DialogEduShift:
Transforming Higher Education Teaching and Evaluation Approaches in the Era of AI ChatTools

Project No: 2023-1-PL01-KA220-HED-000167212

WP2 – National report

Muğla Sıtkı Koçman University, Turkey

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Content

Introduction

The inception of contemporary Artificial Intelligence (AI) can be attributed to the 17th century, when Thomas Hobbes postulated that human behaviour is fundamentally mechanical, laying the foundation for the fundamental principles of the modern AI field. Hobbes postulated that human ideas and behaviours can be symbolically represented and processed, foreshadowing the foundational principles of artificial intelligence that emerged after.   The 20th century witnessed the transformation of these concepts into concrete advancements, marking the initiation of AI's development. This progress has been further enhanced by evolving methodologies (Issa et al., 2016: 3) and the establishment of AI fundamentals. The field of AI continues to evolve steadily, characterized by the emergence of self-contained AI systems. In the 1970s, AI solutions started to be applied in several areas of specialization.

AI seeks to mimic and augment human cognitive capacities. The corporation perceives and comprehends its surroundings through the utilization of digital computers or computer-controlled gear. The system gathers data and utilizes it to enhance outcomes. Since 2010, AI applications have gained significant importance in several sectors of society, such as the economics, commercial sector, and public sector. The domains covered include public health, transportation, education, security, communications, and the armed forces (De Sousa et al., 2019: 2). Autonomous algorithms are leading the way in the current advancements in this subject and are having a significant influence on various industries. In summary, artificial intelligence (AI), created by humans, has reached a stage where it seamlessly integrates into both daily life and the corporate world.

AI has an extremely important place in the education sector as well as in all areas of life. The increasing use of AI technology in the education sector represents a fundamental change towards personalized, data-driven, and inclusive learning systems. AI integration has the potential to revolutionize educational paradigms, optimize instructional outcomes, and cultivate lifelong learning opportunities in globalized knowledge societies. This can be achieved by fostering adaptive learning environments, facilitating data-driven decision-making, automating administrative processes, enhancing accessibility, supporting teacher professional development, and addressing ethical considerations.

The current state of higher education is at the intersection of significant technical advancements and innovative teaching methods, as the emergence of Artificial Intelligence (AI) chat tools marks the beginning of a revolutionary era. AI chat tools are becoming crucial instruments that are redefining

teaching and evaluation methodologies in academic institutions. These technologies are being used to address the challenges of adaptation, relevance, and efficacy in a linked global environment. These advanced technologies, supported by machine learning algorithms, natural language processing capabilities, and adaptive learning mechanisms, provide exceptional chances to enhance teaching methods, customize learning experiences, and optimize assessment processes.

The use of AI chat tools into higher education systems goes beyond simple technology improvement, encompassing wider goals of effective teaching methods, active student involvement, and institutional adaptability. AI chat solutions utilize real-time data analytics, predictive modelling, and interactive interfaces to enable dynamic instructional tactics that are customized to the unique characteristics of different learners. This promotes inclusivity, accessibility, and fair educational results. Simultaneously, these technology advancements bring about fundamental changes in the way evaluations are conducted, placing emphasis on ongoing feedback loops, assessments that inform learning, and decision-making processes based on data, surpassing old methods of summative evaluation.

Nevertheless, the profound impact that AI chat tools can have on higher education is coupled by complex obstacles related to ethical concerns, maintaining academic honesty, and the human-centred aspects of teaching and learning. As academic institutions navigate through this intricate landscape, it is crucial to thoroughly analyse the various implications, opportunities, and problems that arise from the merging of AI chat technologies and higher education paradigms. This report aims to clarify the changing landscape of how higher education teaching and evaluation methods are being transformed in the era of AI chat tools. It examines the connections between technological innovation, pedagogical transformation, and institutional adaptation in modern academic ecosystems.

In this context, this report has been prepared within the scope of the project in order to provide a perspective on the use of AI chat tools in terms of the higher education system in Turkey and the capacities of utilising these tools in higher education nationally. The findings were obtained from the views of 10 experts, 10 academics and 5 administrative staff/manager level participants using in-depth interviews and presented in detail in the report.

