INFLUENCE OF ARTIFICIAL INTELLIGENCE ON THE TEACHING PROCESS

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Abstract

The purpose of this study is to assess the impact of artificial intelligence (AI) on the teaching process among teachers.

Although AI is spreading rapidly as a concept, its practical application in Albania's education system remains unclear, and there is concern that AI may erode essential human interactions that define meaningful education. Data were collected through questionnaires completed by 126 student-teachers enrolled in various master's degree programs and alumni of the Faculty of Education at "Aleksandër Moisiu" University of Durrës, Albania, during October–December 2024. The responses were analyzed using the SPSS 25 software for a comprehensive and professional interpretation. The findings reveal that while AI is recognized as an emerging trend, its tangible impact on teaching practices is still uncertain. Furthermore, participants expressed concern that AI could gradually diminish the crucial human interaction between teachers and students. Human interaction remains irreplaceable in education, as teachers provide mentorship, emotional support, and motivation beyond mere information delivery. Therefore, AI should be integrated thoughtfully to enhance, not replace, the human aspects of teaching.

Keywords: artificial intelligence, instructional practices, education, influence, Albania.

Introduction

In Albania, the progression of artificial intelligence (AI) has commenced with notable strides, yet it remains nascent compared to certain nations boasting a more sophisticated infrastructure in this domain. In recent times, educational institutions and universities in Albania have initiated the provision of academic and research programs spanning diverse facets of artificial intelligence, marking a pivotal stride in cultivating professionals and scholars poised to contribute to the evolution of this technology.

Nevertheless, a primary impediment hindering the advancement of artificial intelligence in Albania is the paucity of human and financial resources. Realizing sustainable progress necessitates substantial investments in advanced education and the establishment of an innovation-friendly environment.

Broadly speaking, artificial intelligence in Albania is in its preliminary stages of development, although its potential to augment influence and utility across various societal and industrial domains in the future is considerable. The dearth of specialized training in artificial intelligence within the country poses a significant hurdle, requiring the establishment of infrastructures and the training of personnel to engage effectively with AI.

According to Brynjolfsson & McAfee (2014), artificial intelligence (later mentioned as AI) is very powerful as it liberates human resources from the nuances of routine and repetitive tasks to sharpen their energy into featuring new and modern methods. This symbiotic relationship between humans and AI fosters a work environment where individuals can harness their intellectual capacities to explore new frontiers of innovation and productivity. AI's role in automating routine operations not only enhances efficiency but also augments the human workforce's potential to engage in tasks that demand uniquely human qualities, thereby contributing to a more dynamic and forward-thinking landscape across various sectors.

Furthermore, Artificial Intelligence (AI) emerges as an unparalleled force in handling vast datasets, exhibiting a prowess that extends beyond human capabilities. Its remarkable ability to process massive volumes of data and distill meaningful insights has become a cornerstone for informed decision-making across diverse domains. The reference to Davenport and Harris (2007) in "Competing on Analytics: The New Science of Winning" underscores the transformative impact of AI on strategic

decision-making. In the realm of business, AI-driven analytics empower organizations to uncover patterns, trends, and correlations within datasets, offering a competitive edge by facilitating data-driven strategies. In healthcare, AI's proficiency in processing complex medical data accelerates diagnostics, treatment planning, and drug discovery, revolutionizing patient care.

Likewise, in finance, AI algorithms navigate intricate financial datasets, providing timely and accurate insights for investment decisions and risk management. In the book "Prediction Machines: The Simple Economics of Artificial Intelligence" by Agrawal, Gans, and Goldfarb (2018), the authors emphasize the transformative role of AI in stimulating innovation. In a more relatable context, AI acts as a collaborative partner for researchers, engineers, and developers, functioning as a digital co-creator that augments human capabilities. This partnership allows professionals to delve into intricate challenges across various domains with newfound confidence and efficiency. It's akin to having an intelligent ally that not only assists in problem-solving but also inspires fresh perspectives and solutions. As AI seamlessly integrates into the creative process, it empowers individuals to explore uncharted territories of knowledge and navigate complex problem landscapes, fostering a harmonious synergy between human intuition and machine intelligence in the pursuit of groundbreaking advancements.

