# The Expanding Role of AI in Higher Education Management: Navigating Ethical Frontiers

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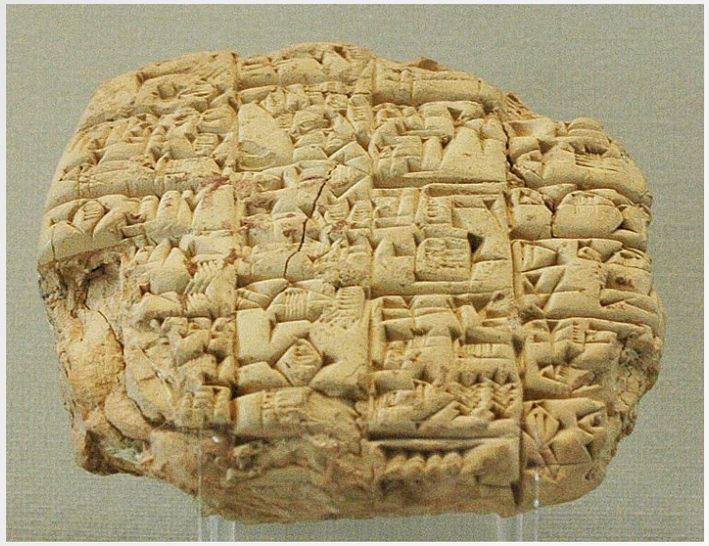
Bucharest University of Economic Studies
AGRIAI Accountable Governance and Responsible Innovation in Artificial Intelligence
IDA Institute Digital Assets
AI4EFin Artificial Intelligence for Energy Finance

# Students journey: from cuneiforms to ChatGPT



Mesopotamia, 4th m. B.C.