State-of the-art desk research of current situation in Turkey

In the current era characterized by swift technological progress, the field of higher education is experiencing significant changes, especially in teaching and assessment methods. Turkey, known for its abundant historical heritage and growing modern educational establishments, finds itself at a crucial point when conventional teaching methods meet state-of-the-art advancements propelled by artificial intelligence (AI) chat technologies. With the increasing focus on utilizing AI to reshape education, Turkey's

distinct socio-cultural environment, economic needs, and educational system provide an ideal setting for investigation and evaluation.

The incorporation of AI conversation tools into the higher education system in Turkey offers unique prospects and complex obstacles for institutions and stakeholders. These technological advancements have the potential to improve teaching efficacy by providing customized learning experiences, enabling immediate feedback mechanisms, and promoting collaborative learning environments. On the other hand, the increasing use of AI-powered teaching and evaluation tools requires careful examination of ethical concerns, maintaining academic honesty, and upholding educational principles that prioritize human well-being. Hence, it is crucial to conduct a thorough analysis of Turkey's preparedness, openness, and reaction to these significant changes in order to gain a detailed picture of the developing educational environment.

Turkey's higher education system has traditionally combined traditional values with modernization, demonstrating the country's dedication to promoting intellectual advancement, cultural conservation, and socio-economic progress. The country's academic institutions have continually strived to create a comprehensive educational experience that combines international best practices with local teaching methods. In light of this situation, the introduction of AI chat tools in higher education requires a flexible approach that encompasses both the need for innovation and the need to maintain existing practices. This research seeks to clarify the various ramifications of integrating AI in Turkey's higher education sector, including pedagogical advancements, institutional changes, and governmental issues.

As Turkey incorporates AI chat tools into its higher education system, it is crucial to take a comprehensive approach that goes beyond relying solely on technology to determine outcomes. The effectiveness of AI-driven innovations in transforming teaching and evaluation methods depends on several elements, including alignment with pedagogical principles, active involvement of stakeholders, strong infrastructure, and ethical considerations. Hence, this nation report aims to present a thorough analytical framework that encompasses the changing educational scenario in Turkey. It seeks to clarify the connections, conflicts, and potential for transformation that arise when AI chat tools collide with higher education models.

Analysis of survey results

Survey Development

The survey design was developed through a collective work package collaboration, and the process was initiated with a joint WP virtual meeting where the overall design was discussed. In order to carry out the

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survey, firstly, the partners conducted a literature review on transforming higher education teaching and evaluation approaches through AI Chat tools usage in their countries and identified the state of the art in which issues are addressed, practices and policies in the education processes of each country. Then, the findings in 6 countries were evaluated and the questions to be used in conducting the survey were clarified based on the common elements for 6 countries. The responses collected from 6 countries regarding the common questions used in the data collection process are presented in detail in the following sections.

Research Questions

The research study was designed to address the following research questions:

- **Demographic questions:** Country, age, gender, education level and position.

- **Area 1:** Are you familiar with the concepts such as Artificial Intelligence (AI), Generative AI, data science, machine learning and AI chatbot? Besides one more open-ended question about to collect detail information on Artificial Intelligence knowledge and understanding.

- **Area 2:** Have you used or encountered these AI tools in your daily life such as AI chatbots, Image generator, Image/ video editor, Video generator, Sound and music generator and Computer vision? Besides one more open-ended question in order to gather information about the usage situations and ways.

- **Area 3:** What AI chatbots do you use such as ChatGPT https://chat.openai.com/, Google Bard https://bard.google.com/ and Bing Chat?

- **Area 4:** Do you think AI technologies could help improve the study process in higher education? Besides two more open-ended questions 1) How could AI technologies, in your opinion, help improve the study process in higher education? 2) Could you provide examples or share experiences when AI tools were helpful or necessary in study process? (Only for academicians)

- **Area 5:** There are six statements regarding AI in the education process with 5 Likert scale which are below:

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Do you use AI tools in the assessment process? (Only for academician)
Do you use AI tools to create personalized learning approaches? (Only for academician)
Do you have sufficient knowledge and skills for the use of AI technologies in the study process? (Only for academician)
Do you feel the need to enhance your knowledge and skills in using AI technologies in the study process if they were available? (Only for academician)
Do you agree that AI creates **opportunities** for the improvement of the education/study process?
Do you agree that AI poses **challenges** to the education/study process?

- Area 6: There is a SWOT analysis in order to analyse the strengths, weaknesses, opportunities, and threats that the participants believe AI can create in the higher education studying process. To collect data, the SWOT analysis includes 4 main topics regarding strengths, weaknesses, opportunities, and threats.