The integration of artificial intelligence marks a significant leap forward, promising enhanced educational experiences for both students and educators. It's akin to having a supportive companion on the educational journey, as AI brings innovative methods of teaching, personalized learning experiences, and streamlined administrative processes to the forefront. For students, it means tailored approaches to learning that cater to individual needs, making education more engaging and effective. Teachers will not have such a big workload. In this collaborative dance between humans and AI, the educational landscape transforms into a vibrant space where the pursuit of knowledge becomes more accessible, interactive, and fulfilling for everyone involved.

This study tries to analyze the following research question and hypothesis to draw accurate conclusions and recommendations:

Research question 1: Are there any differences in the perception and impact that the application of artificial intelligence will have on teachers working in schools in rural areas and those in urban schools?

Hypothesis 1: The idea and application of artificial intelligence still cannot have a correct conception in relation to its positive or negative impact.

1. Literature Review

In the ever-evolving landscape of education, AI takes on the role of a perceptive guide, delving into the unique learning journeys of individuals. Drawing inspiration from Lane and Cao's insights in "Exploring the Role of Computerized Adaptive Testing in the GRE Program" (2007), AI becomes a personalized learning companion. Much like a skilled tutor, it carefully dissects the intricate tapestry of each student's learning patterns and preferences. It's about understanding the fact that how people absorb and process information. As students embark on their educational quests, AI tailors content with an artistry that matches the rhythm of each learner, creating a symphony of customized educational experiences. However, despite technological advancements, students often struggle with engagement in online learning environments, citing issues such as lack of motivation, feelings of isolation, and difficulty maintaining attention (Leka & Roseni, 2022). As emphasized by Roseni and Koroshi-Shano (2021), online teaching processes in Albania have revealed that maintaining student motivation and emotional connection is essential for digital engagement, aligning with global challenges in e-learning environments. These challenges highlight the need for more responsive and emotionally intelligent systems. In this light, AI-based tools offer more than personalization – they offer the possibility of deeper connection and sustained engagement. This personalization, however, is not only about efficiency – it is also about inclusion. As highlighted in Leka et al. (2024), equitable access and community-building in digital learning environments are essential, especially in regions with uneven technological development. Similarly, Roseni (2014) underscores that interactive and all-inclusive teaching methodologies represent the foundation for equitable learning, emphasizing that inclusivity must remain central even in technologically advanced education systems. In this context, AI emerges not only as a

mentor but as a bridge – facilitating participation, reducing barriers, and nurturing inclusive virtual spaces where all learners, regardless of background, can thrive. Referring to VanLehn's exploration in "The Relative Effectiveness of Human Tutoring, Intelligent Tutoring Systems, and Other Tutoring Systems" (2011), AI steps into the role of a perceptive mentor within adaptive learning platforms. As students navigate the diverse landscapes of subjects, AI quietly observes, adjusting the difficulty of the content in sync with each individual's performance. In this dance between the learner and the AI-powered platform, the emphasis is not merely on progress but on a harmonious progression where challenges are met with just the right level of difficulty, fostering a sense of accomplishment and an enduring love for learning. This perspective resonates with Roseni and Koroshi-Shano (2020), who highlight that well-structured assessment practices and adaptive feedback mechanisms enhance learner autonomy and deepen engagement in the language classroom, mirroring AI's adaptive capabilities.

Drawing inspiration from Shermis and Hamner's essay insights (2012), AI steps in as an understanding assistant in the educational journey. No longer bound by the constraints of manual grading, educators find themselves with more precious time to invest in fostering meaningful connections with their students. It's a shift from mere assessment to a supportive exchange where AI swiftly evaluates assignments, offering constructive feedback that serves as a compass for improvement. The traditional delay between submission and feedback evaporates, replaced by a real-time conversation that empowers learners to understand and enhance their performance. In this symbiotic relationship between technology and education, the emphasis isn't solely on efficiency but on creating an environment where feedback becomes a dynamic catalyst for continuous learning and improvement. Roseni and Haxhihyseni (2025) similarly argue that teachers' professional development in assessment practices strengthens feedback quality and student learning outcomes, reinforcing the benefits of timely, formative evaluation—principles mirrored in AI-driven assessment tools.