Roman Empire

Oxford, Middle Age

USA, 19th century AC

UK, 20th century AC

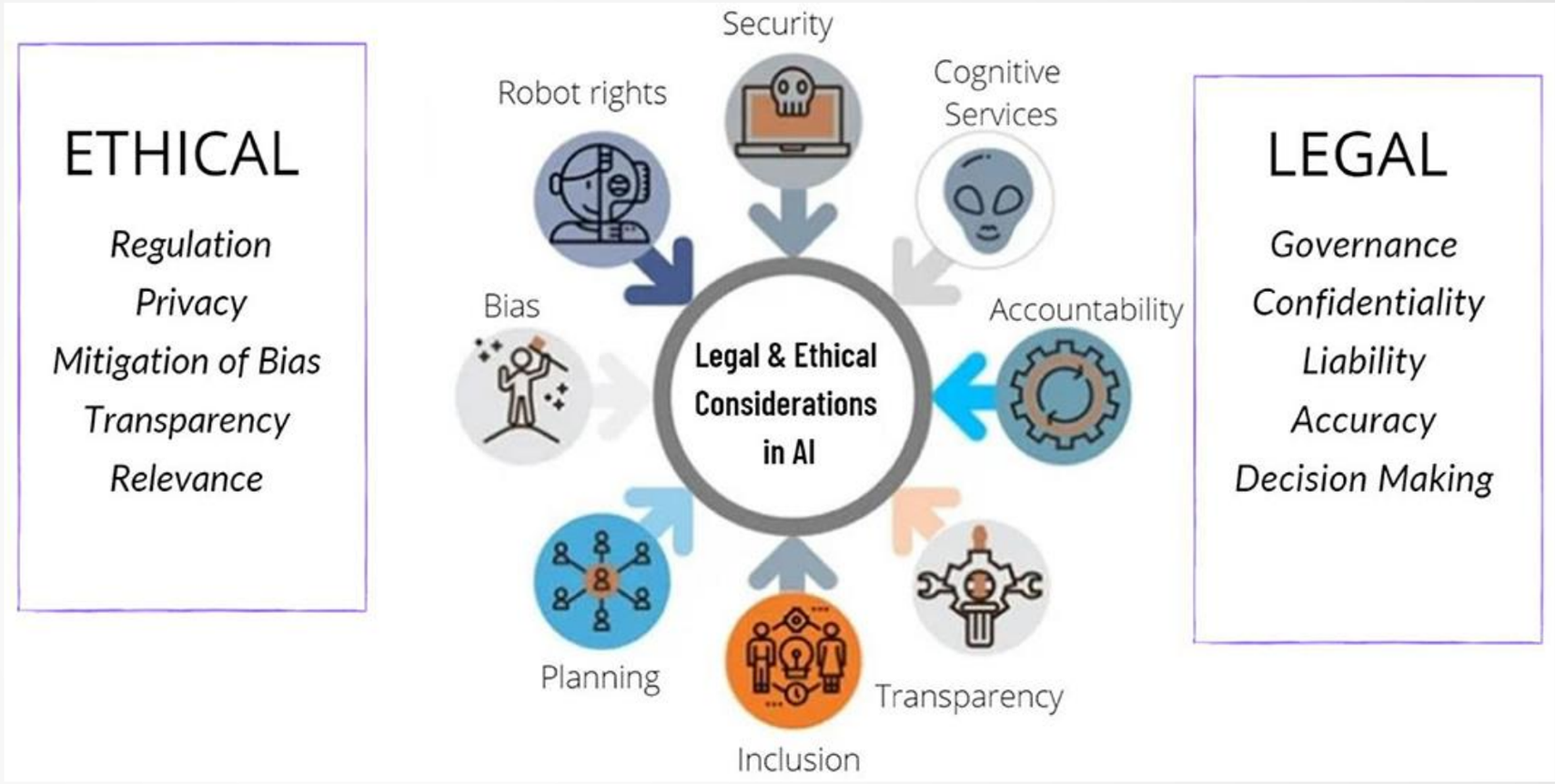

**Now: AI is here to stay?**

# Outline

1. Motivation
2. AI: multidimensional impact
3. AI: Ethics
4. AI: tool for higher education
5. AI adoption in universities
6. Case Study
7. Conclusions

# AI's Multifaceted Impact on Higher Education Management

- increasing administrative efficiency
- predictive analytics
- personalized learning
- chatbots and Virtual Assistants
- data-driven decision-making




*Source: https://www.frontiersin.org/articles/10.3389/fsurg.2022.862322/full*

# Ethical Considerations in AI Adoption

- Transparency
- Fairness
- Data privacy and security
- Student consent
- Accountability
- Accessibility

# The Future of Ethical AI in Higher Education

- **Data-Driven Decision Support:** AI can analyse vast amounts of data, including academic, administrative, and financial data, to provide rectors with valuable insights.
- **Enrolment and Retention Predictions:** AI can predict student enrolment trends and identify potential retention issues.
- **Financial Management**: AI can provide real-time financial data analysis to help rectors monitor budget allocations, cost management, and revenue streams.
- **Student Support and Success:** AI-driven student support systems can identify students at risk of academic underperformance.
- **Operational Efficiency:** AI can optimize administrative tasks, such as scheduling, resource allocation, and staff management, leading to improved operational efficiency.
- **Personalized Learning:** AI-powered learning platforms can enhance the student experience by providing personalized content and recommendations.

# The Future of Ethical AI in Higher Education- cont.

- **Research and Innovation:** AI can assist in identifying research opportunities, trends, and collaboration possibilities.
- **Data Security and Privacy:** AI can enhance data security by identifying and mitigating potential security threats and ensuring data privacy compliance.
- **Resource Allocation:** AI can provide insights into the allocation of resources, whether for building maintenance, infrastructure development, or academic programs.
- **Strategic Planning:** AI-driven strategic planning tools can assist rectors in long-term planning.
- **Alumni Engagement and Fundraising:** AI can enhance alumni engagement by analysing alumni data to determine the most effective fundraising strategies.
- **Communication and Stakeholder Engagement:** AI-driven chatbots and virtual assistants can improve communication with students, faculty, and staff, providing timely information and support.
- **Ethical Decision-Making:** AI can provide ethical guidance by identifying potential ethical concerns and ethical implications in decision-making.

# AI to write grant applications in higher education


- A 2023 Nature survey of 1,600 researchers found that over 25% use AI to aid in manuscript writing, while more than 15% turn to AI to facilitate grant proposal composition.

- **What is the purpose of requiring scientists to write documents that can be easily generated by AI?**
- **Are we adding value through this process?**
- **Is it time for funding bodies to reconsider and streamline their application procedures?**

- **The integration of AI into the grant application process has unveiled a pressing need for reevaluation.**

# Using AI to assist in the creation of syllabi for higher education courses


- **Efficiency**: AI can help educators streamline the syllabus creation process by suggesting templates, structuring content, and offering recommendations. This can save educators time and effort.

