

Список використаних джерел

1. Стратегія розвитку Київського національного економічного університету імені Вадима Гетьмана на 2023-2025 роки. URL: https://drive.google.com/file/d/1CYl4IxrCYQcGajXLWLBaI_NLu49-iBpD/view
2. Передвиборча програма кандидата на посаду ректора Дмитра Лук'яненка. 2024 р. URL: https://drive.google.com/file/d/1hLUbVFwWlRgEO-SspUHNDX_moUioqbyd/view

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CONSULTING IN ARTIFICIAL INTELLIGENCE IN EDUCATION

Artificial intelligence can transform education by putting learners in charge of their own education, by shaping the learning experience to widely varying needs and through redefining the traditional roles of schools and universities. But there is too much hysteria and many over inflated claims. What is needed is a measured approach and a realistic understanding of what can be achieved and how to make the technology work.

Artificial intelligence can be simply defined as is where a computational system performs a task generally accepted to require human intelligence. AI was originally developed between the 1950s and mid-70s but, after initial expectations were not realized, there followed a “AI winter” with little progress being made. Interest picked up again in the mid-1990s, but practical applications were few and far between. The “big bang” for AI came after 2010 driven by much better computational platforms from companies such as Nvidia and access to large volumes of data mostly harvested using the internet.

Consulting in AI for educational process is important part as far as new approaches toward learning process become more essential. Current discussion about AIED is characterized by two essential aspects—the distinction between LA, EDM, ML, and AI and the challenges of pedagogically meaningful implementation. In particular, there is often no clear distinction between LA and AIED. A major reason for this is the missing evidence for the application and effect of the terms in

education (Ifenthaler & Yau, 2019; Renz, Krishnaraja, & Gronau, 2020; Sclater, Peasgood, & Mullan, 2016). The aspect of a meaningful implementation is important because the barriers are still high when it comes to using data-based EdTech solutions concretely and meaningfully in the existing learning and teaching process (Alexander et al., 2019; Zawacki-Richter et al., 2019). To eliminate the issue of distinction in the present paper and improve the understanding of the empirical study in sections “Qualitative Research Design” and “Research results”, the first step is defining AI and AIED and roughly outlining their relationships with LA, ML, and EDM.

One of the first and still most influential definitions of AI was established by McCarthy: “The study [of AI] is to proceed on the basis of the conjecture that every aspect of learning or any other feature of intelligence can in principle be so precisely described that a machine can be made to simulate it” (Popenici & Kerr, [2017](#); Russell & Norvig, [2010](#)). In the past decades, the understanding of the term AI has become more differentiated, depending on the discipline (e.g., mathematics, chemistry, linguistics, and teaching and learning in education). Motivated to understand the profound association between education and AI in terms of knowledge presentation, reasoning, and learning, the first research projects in the field of AIED were already initiated in the early 1970s (Self, [2016](#)). Since then, international research interest has steadily increased.

LA- and AI-based teaching and learning solutions have the potential to change education drastically. Following Buschbacher ([2019](#)), such new technologies are always caught between enthusiasm and rejection. Some see them as long sought-after solutions to existing and future challenges, whereas others view them as a further step toward incapacitation. Both perceptions are equally exaggerated and harmful, as they block the view of the benefits and side effects of the solutions. In the second section, we already pointed out that there are currently only a few LA- and AI-based teaching and learning solutions on the market. The application is often only theoretically explored but not implemented in practice. Below, we first summarize the best-known cases that have successfully implemented such solutions

in the education sector. Subsequently, drivers and barriers are presented, derived from our empirical analysis in combination with discourse analysis. So consulting service should focus on the next main points.

Personalization – A fundamental part of education systems worldwide is that students learn in groups from a teacher or lecturer. But it is increasingly being realized students have very different needs in the way they learn. The current approach leaves little scope to personalize learning to meet these needs. Private tutors are one way to introduce personalization and have been used since Alexander the Great's father hired Aristotle to educate his son. More recently, psychologists such as Benjamin Bloom have demonstrated the benefits of personalization in education. But private tutors are highly variable in terms of quality and too expensive for many parents. So, most students continue to share their teachers in classroom style teaching.

Student focus – Another problem is the narrow focus of modern education. Educationalists such as Ken Robinson lament the rise of teaching systems that use rigid curricula, set simplistic standards and focus on learning how to pass exams. This is made worse where schools and universities concentrate on rankings rather than on providing the best education they can for each student. The result is a failure to provide the type of rounded education today's students need, particularly when it comes to skills such as communication, reasoning, decision-making and creativity.

Evidence-based learning – Education has been subject to more than its fair share of pseudoscience. For example, the UK Government once endorsed the idea of Educational Kinesiology in which one exercise is claimed to increase the flow of electromagnetic energy and help the brain send messages from the right hemisphere to the left. Important progress is being made to counter such nonsense including a more evidence-based approach. For example, the UK's Education Endowment Fund combines education research with rigorous large-scale trials to find out what actually works.

Scaling up – Finally, current education systems are not capable of scaling to meet modern requirements. A hundred years ago, top quality schools and

universities in developed countries provided a good education for a small elite, with everyone else receiving a basic education. This no longer meets the needs of modern economies or the expectations of their citizens. But there are not enough good teachers and other resources to provide the type of education previously reserved for the elite to everyone. In the developing world, the situation is more acute with some 1bn children needing a good education. Current systems simply cannot scale-up to meet these demands.

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