Imagine an educational institution where administrative tasks seamlessly unfold like a well-choreographed performance, thanks to the collaborative dance between humans and Artificial Intelligence (AI). According to Bichsel's insights in "The impact of eLearning on academic performance: A case study in the context of a large introductory computer programming course" (2017), AI takes on the role of an administrative virtuoso. Envision a world where enrollment, scheduling, and resource allocation are not daunting hurdles but rather smoothly navigated processes. AI becomes the behind-the-scenes conductor orchestrating these elements, ensuring that educators and administrators can focus on what truly matters – creating a nurturing environment for learning. It's more than just efficiency; it's a transformation where the administrative backbone of educational institutions is strengthened. The result is an atmosphere where every administrative task contributes to the symphony of education, enhancing the overall efficiency and allowing educators to dedicate more time and attention to fostering a rich and fulfilling learning experience for students. In alignment with this vision, Roseni (2019) emphasizes that curriculum innovation and teacher empowerment are essential to institutional efficiency, ensuring that digital transformation supports – not replaces – the human element in education.

Picture a future in education where the journey of each student is not just a series of academic milestones but a personalized narrative of success. Drawing inspiration from Arnold and Pistilli's exploration (2012), AI emerges as a compassionate guide in this narrative. Think of it as a wise mentor, sifting through the pages of historical data to decipher the unique patterns that foretell a student's triumphs or potential challenges. With this knowledge, AI becomes a beacon, allowing educators to intervene early, crafting strategies that address challenges before they become roadblocks. This isn't a detached analysis; it's a genuine commitment to the success and well-being of each student. In this harmonious dance between technology and education, predictive analytics is a compassionate partner, shaping a narrative where every student can thrive and find their own path to success. Roseni (2023) further asserts that integrating reflective teaching with digital analytics enhances teachers' awareness of student progress, supporting early interventions and personalized guidance—paralleling AI's role as a compassionate mentor.

2. Methodology

This research employed the questionnaire as a data collection tool due to its efficiency in capturing accurate and timely information. The responses, collected via the Google Forms platform, were processed using the SPSS 25 statistical software to ensure a thorough and methodologically sound analysis. Participants included 126 student-teachers enrolled in various master's degree programs and alumni of the Faculty of Education at "Aleksandër Moisiu" University of Durrës, Albania, during October–December 2024.

In order to assess this impact, it was taken care that the sample was inclusive, taking into consideration not only respondents in urban and populated areas, where this phenomenon is discussed or even used the most, but also respondents who belong to peripheral areas with the aim of understanding and evaluating their opinion as well.

2.1. Research Instrument

Section I – general Information: Gathers demographic and professional background data, including respondents' age, gender, geographical location, years of teaching experience, as well as the subjects and grade levels they teach.

Section II – artificial Intelligence in Education: Assesses respondents' familiarity with technology, their integration of technology into the educational process, and the extent to which they use AI-based tools. It also explores perceived risks associated with students' use of AI tools.

Section III – the Future of Artificial Intelligence in Education: Focuses on perceptions regarding the future role of AI in education, measured using a Likert scale.

Section IV – experience with Artificial Intelligence in the Educational Process: Evaluates respondents' direct experiences with AI in their teaching practices. This section combines Likert-scale questions with open-ended items to capture qualitative insights and personal perspectives.

2.2. Participants

Referring to our sample, 71% of the participants belongs to urban areas and the rest with 29% are represented by those participants who teach in rural areas from the total number of 126. (Fig. 1).