- **Consistency:** AI can ensure that syllabi adhere to institutional standards and guidelines, promoting consistency across courses.


- **Alignment with Learning Objectives:** AI can help align course content with the intended learning outcomes, improving the educational quality.

- **Accessibility:** AI tools can assist in making syllabi more accessible to diverse learners by providing recommendations for inclusive design.

# Considerations

- **Originality and Personalization:** While AI can provide templates and suggestions, it's important for educators to infuse their unique teaching style and personalization into the syllabus.
- **Curriculum Design:** AI is not a replacement for curriculum design expertise.
- **Ethical Use:** The ethical use of AI in education includes transparency about the use of AI in syllabus creation.
- **Accessibility:** Educators must verify that AI-generated content complies with accessibility standards to ensure all students can access and understand the syllabus.
- **Quality Assurance:** AI-generated content should be reviewed and edited by educators to ensure accuracy, clarity, and relevance to the course.
- **Flexibility:** Educators should be prepared to adapt and customize AI-generated content as needed to respond to the unique needs of their students and evolving pedagogical methods.
- **Data Privacy:** When using AI tools, ensure that any data shared, such as course materials or student information, is handled in compliance with data privacy regulations.

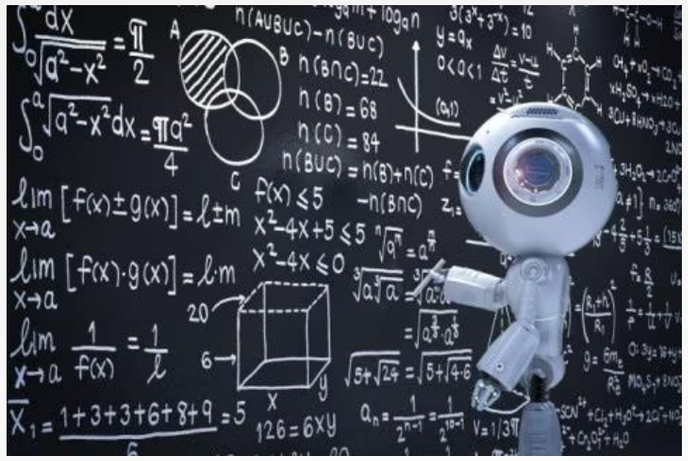
# E.g. Using AI to design a research questionnaire

- By integrating ChatGPT and Typeform, we've achieved a remarkable reduction in the time it takes for our students to create these tools.
- Previously, the design phase was one of the most time-consuming aspects of questionnaire creation, with students spending extensive hours on question formulation, sequencing, and formatting.
- With the incorporation of ChatGPT, students can now receive instant feedback and suggestions on their questions, helping them craft more effective and relevant queries.
- This, combined with Typeform's user-friendly interface and templates, has expedited the design process significantly.
- The result? A **50% reduction in the time** students spend on questionnaire design. This not only saves precious hours but also allows students to focus more on the content and purpose of their research, rather than the intricacies of the design process.

# How universities can approach AI adoption when facing financial constraints

- **Start Small and Prioritize:** Begin with a phased approach by focusing on specific areas where AI can have the most significant impact.
- **Open Source and Low-Cost Solutions:** Explore open-source AI platforms and low-cost AI tools that can be tailored to meet the university's specific needs.
- **Collaborate with Industry and Research Partners:** Partner with industry organizations and research institutions that are willing to share resources and expertise in AI development.
- **Cloud-Based AI Services:** Utilize cloud-based AI services from established providers like Amazon Web Services (AWS), Microsoft Azure, or Google Cloud.
- **Student Projects and Internships:** Engage students in AI-related projects, and consider offering internships for students pursuing AI and data science degrees.
- **Grant Funding:** Seek external grant funding or sponsorships from AI-related organizations, government agencies, or foundations that support educational technology initiatives.

# How universities can approach AI adoption when facing financial constraints



- **Vendor Negotiation:** When partnering with AI solution providers, negotiate favorable terms, such as reduced licensing fees or extended trial periods.
- **In-House Development:** If resources permit, consider building AI solutions in-house, using university faculty and student expertise.
- **Monitoring and Assessment:** Continuously monitor the return on investment (ROI) of AI initiatives. Assess the impact of AI solutions on the university's financial and operational performance, and adjust strategies accordingly.
- **Scale Gradually:** As financial resources become available, gradually scale AI initiatives to additional areas of the university.
- **Community and Alumni Support:** Engage with the university's alumni and local community to secure support and funding for AI initiatives.
- **Long-Term Planning:** Develop a long-term AI adoption strategy that aligns with the university's mission and goals.

