Man in the Webs of Meaning
Negative Aspects of Artificial Intelligence in Education

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The use of generative artificial intelligence (AI) in education undoubtedly opens up new possibilities for more effective teaching, personalised learning, and support for teachers and students in the educational process. For example, adaptive learning systems can analyse students' needs and adapt content to their pace and learning style. This can help improve outcomes, increase inclusivity, and reduce inequalities in student learning. Teachers, in turn, can use data analytics to gain a better insight into classroom performance and spend more time on creative or individual learning. From a philosophical and ethical perspective, however, the AI phenomenon also raises entirely new questions about the role of the educator, student autonomy, and accountability when these advanced technologies are used in the classroom. Let's take a point-by-point look at some possible negative aspects of AI in future pedagogy.

THE TEACHER-STUDENT BOND

Many educators are already using AI to generate tests for their teaching, and they appreciate this benefit. AI saves them time and even suggests creative new ideas for tests or presentations. (Neumajer, 2019). However, if students also use a similar method of generating test results using AI tools, we get into a vicious circle of looping where neither the input nor the output is of much interest to anyone anymore and communication is primarily between the AI tools of the teacher and those of the student. What can be done about this?

The teacher can use AI only to create a basic test plan and focus on lively discussion and student reasoning during the lesson, or he or she can work with AI directly in class but consult the outcomes with students on the spot. This can ensure that AI remains a relevant and useful addition to the lesson without disrupting the personal connection between the teacher and students.

One Authority and One Correct Answer

A problem can also arise with the form of chatbots based on large language models.[1] These are, in fact, unlike the Google search engine, which offers multiple answer options with relevant links to sources. However, AI language models generate only one main answer, which can give the impression of being a definitive truth. From a user's point of view, such communication is user-friendly and relatively natural because AI imitates human dialogue. However, this can be tricky – unless the user asks critically and compares the answer with other sources, they can easily accept inaccurate or biased information (Wecks at al., 2024).

This is why it is always necessary to combine multiple sources, constantly check facts, and view AI as a tool offering a different perspective or help rather than as a perfect authority. AI should serve to broaden perspectives rather than being the sole arbiter of guaranteed true information.

Inaccurate Content Generation

One of the problems of AI is "hallucination", where the model generates mis-leading or false information. For example, when generating a reference list, AI may provide non-existent references or fictitious articles or publications. Similarly, it may provide distorted historical events, incorrect scientific data, or outdated facts (Graham, 2023). This phenomenon arises because the model is not based on an actual understanding of the text (meaning), but merely constructs words on the basis of the probability of its training data (syntax), as described by the philosopher John Searl (Pěchouček, 2025).[2] It is good to keep in mind that AI cannot itself distinguish truth from fiction in this way – it merely mimics the structure of human text.

Therefore, it is essential to verify information constantly and rely on one's own knowledge and critical thinking. Artificial intelligence can be a useful tool for quickly gaining insights and ideas that we might not have thought of, but it should not replace thorough empirical research and working with validated sources that we have acquired through our own study.

Unrecognisable Duplication and Plagiarism

The inability to recognise duplication or plagiarism in school or final papers

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[1] The most widely used **Large Language Models** (LLM) are ChatGPT (from OpenAI), Claude (Anthropic), Copilot (Microsoft), and Llama (Meta).

[2] **The Chinese Room Argument** is an important 1980 thought experiment by the British philosopher John Searle, which aimed to prove that the ability to answer a text question meaningfully (the principle of the classic Turing test) is not proof of the ability to understand that text. Searl demonstrated his experiment using text comprehension in Chinese, where a person sits in a closed room and answers on the basis of the syntax of the texts without understanding the Chinese language.

can be a disadvantage. AI tries to generate each text in such a way that it is never repeated exactly. Thus, it is not yet possible to distinguish clearly between a text written by a human and one that has been generated. There are, however, AI-generated content recognition software packages that analyse text and try to determine whether it was created by a human or by AI.[3] But it is important to know that none of these tools are 100% accurate. Indeed, as AI generative models become more sophisticated, it is becoming increasingly difficult to distinguish AI-generated text from human-generated text.

Given these limitations, it is recommended to use AI detectors as a complementary tool and not rely on them as the only means to determine the origin of a text. Mistakes could easily be made. It is better to make sure that students have their own motivation to understand the subject matter and can process it themselves. In this way, they can also feel good that they have been able to create something themselves and not left the work to AI.

CREATIVITY AND ACTIVE APPROACH

The use of AI can lead to a loss of creativity and an active approach to learning if students start delegating most of their tasks to AI. Although the quality of the output depends on the accuracy of the assignments (prompts), the content, stylistics, grammar, or translations are already largely controlled by the AI itself. This means that instead of using their own thinking and skills, students can rely on pre-made answers without having a deeper understanding of the topic. (Ju, 2023).[4]

Therefore, it is crucial to encourage students to use AI only as a tool to support their thinking – for example, as an advisor or research aid – not as a substitute for their own analytical skills. The ability to put things into context and to approach tasks creatively is more important today than ever before, and so a student should always be able to defend and argue their work.