Description of Data Collection

The Turkey research was conducted by MSKU in Turkey which consisted of minimum 11 in depth interviews (IDIs) with experts in the field and 13 IDIs with academicians and 5 university administrators from Muğla Sıtkı Koçman University, Dokuz Eylül University and Marmara University. The total number of participants is 29 from Turkey.

The interviews were conducted between December 2023. 85% interviews were carried out face-to-face as planned, whereas %15 interviews had to be performed online. All interviews were performed in national languages. A few introductions were to make sure that the purpose of the study was clearly conveyed and understood.

Findings

The findings of the study are categorised under three main headings according to the positions of the participants in higher education institutions. The results for the three main groups of participants are as follows:

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➢ **Findings of Experts in the field**

Demographics:

The survey included 11 experts from Turkey, mainly from the AI sector. The age range of participants
varied from 26 to 45 years old. Both male and female experts participated (see Figure 1), with diverse
educational backgrounds ranging from high school to master's degrees (see Figure 2).
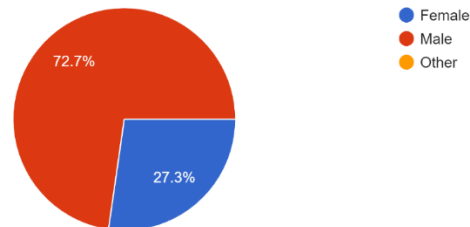
Please indicate your gender
11 responses

- Female
- Male
- Other

72.7%

27.3%

Figure 1: Gender of Participants

What is the highest level of education you have attained or the degree you have earned?
11 responses

- Secondary School
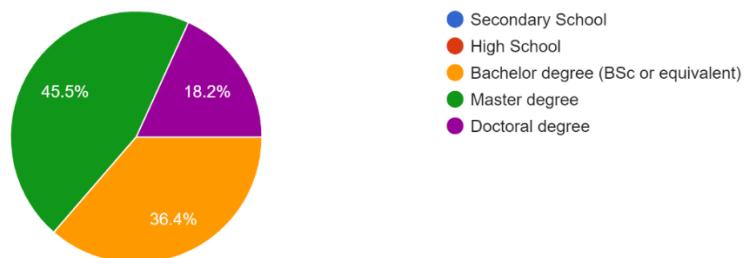- High School
- Bachelor degree (BSc or equivalent)
- Master degree
- Doctoral degree

45.5%

18.2%

36.4%

Figure 2: Education Degree of Participants

Area 1: Awareness and Understanding of AI:

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10 out of 11 participants shown a comprehensive comprehension and favourable viewpoint towards AI, characterizing it as a cognitive emulation tool that is beneficial for a range of activities including predictive analytics, data administration, and enhancing student involvement. Nevertheless, a portion of the participants (9%) had a neutral or restricted understanding of AI, suggesting a possible deficiency in awareness and education among professionals in the field of higher education administration. Several respondents emphasized that AI processes vast amounts of data to uncover latent patterns, draw conclusions, and generate new information. They highlighted AI's ability to analyse data using statistical and mathematical models, leading to actionable insights. Besides most of the respondents described AI as an algorithmic framework capable of solving intricate relationships between diverse data structures. They emphasized AI's role in identifying complex patterns and generating desired outcomes through iterative processing and training. The respondents' perspectives collectively highlight a multifaceted understanding of artificial intelligence, emphasizing its capabilities in data analysis, problem-solving, and mimicking human-like behaviours. Their insights underscore AI's evolving nature, broad applications, and transformative potential across diverse domains, reinforcing its significance as a pivotal technology in today's digital era.

Area 2: Utilization of AI Tools:

10 out of 11 participants stated that they use AI chatbots in their daily lives. 8 of the 11 participants stated that they use image generator and computer vision in their daily lives. Based on the 11 responses provided, respondents highlighted a diverse range of applications and scenarios where they have utilized AI tools. The common theme revolves around leveraging AI technologies for data analysis, classification, prediction, and synthesis across various domains. A notable emphasis was placed on utilizing AI tools for analysing visual data. Respondents mentioned employing machine learning and computer vision techniques to process and analyse visual information effectively. This indicates the significance of AI in extracting insights from complex visual datasets. The responses collectively emphasize the multifaceted applications of AI tools across various domains, including visual data analysis, numerical forecasting, image classification, and financial analytics. The diverse range of scenarios highlighted by respondents underscores AI's versatility and effectiveness in facilitating complex tasks, generating synthetic datasets, and enhancing security measures. Overall, the findings reflect the pivotal role of AI technologies in driving innovation, efficiency, and insights across diverse sectors and applications.