# Perceptions on the current role of Artificial Intelligence in higher education management @BUES

- The Bucharest University of Economic Studies (ASE) is a prestigious and renowned institution in Romania. It is one of the country's leading universities specializing in economics, business, and related fields. Founded in 1913, ASE has a long history of providing high-quality education and conducting research in economics, management, finance, international business, and more. It offers a range of undergraduate, graduate, and doctoral programs, contributing significantly to Romania's academic and economic development.
- Although still very new for our country and for our university, the authors of the present paper have organised at the beginning of the new academic year an inquiry among fellow colleagues and experts in AI and higher education regarding AI adoption on higher education, as well as among students.

# How do you perceive the current role of Artificial Intelligence in higher education management? Please describe the main areas or applications where AI has a significant impact.

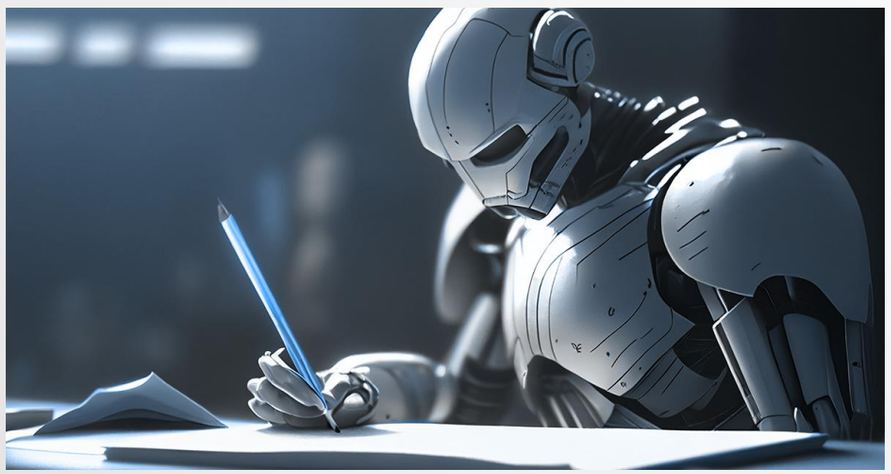
- "*The impact will be major. For now, it's just the beginning. We are in the phase of learning the secrets of AI".*
- Computer security, audiovisual arts (design, music, film, etc), knowledge bases, multi-criteria searches, virtual/augmented reality, new-generation expert systems, interactive systems.
- Automation of processes, database management, finance, accounting.
- AI could be integrated into university management. It might still be pioneering in this field. "*I believe that in research management and in the functional activity of the higher education organization, the activity would be even more opportune*. "
- Help in creating course syllabi, case studies, and other learning resources.

# What are the major benefits brought by AI in improving processes and the quality of higher education? (e.g., personalized learning, resource optimization, data-driven decision-making)

- *"As long as AI processes what it finds on the internet, it will not be a trustworthy source in higher education. However, it can provide information and ideas that are worth delving into. It can help optimize resources."*
- Student profiling and predicting their academic journey, personalizing the academic path, streamlining the search for academic and research resources, reducing the time allocated to repetitive tasks.
- Personalized learning, data-driven decisions.
- Resources use optimisation

# What are the main ethical considerations associated with the use of AI in higher education management? Please list and describe a few examples.

- **Copyright:** Matthew Allen's AI art won first prize at the Colorado State Fair. But the US government has ruled it can't be copyrighted because it's too much "machine" and not enough "human".



- **Plagiarism:** Doing academic work requires that the work you turn in is your own. A paper that is written by AI is not considered your own original work.

# How can we ensure that the development of AI in higher education remains aligned with ethical principles and the needs of students and educators?