EQUALITY AND ACCESS TO TECHNOLOGY

There is a risk that differences in access to AI tools, which are paid for in higher versions, may exacerbate social inequalities. Students from economically disadvantaged families may not be able to use advanced AI features, while their peers with better financial circumstances will have access to higher-quality versions that offer more accurate and

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[3] The content recognition software packages that are used include **Isgen**, **Smodin**, and **NeuralWriter.**

[4] Similar results were reported in a Colombian study at the University of Ibagué in 2023, where the use of ChatGPT in physics education resulted in a decrease in student performance compared to a control group. Although most acknowledged the usefulness of the tool for understanding concepts and providing information, there were concerns about its potential to reduce critical thinking and independent learning (Forero & Herrera-Suárez, 2023).

sophisticated outputs. This could widen the gap not only in technological literacy but also in the quality of education, although there are cases where, as a result of the inaccessibility of technology, there is far greater motivation for students to achieve high-quality outcomes than those for whom it is commonly available (Malečková, 2023).

It is therefore essential to ensure that AI is accessible to all, regardless of their economic background. Schools could provide access to premium versions of AI tools through school licences. It is also important to educate educators and students on how to use the free versions of AI that are available effectively and how to develop digital skills. Equal access to AI should be a goal of ensuring quality education for all.

Protecting Privacy and Sensitive Data

The collection and analysis of data by artificial intelligence raises fundamental questions about the protection of students' personal data. Many AI tools process vast amounts of data, including test scores, study habits, or personal preferences, which can lead to the risk of misuse or unauthorised sharing of this information. If data is not properly protected, students' privacy may be violated or their data may be commercially exploited by third parties.

Schools must therefore ensure that all data is used transparently, ethically, and solely for educational purposes (Cockel-bergh, 2023). This includes establishing strict rules for collecting and storing information, using only trusted AI platforms with clearly defined privacy policies, and educating teachers and students about the safe handling of digital tools. The safe use of AI in education must be a priority so that the technology remains a useful tool and not a security threat to student privacy.

Ability to Understand Emotions and Social Context

An AI tool provides answers based on pre-programmed algorithms, which means it lacks the ability to experience emotions or understand complex social and emotional situations as a human actor can. While AI can respond to various stimuli and simulate participation, it cannot truly perceive students' moods, needs, or interests. For example, in crisis situations, AI's response may be inappropriate or superficial, in contrast to a human teacher who may offer empathy, encouragement, or adequate emotional support.

Teachers who are able to identify and respond to students' emotional signals and needs can support their overall development more effectively and empathetically than AI can. Therefore, it is imperative that AI in schools serves more as a supplement, but human interaction should play a critical role in supporting emotional and social growth in the first place.

Conclusion

Artificial intelligence raises a fundamental debate about the role of the teacher as a guide to the educational process. If artificial intelligence, as a non-human actor, were to take over some of the functions of the educator, it could lead to a fundamental shift in the perception of the relationship between teachers, learners, and technology. This change could have far-reaching implications for the dynamics of teaching and relationships in the school environment. The introduction of AI into education must be carefully considered and accompanied by ethical considerations (Cockelbergh, 2023). The involvement of all stakeholders – teachers, students, parents, and developers – is essential in order to create a harmonious and effective use of technology. The key is to ensure that AI technology is always a tool serving education and supporting teachers, not an end in itself.

However, the teacher should remain a key figure in the educational process – a mediator who adds a human dimension to teaching, ethical guidance, and emotional support that technology is not yet able to fully replace. AI can be a valuable tool for increasing the effectiveness and creativity of learning, but it should not replace the human element, which is invaluable for students' personal and social development. The ideal is a combination of human and machine approaches – a teacher as a guide who uses AI smartly but does not let it replace the learning process itself. As the sociologist Max Weber argued, "Man is an animal suspended in webs of meaning that he himself has spun." Today, that web is Artificial Intelligence.

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MAREŠ, P. Člověk v síti významů: Negativní aspekty umělé inteligence ve výuce

Tento článek se kriticky zabývá negativními aspekty integrace generativní umělé inteligence (AI) do vzdělávání, a to z pedagogického, filozofického i etického hlediska. Přestože AI nabízí mnoho výhod pro zvýšení efektivity výuky, může zároveň oslabit vztah mezi učitelem a žákem. Text upozorňuje na negativní důsledky využití AI nástrojů v pedagogice. Autor zdůrazňuje, že klíčovou postavou výuky by měl zůstat učitel jako lidský a etický mediátor vzdělávacího procesu. Článek vyzývá k obezřetnému a vyváženému využívání AI ve školství, které by mělo podporovat, nikoli nahrazovat lidskou interakci a kreativitu.

Klíčová slova: umělá inteligence, AI, vzdělávání, pedagogika, etika, učitel, žák, kritické myšlení