and learners alike blindly accepting the illusion of empowerment through technology, in the back now scammed themselves in ways that were not imaginable before. Worse, the education sector hopes to overcome its systemic problems by depending even more on corporate greed. Exhausted reviewers and underpaid academics are overwhelmed with botshit-enhanced homework and essays, botshit-brushstroked final-degree theses, botshit-

generated research papers[5] (e.g., Day, 2023; Gu et al., 2025; Haider et al., 2024; Hicks et al., 2024; McCarthy et al., 2024), all of that inevitably jeopardizing education, scientific research, and an already anaemic peer-review and publication system (McKie, 2024). Educators and educational institutions are becoming increasingly and helplessly dependent on a constantly SOTA-chased technology (SOTA: state-of-the-art) whose results cannot be trusted anymore (Al-Sibai, 2025). They are changing bedrock pedagogical and didactic skills and practices for quicksand digital stress and ineptitude in a field they probably neither chose to study (AI) nor will completely dominate: most will remain hostage victims of corporate AI and its acolytes.

Why would someone like to hide their voices and accommodate and subordinate them to a statistically limited combination of what others said or wrote before? Why would they like to copy-paste any-size-varying (oftentimes) kitschy texts, some of them entirely verbatim-repeated from passages taken out of context from other now openly plagiarized texts that were tastelessly stolen, rudely kidnapped without consent, and colourlessly modified without permission? Why would they prefer outputs from indifferently mixed texts according to math formulae with machinistic and mechanistic outcomes and sophisticated variable names? Why would they choose meaningless sentences intentionally produced for the sake of a scientific underserved halo that ascribes the software program the illusion of being intelligent, the program's producer the illusion of producing something creative, and the end users the illusion of writing themselves? Agency, moral choice, and personal responsibility become imperative; they should not be selective. Trust has been eroded. Cheap and pyrrhic "advancements" in the name of machined statistics have dominated over trustworthy technologies. Is there a way out?

7 Conclusion: A Call to action

The revolution of AI in education is not such as marketers and corporate AI want us to believe. It is more of a fragile and faked kite that flights in revolting air and has no robust anchors. Its threads proliferate from time to time in the tech industry, depending on hype waves, but make it fall free shortly after being confronted with education and educators' adversities. It is not an AI revolution but a *kite-type AI revolú* ready to seem stronger than it really is.

We do not need *clicky-learners*, the ones formed in and used to clicking apps and chatbots for shortcutting their learning paths. They are slowly losing their agency and voices and will be easier to manipulate, faster to lay off and be paid less in the future (Merchant, 2024). This is not what the ultimate goal of education should be. In the end, educators will have to decide whether they will review, read, give feedback about, and spend time with texts written by either human beings or algorithms; and learners will have to learn the hard way that AI tools doing the writing and thinking for them still means they cannot write and think by themselves.

Is it time to surrender, obey, and follow technocratic mandates that lure the *technology innocent* (Postman, 1992) and wishful-thinking masses to believing in utopic futures behind interests-driven technological manipulation? No, it is not and it never should be! These clearly are times of something opposite: these are times of resistance, pushing back, contempt, refusal, disobedience, and rebellion (Dusseau, 2024; Hao & Freischlad, 2022; Nichols et al., 2025; Sano-Franchini et al., 2025; Valdivia, 2024). These are *times of dissent*. Submission is not the answer (Collins, 2018; McQuillan, 2022; Sadin, 2020; 2023). There is enough material available to support why: e.g., Critical AI, n.d.; EPIC, 2025; Leufer et al., n.d. See especially (Sano-Franchini et al., 2025)

[5] See some examples at https://twitter.com/simonthenorth/status/1768355339697541185 and https://garymarcus.substack.com/p/the-exponential-enshittification.

on how to respond to the "rhetorical move to quickly dismiss refusal perspectives as a strategy that works to advance AI marketing, facilitate upward wealth redistribution, and silence opposition/dissension."