- *Education, education, education…. of users of all kinds*
- Procedures to comply with best practice
- GDPR
- A shift in  the way classes are taught, of course depending on the type: the essays should be completed eliminated, oral examination should become compulsory for the less technical subjects
- The professor should guide the students to enhance the content generated by AI, making them aware of its caveats

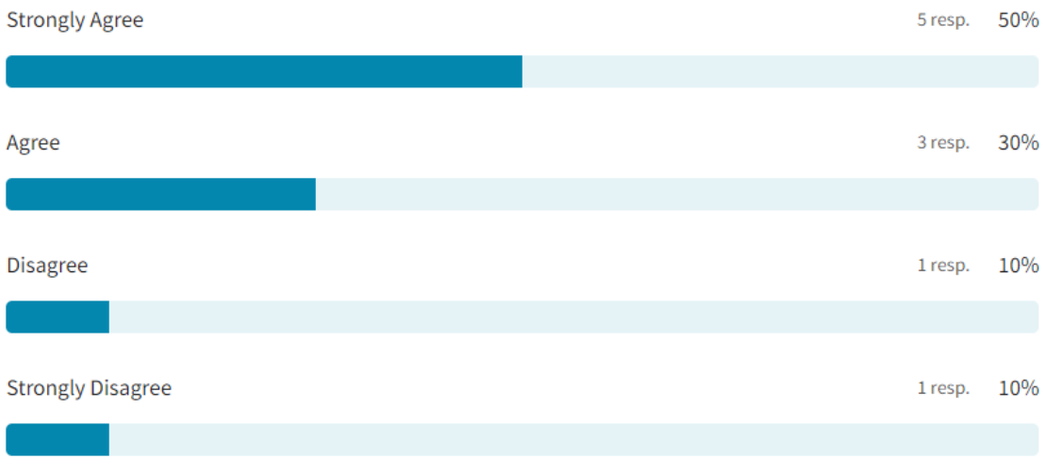
# How do you envision the future evolution of AI usage in higher education management? What are the possible trends or significant developments?

- The use of AI will **expand** in the coming years and will encompass more and more aspects.
- Creation of **expert systems** to provide data necessary for management, creation of **personalized plans** based on student profiles, and a **tailored training** to offer more specific competencies according to each student's expectations.
- Optimization of organizational workflows.
- Automation of support systems.
- Enhancing educational management.
- Every student and professor will have **an AI co-pilot.**

# Students' perceptions

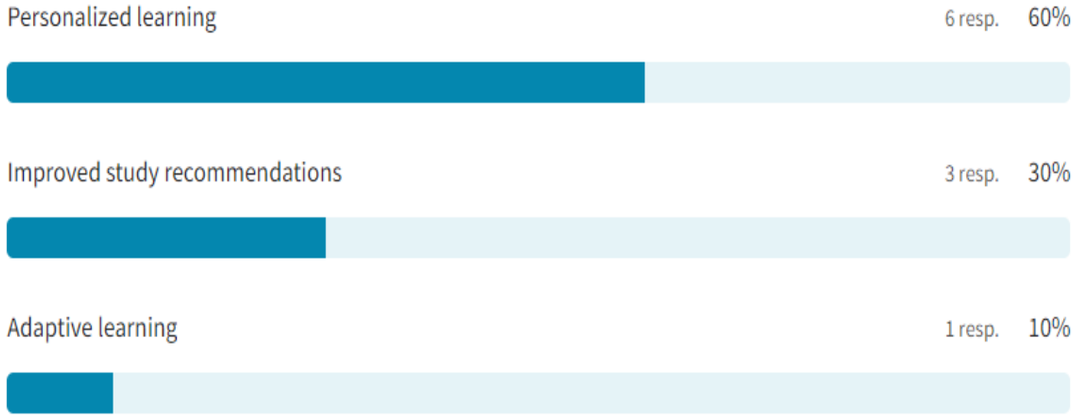
Do you believe AI has the potential to positively impact the learning experience?