Area 3: The Most Used AI chatbots:

For the most used AI chatbots, most of the participants stated that they use ChatGPT and that they have heard of other chatbots but do not use them much.

Area 4: Perceptions on AI in Higher Education:

There was a consensus among experts that AI technologies have the potential to improve the study process in higher education by enhancing student engagement, personalized learning, academic advising, and institutional effectiveness. However, concerns were raised regarding the technical capacity of universities, accessibility issues for students, and the ethical implications of AI adoption in education.

Area 5: AI in The Education Process:

The 11 respondents provided insights into how they perceive AI technologies can revolutionize the study process in higher education. The feedback underscores AI's potential to transform various facets of education, ranging from personalized learning to enhanced accessibility and collaboration. For instance, respondents expressed that AI technologies could offer a novel perspective in education by revealing intricate relationships between information. They believe that AI has the potential to introduce breakthroughs not achievable through traditional teaching tools, reminiscent of the impact Google had upon its introduction. The feedback from respondents explains AI's transformative potential in higher education, encompassing enhanced perspective, interactive learning experiences, improved accessibility, data-driven insights, efficiency, scalability, and timely feedback mechanisms. The insights reflect a collective optimism regarding AI's capacity to revolutionize traditional educational paradigms, foster inclusivity, and optimize learning outcomes for diverse student populations. Overall, the findings underscore the pivotal role of AI technologies in shaping the future of higher education by harnessing innovation, technology, and data-driven strategies to enhance teaching, learning, and collaboration in the digital age.

Area 6: Strengths, Weaknesses, Opportunities, and Threats (SWOT) Analysis:

Strengths: AI allows personalised learning experiences customised to student needs, which boosts engagement and productivity in higher education, according to experts. By quickly correcting student faults, AI's fast feedback mechanisms boost academic advancement. AI also improves accessibility for disabled students and breaks geographical barriers through collaborative platforms. AI data analytics helps educators optimise curricula and instruction for student achievement. AI aligns educational offers with dynamic job markets and career routes, enabling lifelong learning. Finally, immersive and engaging virtual experiences, especially for complicated subjects, improve learning with AI.

Weaknesses: Respondents noted that AI's participation in higher education may over-rely on technology, which may impair educators' and students' critical analysis and problem-solving skills. AI lacks emotional intelligence, making it harder for educators to comprehend and meet kids' emotional requirements. AI may limit face-to-face contacts needed for social skills development and create an educational divide due

to unequal access to advanced technologies. AI training data and producers may reinforce preconceptions and educational inequalities. Overreliance on AI-generated content may also lower instructional material quality and reliability, affecting learning outcomes.

Opportunities: Experts see opportunities AI offers several ways to improve higher education. It creates personalised learning routes based on student requirements, preferences, and performance, making education more effective and enjoyable. AI-powered online platforms can increase access to higher education, especially for poor or rural populations, and enhance lifelong learning by delivering flexible courses that meet changing professional needs. Automation of registration, scheduling, and grading lets schools focus on curriculum and student assistance. AI also speeds up feedback, encourages ongoing learning, and helps researchers find trends and insights in large datasets. AI also helps educators improve teaching and curriculum with data-driven insights, improving student achievement and engagement.

Threats: According to analysts AI poses various risks to higher education. Privacy and data security are major concerns due to the massive gathering and processing of personal data. AI may also disregard overall student development by focusing on quantitative objectives like test scores. AI-driven student monitoring and surveillance raises ethical questions about data misuse and technology inequality, worsening socioeconomic inequities.

➤ Findings of Academicians

Demographics:

The respondents predominantly consist of male academicians with doctoral degrees in university administration roles. The age distribution varies, with a majority falling between the ages of 40 and 50. The educational background is primarily at the doctoral level, indicating a high level of expertise and specialization in their respective fields (see Figure 3 and Figure 4).

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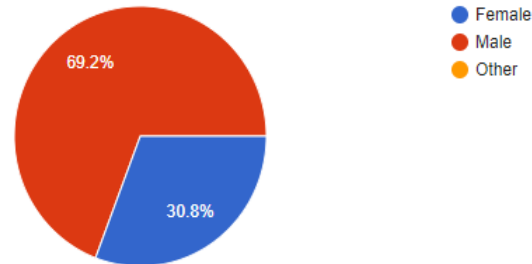
Please indicate your gender

13 responses

- Female
- Male
- Other

69.2%

30.8%

Figure 3: Gender of Participants

What is the highest level of education you have attained or the degree you have earned?