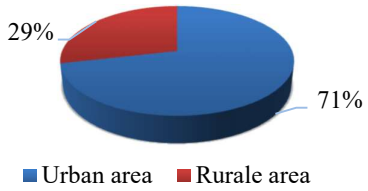

Figure 1. Teachers' distribution by location
Source: compiled by the authors on the basis of the research data, 2024

The distribution on regard of gender shows that most of the respondents with 84% are represented by women and the rest with 16% by men (Fig. 2).

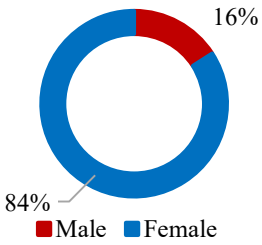

Figure 2. Teachers' distribution by gender
Source: compiled by the authors on the basis of the research data, 2024

Regarding the distribution by age group, the data show that most of them with 59% belong to the 36-45 age group, followed by the 46-55 age group with 21% and the 26-35 age group represented by only 20 % of them; the rest is distributed between over 55 years and under 25 years, respectively with 8% and 3% of the total (Fig. 3).

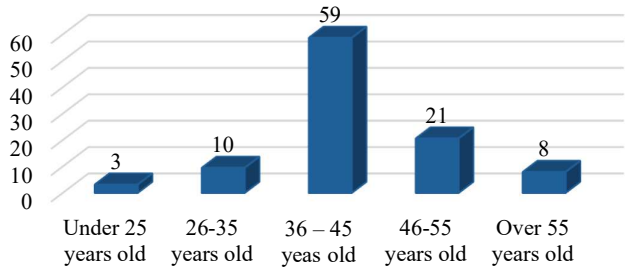

Figure 3. Teachers' distribution by age
Source: compiled by the authors on the basis of the research data, 2024

Referring to the fact that the respondents belong to different age groups, their experience in the educational process is also different. Thus, referring to the following data, ¼ of them have a job experience starting from 11 to 15 years and the same varies from 16-20 years of experience. With 22%, there are those teachers who have a general experience of 5-10 years, while the rest have an experience even longer than 21 years. But our sample also includes those teachers who are generally young in age and experience, respectively representing only 8% of them (Fig. 4).

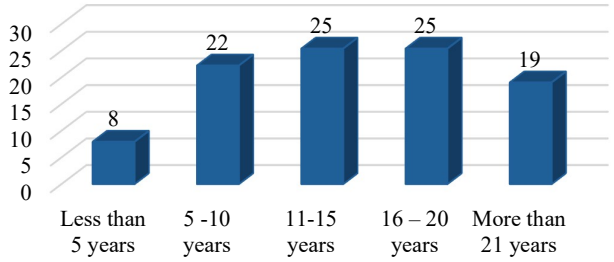

Figure 4. Teaching experience
Source: compiled by the authors on the basis of the research data, 2024

Regarding the distribution depending on the classes where the interviewed teachers teach, we see that less than half of them, respectively 48%, teach in classes with adult students, followed by another 25% who are middle school teachers, and the rest in lower cycle classes from 1st- 6th grade (Fig. 5) and most of them are teachers of social sciences and language subjects, respectively 37% and 24%. There are also teachers of IT, foreign languages or scientific subjects as well. A small part of them, represented by only 3%, are teachers of subjects related to the arts.

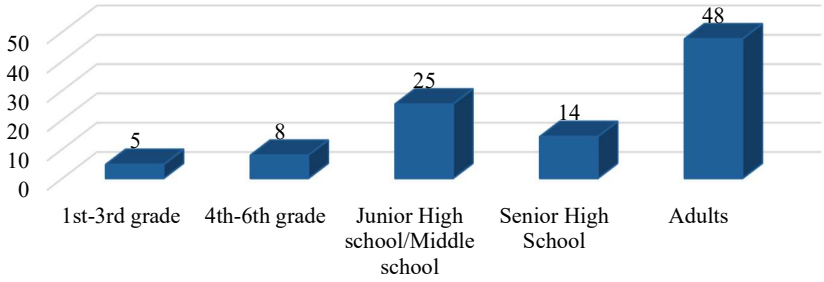

Figure 5. Teachers' distribution by grade they are teaching
Source: compiled by the authors on the basis of the research data, 2024

Table 1 shows that all items related to the positive effects of AI in education load moderately to strongly on a single component, indicating a coherent perception of AI's benefits. The highest loadings

relate to educators' training (0.712), early diagnosis of learning difficulties (0.699), and educator support (0.640), reflecting strong recognition of AI's professional value. Lower but notable loadings for personalized learning (0.489) and support for vulnerable groups (0.507) suggest these benefits are acknowledged but may depend on specific contexts. Overall, the results indicate a positive view of AI's transformative role in education.