10 out of 10 answered



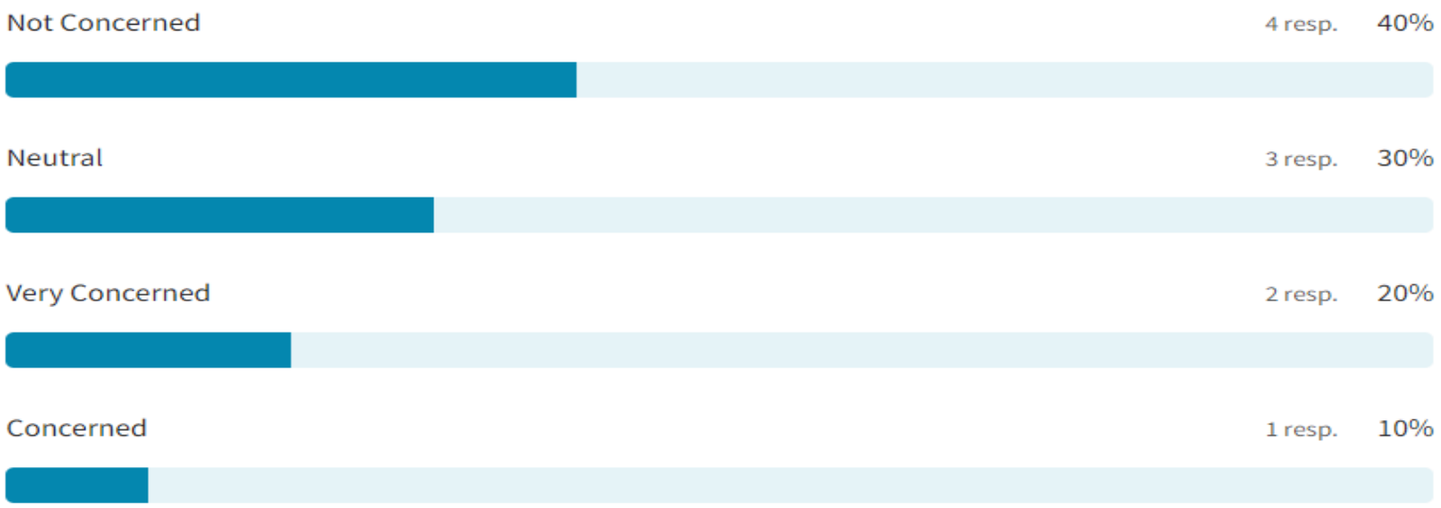

What benefits do you think AI can bring to the learning process? (Select all that apply)