13 responses

- Secondary School
- High School
- Bachelor degree (BSc or equivalent)
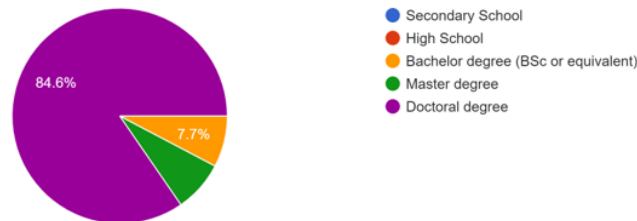- Master degree
- Doctoral degree

84.6%

7.7%

Figure 4: Education Degree of Participants

Area 1: Awareness and Understanding of AI:

All 13 respondents are familiar with Artificial Intelligence (AI). This indicates that the foundational concept of AI is widely recognized among the surveyed group, which is expected given their academic background.

Generative AI:9 out of 13 respondents are familiar with Generative AI. This suggests that while a majority are acquainted with the broader concept of AI, there's a slightly lower familiarity when it comes to more specialized or niche areas like Generative AI. This could imply that while the respondents have a foundational understanding of AI, fewer are versed in its more specific subsets.

Data Science:10 out of 13 respondents are familiar with Data Science. Data Science is a broader field that encompasses various techniques for data analysis and interpretation. The fact that a majority are familiar with it suggests that these academicians likely encounter or utilize data-driven methodologies in their work or studies.

Machine Learning:10 out of 13 respondents are familiar with Machine Learning (ML). ML is a subset of AI that focuses on enabling machines to learn from data. The familiarity level is consistent with Data Science, indicating that the respondents have a good understanding of both AI's broader scope and its specific methodologies like ML.

AI Chatbot:12 out of 13 respondents are familiar with AI Chatbots. Chatbots represent a practical application of AI, often used in various sectors for customer service, information retrieval, and more. The high familiarity suggests that these academicians are not only aware of AI in theoretical terms but also recognize its tangible applications, possibly in educational or research settings.

The data indicates a high level of familiarity among the surveyed academicians with foundational AI concepts, such as Artificial Intelligence, Machine Learning, and Data Science. Additionally, a significant majority are also familiar with more applied AI technologies like AI Chatbots. However, there's a marginally lower familiarity with specialized areas like Generative AI, suggesting potential areas for further exploration or education among this group.

Area 2: Utilization of AI Tools:

A majority of the academics have encountered or used AI tools in their daily lives. Specifically, 11 out of 13 respondents indicated a direct interaction or experience with AI tools. Two respondents were neutral, suggesting they might not have a clear or frequent interaction with AI tools. The participants stated that there are several ways and situations which they can benefit from AI tools. The summary of these explanations are below:

Multidisciplinary Field: Many respondents emphasized AI as a multidisciplinary field, emphasizing its focus on algorithms and computational models that simulate human intelligence.

Simulation of Human Intelligence: A prevalent understanding among academics is that AI is about machines simulating human cognitive functions such as learning, reasoning, problem-solving, and perception.

Learning and Adaptation: Several responses highlighted AI's ability to learn from experiences, adapt to new inputs, and evolve over time.

Machine Learning: A couple of academics specifically mentioned machine learning as a method underpinning AI, suggesting awareness of the technologies that drive AI advancements.

Practical Applications: Some responses went beyond theoretical definitions, mentioning practical applications like academic studies, ecological statistics, and other daily tasks where AI tools like ChatGPT are employed.

Ethical Considerations: One respondent touched upon the ethical dimensions of AI, highlighting its potential benefits and risks based on its application.

Area 3: The Most Used AI chatbots:

12 out of 13 participants stated that the AI tool they use the most is ChatGpt.

Area 4: Perceptions on AI in Higher Education:

12 out of 13 participants stated that AI technologies in higher education can improve learning and teaching processes. Besides the responses for open-ended questions are below:

Improving Study Process: Respondents believe AI can improve higher education by offering personalized learning, enhancing resource accessibility, aiding in econometric models, providing quick access to academic studies, assisting in research, and automating administrative tasks.