Table 1. Extraction of positive effect

	Extraction
Q13.1 Could provide personalized learning experiences for students.	0.489
Q13.2 Could provide great potential in educators' training.	0.712
Q13.3 Could support the work of educators.	0.640
Q13.4 Could make learning easier for vulnerable groups of students.	0.507
Q13.5 Could assist in the early diagnosis of learning difficulties	0.699
Q13.6 Could assist in the administrative duties of educators	0.624

Extraction Method: Principal Component Analysis
Source: compiled by the authors on the basis of the research data, 2024

It is noted that except for alternative 2 (Table 2), which has a weight of less than 0.4, all the others are kept in the analysis by analyzing the influence of this effect on the dependent variable artificial intelligence. Efficiency Alternatives that measure and evaluate the efficiency of using artificial intelligence have all factorial weights greater than 0.4 therefore all continue to be kept in further analysis.

Table 2. Extraction of negative effect

	Extraction
Q14.1 Could undermine the role of the educator	0.424
Q14.2 Could lead to new forms of inequality or discrimination, or exacerbate existing ones.	0.351
Q14.3 Could become an obstacle to the cultivation of students' thinking and especially their critical thinking.	0.473
Q14.4 Could lead to the exaggeration of plagiarism.	0.431

Source: compiled by the authors on the basis of the research data, 2024

The alternatives that measure and evaluate the efficiency of the artificial intelligence (Table 3) use have factorial weights greater than 0.4, so they all continue to be kept in the further analysis.

Table 3. Extraction of efficiency

	Extraction
Q17.1 University education	0.519
Q17.2 Training seminars / workshops	0.659
Q17.3 Specialized online courses (e.g. MOOCs)	0.607
Q17.4 Appropriate educational material (textbooks and other teaching material)	0.608

Extraction Method: Principal Component Analysis
Source: compiled by the authors on the basis of the research data, 2024

Similarly, there is measurement and factorial weighting of the dependent variable, which evaluates the recognition and use of Artificial intelligence as well. From the analysis of the Principal Component, it is observed that with the exception of the last question, all the other questions follow further analysis (Table 4).

Table 4. Extraction of artificial intelligence

	Extraction
How familiar are you with technology?	0.458
How often do you use technology in the educational process?	0.438
Have you used tools in the educational process that include artificial intelligence?	0.564
Have you noticed whether your students use artificial intelligence tools for their study?	0.672
Have you noticed if your students use artificial intelligence tools outside their school activities?	0.640
Are you aware of any potential risks arising from your students' use of artificial intelligence tools in general? (not necessarily in the educational process).	0.563
Does your school use artificial intelligence systems for administrative tasks (student registration, grades, absences, etc.)?	0.384

Extraction Method: Principal Component Analysis
Source: compiled by the authors on the basis of the research data, 2024

2.3 The main hypothesis of the study

Hypothesis 1: The idea and application of artificial intelligence still cannot have a correct conception in relation to its positive or negative impact. First, we analyze factorial weights, the reliability coefficients for each variable as well as the multicollinearity between them. The factorial weights of the independent variables (Impact of the positive effect, Impact of the negative effect and Effectiveness) are all greater than the limit value of 0.4, and therefore are kept in the analysis. Furthermore, the factorial weights of the dependent variable that measures and evaluates Artificial Intelligence are greater than this value. On the other hand, the values of the Cronbach Alpha coefficient for each of the independent variables are at considerably high values, which shows their validity (Table 5).