10 out of 10 answered

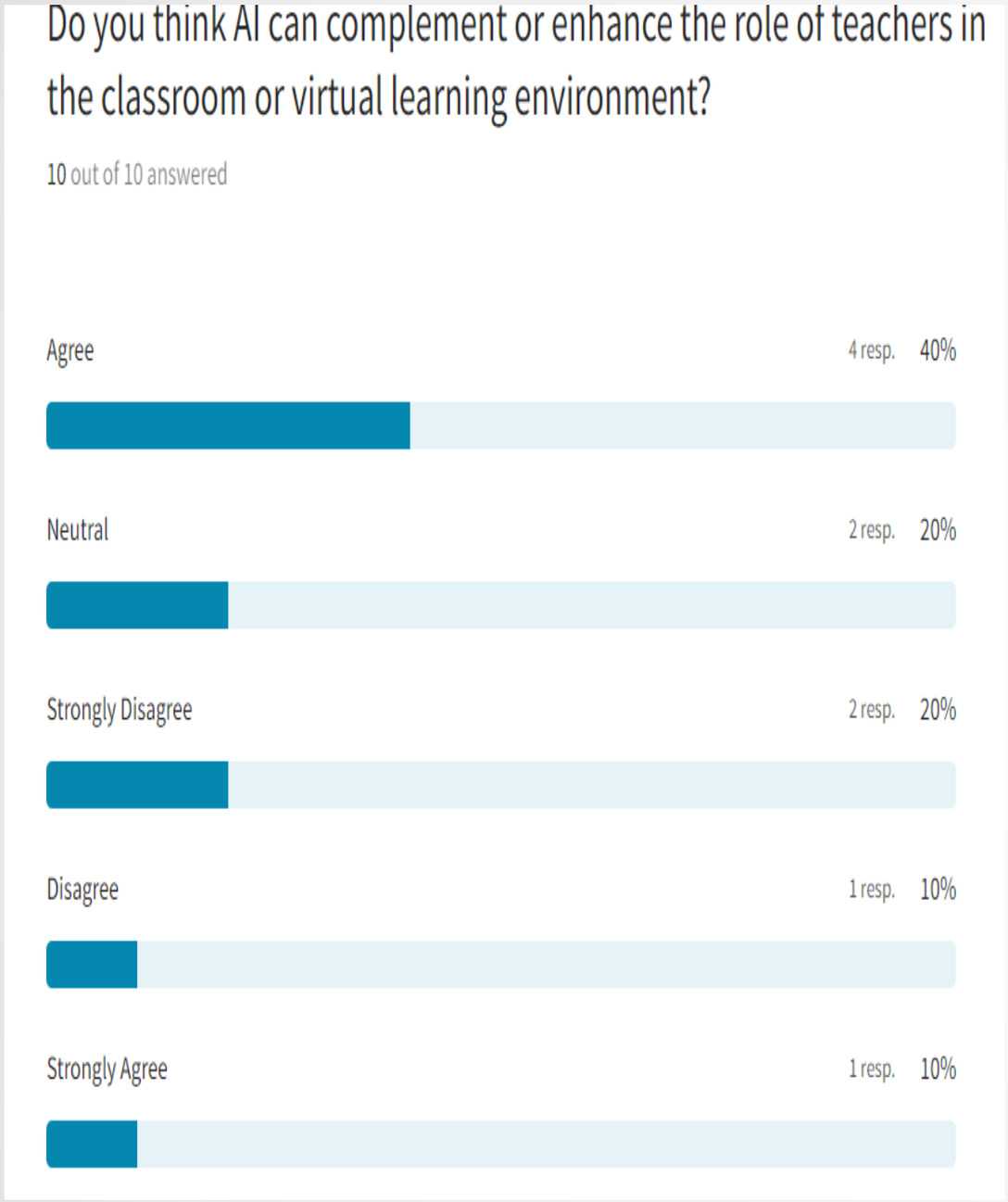


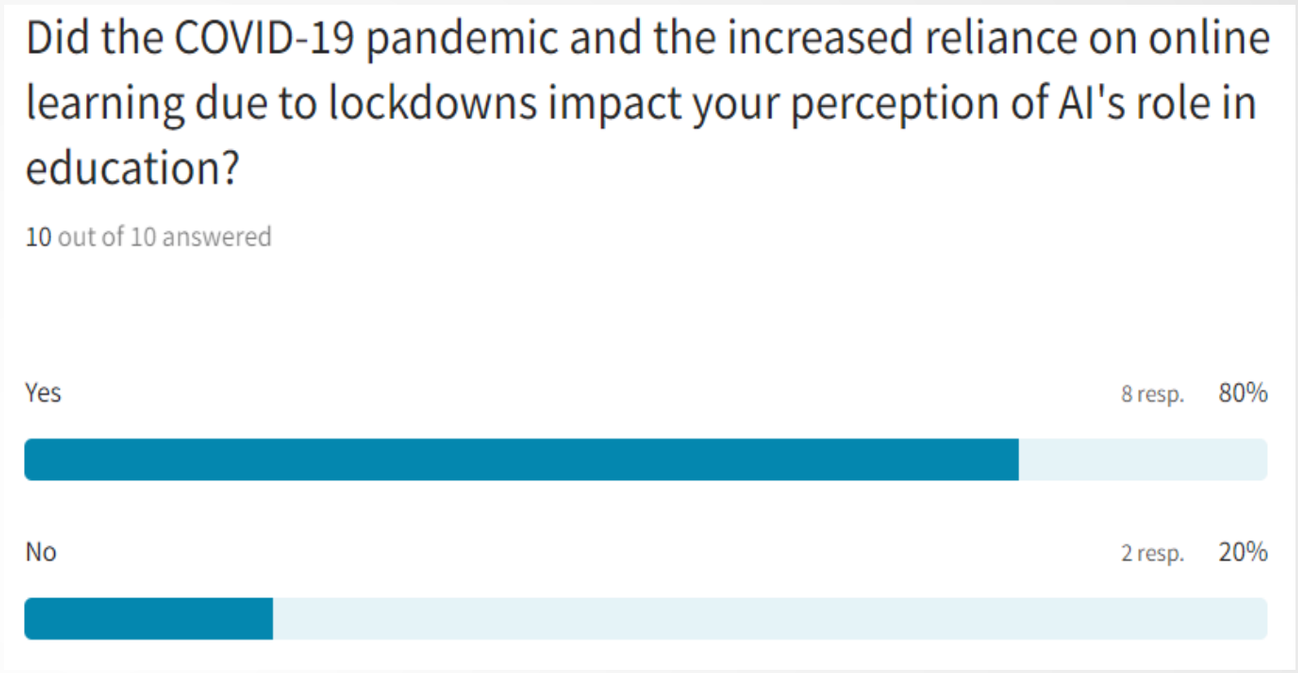

Are you concerned about the ethical use of AI in education, such a data privacy, algorithm bias, or student profiling?

