
Reimagining assessment in higher education: the role of artificial intelligence in student evaluation

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Annotation

The technology of artificial intelligence (AI) is rapidly changing the way assessment is practiced in higher learning. Learning analytics, data-driven, intelligent feedback systems, automated marking, and AI-supported evaluation are changing the way the performance of students is assessed. Although these technologies have been quickly adopted, there is not much research investigating the experiences and perceptions of AI-mediated processes of assessments by students in real academic settings. Based on a socio-technical approach, the proposed qualitative study explores the perception of the students in the university concerning AI-supported evaluation and its effects on learning, assessment, and academic responsibility. The analysis builds around thematic examination of over 100 open-ended replies available as a result of a survey conducted among university students. The results show that AI-enhanced evaluation improves the immediacy of feedback, transparency, and consistency of the evaluation process. According to students, AI-generated feedback helps students to reflect, self-regulate, and engage in lifelong learning. Meanwhile, the participants raise the issue of algorithmic bias, a deficit of contextual knowledge, and the possible loss of human cognition in evaluation.

Keywords

Artificial intelligence, assessment, higher education, automated feedback, learning analytics, student evaluation

Oliy ta'limda baholashni qayta ko'rib chiqish: talabalarni baholashda sun'iy intellektning o'rni

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Annotatsiya

Sun'iy intellekt (SI) texnologiyalari oliy ta'limda baholash jarayonlarini sezilarli darajada o'zgartirmoqda. O'quv analitikasi, ma'lumotlarga asoslangan tizimlar, aqlli fikr-mulohaza (feedback) tizimlari, avtomatlashtirilgan baholash va sun'iy intellekt yordamida amalga oshiriladigan baholash usullari talabalarning o'quv natijalarini baholash jarayonini tubdan yangilamoqda. Ushbu texnologiyalar tez sur'atlarda joriy etilayotgan bo'lsa-da, talabalarning sun'iy intellekt asosida amalga oshiriladigan baholash jarayonlari haqidagi tajribasi va qarashlarini real akademik muhitda o'rganishga bag'ishlangan tadqiqotlar hali yetarli emas. Mazkur sifatli tadqiqot ijtimoiy-texnologik yondashuv asosida universitet talabalari tomonidan sun'iy intellekt yordamida amalga oshiriladigan baholash jarayonining qabul qilinishi hamda uning ta'lim, baholash va akademik mas'uliyatga ta'sirini o'rganadi. Tadqiqot universitet talabalari o'rtasida o'tkazilgan so'rov natijasida olingan 100 dan ortiq ochiq javoblarning tematik tahliliga asoslangan. Natijalar shuni ko'rsatadiki, sun'iy intellekt yordamida amalga oshiriladigan baholash tizimlari fikr-mulohazalarning tezkorligini, baholash jarayonining shaffofligi va izchilligini

oshiradi. Talabalarning fikriga ko'ra, sun'iy intellekt tomonidan yaratilgan fikr-mulohazalar refleksiya qilish, o'z-o'zini boshqarish va uzluksiz o'rganishni rivojlantirishga yordam beradi. Shu bilan birga, ishtirokchilar algoritmik xolislik muammosi, kontekstni yetarli darajada tushunmaslik hamda baholash jarayonida inson tafakkurining kamayishi kabi xavotirlarni ham bildirganlar.

Kalit so'zlar *Sun'iy intellekt, baholash, oliy ta'lim, avtomatlashtirilgan fikr-mulohaza, o'quv analitikasi, talaba baholash*

**Переосмысление системы
оценивания в высшем
образовании: роль
искусственного интеллекта в
оценивании студентов**

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Аннотация *Технологии искусственного интеллекта (ИИ) стремительно изменяют способы проведения оценки в высшем образовании. Аналитика обучения, системы интеллектуальной обратной связи, автоматизированное оценивание, анализ данных и системы оценки, поддерживаемые ИИ, трансформируют традиционные подходы к оценке успеваемости студентов. Несмотря на быстрое внедрение этих технологий, существует ограниченное количество исследований, посвящённых тому, как сами студенты воспринимают и оценивают процессы оценки, опосредованные искусственным интеллектом, в реальных академических условиях. Основываясь на социотехническом подходе, данное качественное исследование изучает восприятие студентами университетов оценивания с использованием ИИ и его влияние на обучение, процессы оценки и академическую ответственность. Исследование основано на тематическом анализе более 100 открытых ответов, полученных в результате опроса студентов университетов. Результаты показывают, что использование ИИ в оценивании повышает оперативность обратной связи, прозрачность и последовательность процессов оценки. По мнению студентов, обратная связь, сгенерированная ИИ, способствует развитию рефлексии, саморегуляции и непрерывного обучения. В то же время участники исследования отмечают возможные риски алгоритмической предвзятости, недостатка контекстуального понимания и потенциального снижения роли человеческого мышления в процессе оценки.*

Ключевые слова *Искусственный интеллект, оценивание, высшее образование, автоматизированная обратная связь, аналитика обучения, оценка студентов*

Introduction

Assessment is one of the most essential elements of the educational system to define the way of measuring learning outcomes, their interpretation, and enhancement. Traditionally assessment in higher education has been based on teacher-directed process of assessment like written examination, essays, projects, and oral presentations. The purpose of these methods is not only to measure the knowledge of students but also to lead to the learning process, give feedback, and ensure the academic standards.