Table 5. Alpha coefficients

Variable	Cronbach's Alpha	No of Items
Positive effect	0.730	6
Negative effect	0.531	4
Effectiveness	0.776	4

Source: compiled by the authors on the basis of the research data, 2024

2.4 Research question

Research question 1: Are there any differences in the perception and impact that the application of artificial intelligence will have on teachers working in schools in rural areas and those in urban schools?

Table 6. Chi Square test

	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	4.443[a]	2	0.108
Likelihood Ratio	7.162	2	0.028
Linear-by-Linear Association	2.544	1	0.111
N of Valid Cases	126		

Source: compiled by the authors on the basis of the research data, 2024

To analyze this research question, we refer to the Chi Square Test of independence. The data of this test show that the Pearson Coefficient has a value of Asymptotic Significance (2-sided) = 0.108>0.05, which allows us to reach to the conclusion that there are no differences in the perception of the concept or the implementation of AI among teachers who work in rural areas (schools) and those who work in urban ones. This happens on the one hand for the reason that the sources of information are the same and on the other hand the effect of the application of AI in the educational process will be a process, which in the near future will be implemented regardless of the possibilities or the dimension of its use.

At first, we observe the analysis of variance (ANOVA) which according to the following data shows that for df(3;122) and F=0.656 there is the value of Sig.=0.581>0.05, which shows that there is no valid correlation from the statistical side between the independent variables and the dependent variable that measures Artificial Intelligence.

In the contemporary milieu, the nascent state of artificial intelligence, particularly within the confines of our nation, Albania, is apparent. The precise ramifications, whether positive, negative, or efficacious in terms of service provision or the facilitation of overarching processes, remain indeterminate. This holds especially true for its influence on the educational paradigm, as the intricate dynamics of this technological evolution are yet to unfold definitively.

Table 7. ANOVA

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	0.802	3	0.267	0.656	.581[b]
Residual	49.738	122	0.408		
Total	50.540	125			

a. Dependent Variable: IA
b. Predictors: (Constant), Effectiveness, positive effect, negative effect
c. Source: compiled by the authors on the basis of the research data, 2024

3. Discussion of the findings

Nowadays, when information technology is developing more and more often, it is taking an indisputable place in many daily social and economic processes, thus bringing a new approach, new development, but also almost unknown until now.

This approach cannot but be reflected in the educational process as well. Thus, related to the question of familiarity with technology, a little more than half of them answered that their skills are adequate, where most of them with 58 % belong to the age group of 36-45 years, followed by another 27 % who belong to the age group over 46 years. On the other hand, 33 % of them said that their skills allow them to handle the basics. On the other hand, the fact that their skills need strengthening is accepted by 88 % of the participants who belong to the age group of 36-55 % and another 11 % who belong to the age group of more than 55 years, which is normal since the knowledge about IT during their work experience as a teacher was not enough and moreover in that period technological development was not at the levels it is today, and therefore they need to recover their knowledge in order to adapt to the process, the students as well as the time and its immediate changes.

On the other hand, regarding the frequency of technology use, it is obvious that a little more than half of them stated that they often use technology during the educational process, while 1/3 of them stated that its use during work is almost daily. A very small part of them, about 3 %, stated that they rarely use technology during the educational process, but on the other hand, they all admitted that they have heard about artificial intelligence, which is spreading rapidly in various social and economic processes, listing as the primary source social media, TV or even conversations with friends and colleagues at work.

Knowing that artificial intelligence is spreading widely in social and economic life, there is no doubt that its impact will find place in the educational process. So, when asked about the use of tools with AI, 59 % of them said that they still use little or no artificial intelligence tools in the educational process, while about 18% of other respondents use them even very often or always, even at these levels the use of this technology by their students during the teaching process as well as outside the school is justified by the teachers.

38 % of the respondents admit that this risk can be continuous or will always accompany them. On the other hand, 1/3 of them see it as a small or non-existent possibility and the rest think that this risk is average.