10 out of 10 answered




# Students' perceptions



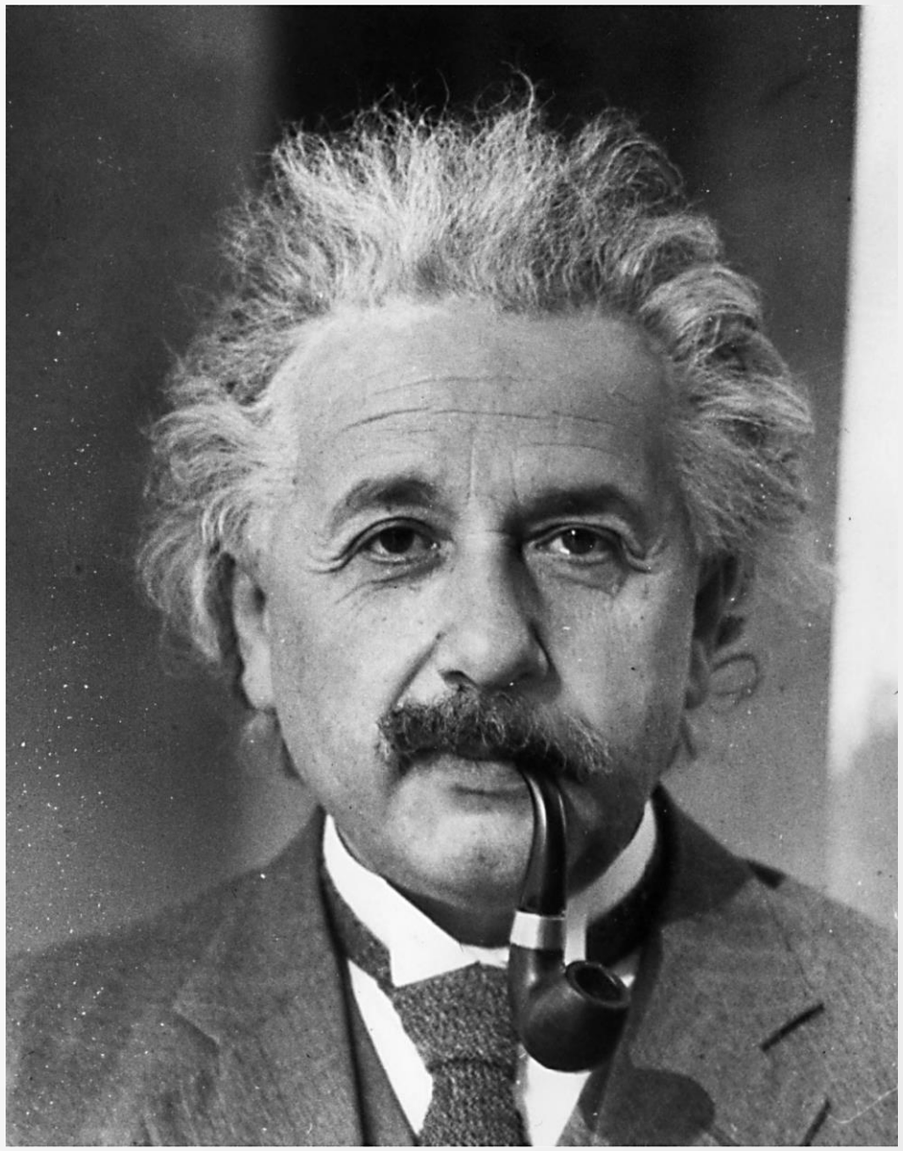

# To conclude:

- Navigating the ethics of AI in higher education is a **multifaceted endeavour.**
- It involves **transparency, fairness, data protection, privacy, student** autonomy, accessibility, education, and ongoing assessment.
- By embracing these ethical considerations, **higher education institutions can harness the potential of AI** while ensuring that its implementation aligns with the values and needs of students, professors, and why not society at large.

# AI: Trick or treat?

**Artificial Intelligence**

**Natural (?!) Intelligence**



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