Examples & Experiences: Some cited examples include using AI for academic support, assisting in coding, aiding foreign students, preparing course content, and enhancing research processes.

Assessment & Personalized Learning: A majority of respondents use AI tools for assessment, creating personalized learning approaches, and believe they have sufficient knowledge for AI use in education.

Opportunities vs. Challenges: All respondents agree that AI creates opportunities for improving the education/study process. However, there are mixed views on the challenges posed by AI, with concerns related to ethical considerations, the potential for misuse, and the risk of replacing human interaction.

Area 5: AI in The Education Process:

50% of the participants stated that they use AI tools in assessment processes, that they have sufficient knowledge and skills in the use of AI technologies and that AI technologies can pose a challenge in the learning process. 54% of the participants stated that they use AI tools for personalised learning approaches. In addition, all of the participants stated that they need training to further develop the

necessary knowledge and skills for the use of AI technologies and that AI technologies are an important opportunity for the learning and teaching process.

Area 6: Strengths, Weaknesses, Opportunities, and Threats (SWOT) Analysis:

The responses are below:

Strengths:

Accessibility and Inclusivity: AI-driven accessibility tools accommodate diverse learning needs, disabilities, and linguistic backgrounds. This ensures that education is more inclusive, providing equitable opportunities for all.

Data-Driven Insights: AI analyses student data to provide actionable insights, predicting learning challenges and facilitating interventions to improve student performance and retention.

Efficiency and Time-Saving: AI processes can expedite research processes like literature review, empirical tests, and accessing up-to-date information, saving significant time for educators and students alike.

Innovation in Teaching Methods: AI enables innovative teaching methods, adaptive learning, and personalized education, catering to individual learning styles and needs.

Supportive Activities: AI serves as a virtual assistant, offering 24/7 personalized support, answering questions, and providing targeted feedback to students.

Weaknesses:

Dependence on Technology: Over-reliance on AI can diminish critical thinking and problem-solving skills, making students dependent on technology for learning.

Ethical Concerns: There are significant ethical issues related to data privacy, algorithmic bias, academic integrity, and surveillance that need robust governance frameworks and transparency measures.

Plagiarism and Academic Integrity: AI tools can sometimes provide false or misleading information, leading to academic dishonesty and plagiarism.

Lack of Emotional Intelligence: AI lacks the ability to provide the emotional understanding and personalized interaction that human educators offer, potentially leading to less engaging learning experiences.

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Opportunities:

Global Collaboration: AI-enabled collaborative platforms promote global academic collaborations, interdisciplinary research, and cross-cultural exchanges, enriching learning experiences.

Personalized Learning: AI can adapt to individual learning styles and pace, offering personalized resources, learning paths, and insights to enhance student success.

Innovative Teaching Tools: AI technologies offer opportunities for innovative teaching tools, research support, and new educational areas that can revolutionize higher education.

Efficient Research: AI tools can analyse mega-data, facilitate multi-dimensional research, and provide insights that can expand the scope and depth of academic research.

Threats:

Privacy Risks: Extensive data collection by AI systems raises concerns about privacy, surveillance, and potential misuse of personal information.

Job Displacement: The automation of administrative tasks by AI could lead to job displacement for administrative staff and even some teaching roles.

Digital Divide: The use of AI in education could widen the digital divide, leaving students without access to necessary technology at a disadvantage.

Misinformation and Bias: AI algorithms can perpetuate existing biases in data, leading to unfair assessments, profiling, and unequal educational outcomes.

➤ Findings of University Administrations or Representatives of HEIs

Demographics:

The survey included 5 respondents from Turkey, mainly from the university administration sector. The age range of participants varied from 32 to 58 years old. Both male and female experts participated (see Figure 5), with diverse educational backgrounds ranging from high school to master's degrees (see Figure 6).