Nevertheless, conventional evaluation practices are usually a challenge in modern institutions of higher learning. Expanding student numbers, lack of teaching time, and the necessity of providing prompt feedback on students pose significant stress on the instructors. Therefore, students are often given delayed or no feedback on their academic performance, which can limit the possibilities of reflection and improvement.

The fast advancement of artificial intelligence technologies has provided new opportunities in dealing with these challenges. Assessment tools based on AI have become more and more popular in assisting the grading process, automated feedback, learning pattern analysis, and student progress tracks. Such technologies can handle high amounts of student data and detect patterns that might be difficult to detect using conventional means of assessment.

The AI-assisted assessment systems are based on sophisticated algorithms, natural language processing, and machine learning methodologies to analyze the answers provided by students and provide feedback. These systems are able to breakdown written documents, identify grammar and structural formulations, and suggest ways of making such documents effective. Moreover, AI technologies may be deployed in digital learning settings to monitor student

engagement and participation levels as well as learning patterns.

Although the possibilities of AI technologies to increase efficiency in assessments and enhance the quality of feedback are promising, there are also significant pedagogical and ethical issues. Researchers have been concerned about the veracity of the automated grading systems, the possibility of algorithm biasing, and the inability to diminish human judgment in the assessment of education.

The perception of AI-assisted assessment by students is thus the key to establishing the effective and ethically responsible practices of assessment in higher education.

Methodology

This research will be based on a qualitative research design that tries to elucidate the experiences and perceptions of students on the application of artificial intelligence in an academic assessment. The study will be based on an interpretive framework that aims to comprehend the student-AI-mediated evaluation systems interaction in actual learning situations.

Data Collection

The data were obtained using an online questionnaire that was administered to various students of the university belonging to various academic fields. The questionnaire consisted of open-ended questions to enable the researcher to understand the experiences of students using AI-supported assessment tools, attitude towards its benefits and difficulties, and perceptions of fairness and effectiveness of AI-assisted assessment.

The data is composed of 100 open-ended questions which were gathered among undergraduate and graduate students. The participants volunteered to provide commentaries on the effects of AI technologies on the feedback mechanisms, transparency in grading and learning.

Data Analysis

The thematic analysis was the method that was used to analyze the collected data and allow the researcher to detect the tendency and the repetition of the specific themes in the qualitative data. The inductive coding approach was applied in order to determine significant themes connected with how students viewed AI-assessed assessment.

The analysis focused on three main dimensions:

- students' experiences with AI-generated feedback
- perceptions of fairness and transparency in AI-supported evaluation
- ethical concerns related to automated assessment systems

Findings

Feedback in the Short-Term and Long-Term

The timeliness of feedback is considered one of the most commonly mentioned benefits of AI-supported assessment systems. According to students, automated evaluation tools are faster in replying to their submissions giving them the opportunity to spot errors and rewrite better.

Contrary to the usual methods of assessing, where the feedback might take long because of the workload of the instructors, AI-based systems provide immediate recommendations and clarifications. This immediacy makes assessment a process of continuous learning as opposed to the end performance judgment.

Improved Self-regulated Learning

Another point mentioned by the participants was the fact that AI-generated feedback promotes self-regulation and reflection. In the learning process, the students can track their progress, determine the areas of weakness and modify their learning strategies by getting feedback constantly throughout the learning process.

According to the reports by many students, AI-assisted assessment assisted them in becoming more independent learners

because they had an opportunity to repeatedly revise their works and only submit final assignments.

Some Apprehensions about Algorithms

Notwithstanding such benefits, students also reported about the disadvantages of AI-based assessment systems. Part of the participants noted that automated grading systems might lack full comprehension of student context, or originality of student response.

Students also stressed that creative thoughts, highly-complicated arguments, and interdisciplinary thinking can be mistaken by algorithmic assessment systems sometimes.

Assessment has always been a central component of higher education because it determines how student learning, skills, and competencies are measured. Traditional assessment systems in universities have historically relied on examinations, written assignments, and standardized tests. However, scholars increasingly argue that conventional assessment approaches often fail to capture the complexity of student learning and may not adequately reflect students' critical thinking, creativity, and problem-solving abilities. As higher education continues to evolve in response to digital transformation, the integration of artificial intelligence (AI) has emerged as a promising solution for improving the effectiveness, accuracy, and fairness of student evaluation.

Earlier research on assessment reform highlighted the need to move away from purely summative assessment practices toward more formative and learner-centered approaches. Boud and Falchikov (2007) emphasize that assessment should support long-term learning and encourage students to develop self-regulation skills. According to these scholars, effective assessment systems should not only measure knowledge but also promote reflection, critical thinking, and continuous improvement. This perspective has influenced contemporary discussions on assessment redesign in higher education.