The banalization of *GPT-ifying* life one prompt at a time must be stopped urgently. Producing clicky-learners must not be the answer. Paraphrasing Nelson,[6] the more AI clicky-learners graduate, the more positions for juniors will be eliminated, i.e. they will not become mid-level knowledgeable in their work if they lack the skills to do so. This means they will not even become seniors, not to mention the much-needed experts and creatives of tomorrow.

The blurring of the limits of what is true or false, of what is factual or AI token-mixed, of what is valid or misleading, is worrisome. Educators are simply not prepared to fill the gap when the majority of them conflate the former with the latter, arguably because of their AI or technology illiteracy. On the other side, no amount of critical AI literacy can prevent big and small tech from singing students their siren songs and the latter from continuing using tech for short-cutting their learning paths if educators do not care. Educators using whatever-AI tools in class are accelerating such trends, extending the space and time those tools are used in the classroom, thereby reducing the space and time learners would have to learn to debate, communicate, exchange ideas, now agency-lost, lobotomized into more clicks, more copy-pasted information, and more dependency of such tools.

If we (educators foremost) do not awake from the greedy corporate-serving nightmare, then we will soon be witnesses of the *uberization* (Asher-Schapiro, 2023; Sadin, 2023) of our professions. No amount of books or papers like this one, nor campus debates or personal experiences, will suffice if each and every single educator is not intrinsically motivated to remove the veil before their eyes. Outsourcing learning, commodifying education, and deskilling humanness is not progress. The answer is easy and short: we must say no and truly mean it. These are times of *Luddite pedagogy*, i.e. of "reclaiming of faculty agency, built on the refusal to accept that technology has rendered our role moot" (East, 2025). One way to reclaim such an agency would be, for instance, through *humanistic education* and *technology humanism* instead of tech solutionism (Morozov, 2022, 2023), i.e. through approaches that question "the extent to which technological solutions (even those of the humanistic variety) are adequate substitutions to other, more human approaches" (Morozov, 2022, 2023).

Learning is hard, mastery takes time, and time ripens all things. A tool that outsources reading the books, writing the texts, critically analysing the sources, reading between lines in the original sources, engaging in reflection, and fostering intrinsic motivation to read the next books and sources, is more than enough reason *not to use* the tool in educational settings. Favouring the low-hanging fruits after the first impressions of using a new tool usually means falling into the trap of technological empowerment through disempowerment as humans, instead of focusing on what really matters for learning long-term and growing cognitively. Apparent gains from auto-completing sentences should not be a reason to favour generative AI in education: the harms amply overweight the gains and wished potentials. Educators should focus on what matters for and from pedagogical and didactic knowledge and practice (Biesta, 2025). The rush to test a new technological toy whatever its implications has dominated the educational field. We risk connecting and interacting with others in real life, finding solace in nature, seeing history, life,

6 When interviewed by Acovino and Intagliata in 2024 on the impact of AI in the game industry (see https://www.npr.org/2024/03/15/1238111971/video-games-ai-artificial-intelligence-nvidia).

and imagined worlds through others' eyes and souls who express themselves artistically and let us feel and be *us*.

It is not only a matter of it being a tool and whether to use it or not, but that such a tool exists and is developed, marketed, and used *despite* the very serious ethical, environmental, legal, and technological issues (many of each) that it has. *That* exactly should be more than concerning and enough for not using it in education, where the disdain for such issues might not only actively be exercised but directly handed over to the learners who, by using the tool further, will repeat the same behaviour: i.e. using first and then, as an afterthought, if at all, considering the issues. As McPherson and Candea (2024) advise, scholars and students should figure out "if, rather than how, generative AI contributes to their scholarship." We should advocate for, *first*, considering the harms and issues, which are more than serious, and, then, only then, use the tool.

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DM: Conceptualization, formal analysis (of the literature and related work), investigation, methodology, project administration, validation, and writing (original draft and subsequent versions), review, and editing. GP: Conceptualization, formal analysis (of the literature and related work), investigation, methodology, validation, writing, and review. All authors have read and agreed to the published version of the manuscript.

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The authors have no competing interests.

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