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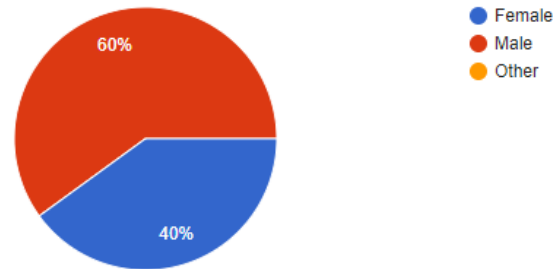
Please indicate your gender

5 responses

- Female
- Male
- Other

60%

40%

Figure 5: Gender of Participants

**What is the highest level of education you have attained or the degree you have
earned?**

5 responses

- Secondary School
- High School
- Bachelor degree (BSc or equivalent)
- Master degree
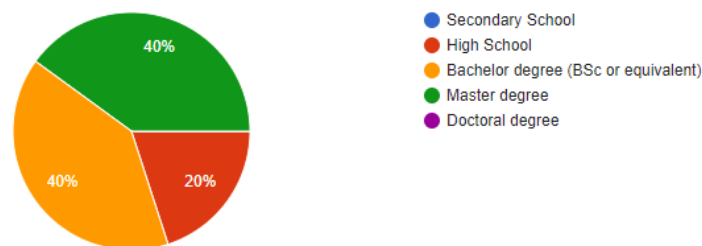- Doctoral degree

40%

40%

20%

Figure 6: Education Degree of Participants

Area 1: Awareness and Understanding of AI:

Three-fifths of the participants shown a comprehensive comprehension and favourable viewpoint
towards AI, characterizing it as a cognitive emulation tool that is beneficial for a range of activities
including predictive analytics, data administration, and enhancing student involvement. Nevertheless, a
portion of the participants (40%) had a neutral or restricted understanding of AI, suggesting a possible
deficiency in awareness and education among professionals in the field of higher education
administration. Most participants acknowledged using AI tools like chatbots, data analytics, and machine
learning algorithms in their professional roles, primarily for generating reports, data management, and
analysing student data to enhance academic advising and retention strategies.

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Area 2: Utilization of AI Tools:

3 out of 5 participants stated that they use AI chatbots in their daily lives. Two of the 5 participants stated that they use image generator and computer vision in their daily lives. One respondent mentioned using AI solely for language translation purposes, indicating a singular application of the technology in their routine. A respondent affiliated with the IT department of a university emphasized the consistent use of AI chatbots. These tools serve multiple functions, including text generation, data management, and data analysis. This showcases the integral role of AI in managing university IT operations efficiently. A data scientist from a university detailed extensive usage of AI technologies. The individual leverages predictive analytics models and machine learning algorithms to analyse a broad spectrum of data, including student engagement metrics, demographic information, and behavioural patterns. The primary goal is to identify at-risk students and factors influencing attrition. This comprehensive approach aids in implementing timely interventions, academic advising, and retention strategies to bolster student success rates.

Area 3: The Most Used AI chatbots:

For the most used AI chatbots, most of the participants stated that they use ChatGPT and that they have heard of other chatbots but do not use them much.

Area 4: Perceptions on AI in Higher Education:

There was a consensus among experts that AI technologies have the potential to improve the study process in higher education by enhancing student engagement, personalized learning, academic advising, and institutional effectiveness. However, concerns were raised regarding the technical capacity of universities, accessibility issues for students, and the ethical implications of AI adoption in education.

Area 5: AI in The Education Process:

Many participants stated that AI tools create opportunities for the improvement of the education and study process both for academicians and students. Besides the most of the participants stated that AI poses challenges to the education and study process.

Area 6: Strengths, Weaknesses, Opportunities, and Threats (SWOT) Analysis:

Strengths: Experts highlighted AI's ability to enhance student engagement, optimize institutional resources, and provide personalized learning experiences tailored to students' needs and preferences.

Weaknesses: Challenges such as limited technical capacity, accessibility issues, and ethical concerns were identified as potential weaknesses that universities need to address to effectively leverage AI technologies.

Opportunities: AI offers opportunities to align institutional strategies, increase institutional effectiveness, improve student outcomes, and inform strategic planning and decision-making processes.

Threats: Regulatory frameworks, government policies, ethical issues, and potential job displacement were identified as threats that could impact the adoption and implementation of AI in higher education.

In summary, the survey findings indicate a growing awareness and positive perception of AI among experts in Turkey's higher education sector. While there is a consensus on AI's potential benefits in enhancing student engagement, personalized learning, and institutional effectiveness, there are challenges and concerns that need to be addressed, including technical capacity, accessibility, ethical considerations, and regulatory frameworks. Collaborative efforts among stakeholders, including policymakers, educators, administrators, and technology providers, are essential to harnessing AI's full potential while addressing associated challenges and ensuring equitable access and ethical use in higher education in Turkey.

Conclusions

The extensive study carried out by MSKU in Turkey thoroughly examines the profound influence of AI on higher education, specifically concentrating on the viewpoints of industry professionals, scholars, and university administrators. The findings provide a clear depiction of Turkey's developing association with AI and its potential ramifications for the future of higher education.