Recent developments in artificial intelligence have created new opportunities for transforming assessment practices. AI technologies can process large amounts of data, analyze patterns in student performance, and provide personalized feedback. Crompton and Burke (2023) note that AI systems can automate certain aspects of assessment, such as grading assignments, analyzing written responses, and identifying learning gaps. These capabilities allow educators to focus more on instructional support while AI systems assist in evaluating student performance.

Another important area of research concerns the broader role of AI in education systems. Holmes, Bialik, and Fadel (2019) argue that artificial intelligence has the potential to significantly reshape teaching and learning processes by providing adaptive learning environments and intelligent tutoring systems. In the context of assessment, AI can support personalized evaluation methods that adapt to individual student needs and learning progress. For example, intelligent assessment systems can analyze student responses in real time and adjust the difficulty of tasks accordingly.

Machine learning technologies are also playing an increasingly important role in educational assessment. Luckin (2018) explains that machine learning algorithms can analyze complex patterns in student behavior and learning data, enabling more accurate predictions of academic performance. These systems can identify areas where students struggle and recommend targeted interventions to support learning. As a result, AI-based assessment systems can provide more detailed and meaningful feedback than traditional evaluation methods.

Another key aspect of AI-driven assessment is the use of automated grading systems. Automated grading tools are capable of evaluating essays, quizzes, and other forms of student work using natural language processing techniques. According to Zawacki-Richter et al. (2019), AI-based evaluation

systems can improve efficiency and reduce the workload of educators while maintaining consistent assessment standards. However, researchers also emphasize that automated assessment should complement rather than replace human judgment in educational evaluation.

Despite the potential benefits of AI in student evaluation, researchers have raised several ethical and pedagogical concerns. Selwyn (2019) argues that the use of AI in education must be carefully monitored to ensure transparency, fairness, and accountability. Algorithms used in assessment systems may contain biases or inaccuracies if they are not properly designed and evaluated. Therefore, educators must critically examine the role of AI in assessment and ensure that technological tools support rather than undermine educational values.

Another challenge relates to the need for teacher training and institutional readiness. Implementing AI-based assessment systems requires educators to develop new technological and pedagogical competencies. Universities must also invest in digital infrastructure and data management systems to support AI applications in education.

Overall, recent literature suggests that artificial intelligence has the potential to transform assessment practices in higher education by improving efficiency, personalization, and feedback mechanisms. However, successful implementation requires careful consideration of ethical, pedagogical, and technological factors. As AI technologies continue to develop, educators and researchers must work collaboratively to design assessment systems that enhance learning outcomes while maintaining academic integrity and fairness.

Discussion

The results show that AI-based evaluation systems can radically change the practice of evaluation in higher education. AI technologies can facilitate more interactive and formative assessment because they offer

instant feedback and monitoring of performance.

Pedagogically, the AI technologies can assist in changing the assessment system, which must remain purely summative, to a more process-based system, which facilitates the process of reflection and improvement. Automated feedback system helps students to take more active participation in the learning process and acquire greater self-regulation abilities.

Yet, the paper also brings to the fore the significance of the human element in the AI-based evaluation systems. Although AI technologies can be effective in patterns analysis and feedback creation, they might not be as contextual and interpretive as human instructors are.

Thus, the effective assessment practices must be based on a combination of the

performance of AI technologies and the abilities and ethical duty of the educators.

Conclusion

Artificial intelligence poses a new trend in assessment practices in higher education. AI-based assessment tools have enormous benefits regarding the timeliness of feedback, efficiency, and self-regulation learning.

Meanwhile, the implementation of AI in assessment procedures will lead to serious concerns concerning equity, transparency, and scholarly integrity. Students are aware of the advantages and drawbacks of AI-based evaluation systems and insist on the role of human intervention in assessments.

The further deepening of the study of the role of AI technologies in assessment systems to facilitate learning without violating ethical norms and academic fairness is the subject of future research.

References:

1. Boud, D., & Falchikov, N. (2007). *Rethinking assessment in higher education*. Routledge.
2. Crompton, H., & Burke, D. (2023). Artificial intelligence in higher education: Emerging perspectives and future directions. *Educational Technology Research and Development*, 71(2), 789–803.
3. Holmes, W., Bialik, M., & Fadel, C. (2019). *Artificial intelligence in education: Promises and implications for teaching and learning*. Center for Curriculum Redesign.
4. Selwyn, N. (2019). *Should robots replace teachers? AI and the future of education*. Polity Press.
5. Luckin, R. (2018). *Machine learning and human intelligence: The future of education*. UCL Institute of Education Press.
6. Zawacki-Richter, O., Marín, V., Bond, M., & Gouverneur, F. (2019). Systematic review of research on artificial intelligence applications in higher education. *International Journal of Educational Technology in Higher Education*, 16(39), 1–27.