Conclusion for Experts in the Field:

The study highlights a strong comprehension and recognition of AI among the majority of experts in Turkey, particularly those from the AI industry. Their observations illuminate the diverse range of AI's possibilities, encompassing data analytics, predictive analytics, and increased student engagement.

Usage and Practical Applications: Experts mostly employ AI chatbots in their professional pursuits, with ChatGPT emerging as a preferred tool. The extensive utilization of AI tools, particularly in the analysis of visual data and the creation of predictive models, highlights its significant capacity for transformation in multiple fields.

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Experts perceive AI as a catalyst for good transformation in higher education, while acknowledging potential obstacles. Although AI has the potential for improved student engagement and customized learning experiences, it is crucial to carefully evaluate the technical capabilities, accessibility, and ethical considerations associated with its implementation.

Conclusion for Academicians:

Proficiency in AI Concepts: The extensive understanding of fundamental AI concepts, such as Machine Learning and Data Science, possessed by the academicians, along with their practical expertise in AI technologies, highlights their preparedness to incorporate AI into higher education.

The widespread preference of ChatGPT among scholars emphasizes its significance and usefulness in academic environments. Their focus on individualized instruction, evaluation, and investigation with artificial intelligence methods amplifies its potential advantages.

Academicians acknowledge that AI has several positives, including its ability to enhance inclusion, improve efficiency, and facilitate novel teaching approaches. Nevertheless, apprehensions regarding excessive dependence on technology, ethical deliberations, and possible biases require a well-balanced strategy for incorporating AI.

Conclusion for University Administrators:

Recognition and Incorporation of AI: A considerable proportion of university administrators in Turkey acknowledge the profound capacity of AI, specifically in predictive analytics, data administration, and improving student involvement.

The regular use of AI chatbots, specifically ChatGPT, highlights its crucial function in optimizing university operations. Administrators utilize artificial intelligence systems to make decisions based on data, provide guidance for academic matters, and implement measures to retain students.

Administrators acknowledge the potential of AI to improve institutional effectiveness and student results, but they also emphasize the significant hurdles it presents. Future exploration and strategy development should prioritize addressing technical restrictions, assuring accessibility, and handling ethical considerations as crucial topics.

To summarize, the conclusions drawn by specialists, academics, and university administrators shed light on the ever-changing AI landscape in Turkish higher education. Although there is a general sense of optimism regarding the revolutionary capabilities of AI, it is crucial for stakeholders to collectively tackle the problems and ethical considerations associated with it. To fully leverage the potential of AI in Turkey's

higher education ecosystem, it is crucial to adopt a comprehensive approach that includes rigorous training, policy development, and engagement with stakeholders. This approach will ensure fairness, accessibility, and ethical integrity.

The survey findings have revealed six crucial areas where stakeholders have observed gaps or limits.

- Technical Capacity and Training: Although there is recognition of the promise of AI, there is a significant deficiency in the technical capabilities of universities. There is an urgent requirement for training programs to provide educators and administrators with the essential skills to successfully utilize AI's complete capabilities.
- Accessibility concerns are evident while acknowledging the advantages of AI. These concerns mostly revolve around ensuring access for students, particularly those from underprivileged families or rural regions. It is essential to tackle these inequalities in order to guarantee fair and equal opportunities for all students to get a high standard of education.
- Ethical Considerations: The poll brings attention to widespread worries regarding the moral aspects of implementing AI, which include concerns about safeguarding data privacy, addressing algorithmic bias, and upholding academic integrity. It is crucial to establish strong systems of governance and transparency in order to properly manage these complex ethical challenges.
- The use of AI tools in educational settings provides advantages in terms of efficiency and scalability. However, there is a noticeable deficiency in addressing emotional intelligence and tailored human contact. Striking a balance between technology progress and approaches that prioritize human needs continues to be a difficult task.
- The report highlights the possible dangers of over dependence on AI, which could lead to a decline in pupils' critical thinking and problem-solving abilities. It is crucial to create an educational environment that is balanced and utilizes the benefits of AI while also maintaining the important abilities of humans.
- The lack of comprehensive regulatory frameworks and consistent policy guidelines is a key obstacle. It is essential to address these gaps in order to promote responsible use of AI, protect the interests of stakeholders, and create a favourable environment for innovation in higher education.

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