60 % of the respondents state that AI system is rarely used or is not used at all, even in 62% of them these schools where this system is used little or not at all related to school administrative issues are precisely schools that are located in urban areas and about 55% they are schools located in rural areas.

60 % of the respondents is convinced that the effect of AI use in the educational process will undoubtedly be very large in the following years, just as for 6% this impact will be small or even insignificant.

Regarding the importance of AI effect in the educational process in the future, 75 % of them admit that the effect of this use is important in relation to the learning experience of students, as well as the importance of the administrative processes of schools also. On the other hand, 70 % admit this system as a positive possibility, supporting teachers in their daily life in the teaching process, while for the other 10 %, this effect has no importance at all. The fact that the possibility of using artificial intelligence will be a useful instrument in the future also in schools makes 71 % accept the importance of its use in relation to the ease that can be created for vulnerable groups of students during the educational process, while the fact that artificial intelligence can be used to identify difficulties during the learning process is accepted by 51 %, while for another 17 % this system has no impact and 32% do not have an accurate idea about this type of impact (Table 8).

In addition, a significant part of them also state that artificial intelligence could provide innovation and research in education, creating texts with contemporary literature, facilitating information, helping students in different tasks, just as others think that maybe it will help the students to use their strongest skills in order to help them improve their weakness, saves time or make more active the learning process, help students in the process of analyzing the situation or in the methodological aspect as well.

Table 8. AI Positive Effects in educational process in the future

	Yes	No	I don't know	Total
Could provide personalized learning experiences for students.	54	13	33	100
Could provide great potential in educators' training.	75	8	17	100
Could support the work of educators.	70	10	21	100
Could make learning easier for vulnerable groups of students.	71	6	22	100

Source: compiled by the authors on the basis of the research data, 2024

The teachers were also asked about the negative aspects of the artificial intelligence use in the future regarding the educational process.

Regarding the fact that artificial intelligence could undermine the role of the educator, almost half of them affirm and agree with this fact and ¼ do not see it as a danger. On the other hand, the fact that artificial intelligence could become an obstacle to the cultivation of students' thinking and especially their critical thinking received the absolute agreement of 79 % of the teachers interviewed, and at these levels the other fact that precisely intelligence artificial could lead to the exaggeration of plagiarism. While for 46 % of the respondents, the evil of artificial intelligence is related to the fact that it could lead to new forms of inequality or discrimination, or exacerbate existing ones (Table 9).

Table 9. AI Negative Effects in educational process in the future

	Yes	No	I don't know	Total
Could undermining the role of the educator	49	25	25	100
Could lead to new forms of inequality or discrimination, or exacerbate existing ones.	46	16	38	100
Could become an obstacle to the cultivation of students' thinking and especially their critical thinking.	79	6	14	100
Could lead to the exaggeration of plagiarism.	75	8	17	100

Source: compiled by the authors on the basis of the research data, 2024

84 % of them responded positively, agreeing that the future of youth will undoubtedly be connected to the use of artificial intelligence, while the rest with 16 % do not agree and do not accept this fact.

It comes out that in 66% of the cases, effectiveness is mainly agreed with the educational system in the university, followed by 78 % which refer mainly to the effectiveness of the use of artificial intelligence mainly with training seminars / workshops and this assessment is also related to the effectiveness that artificial intelligence can have in specialized online courses as well as in appropriate educational material (Table 10).

Table 10. Teachers' training on artificial intelligence systems

	Don't agree	Somehow	Agree	Absolutely agree	Total
University education	17	17	44	22	100
Training, seminars / workshops	13	10	33	45	100
Specialized online courses (e.g. MOOCs).	13	6	44	37	100
Appropriate educational material (textbooks and other teaching material).	16	5	42	37	100

Source: compiled by the authors on the basis of the research data, 2024

When the respondents were asked about the main difficulties of AI use in the educational process, some of the challenges they face are: difficulties in understanding being old age; lack of critical thinking; plagiarism; it could lead to less critical thinking; lack of conversation skills; difficulty on understanding; may be fake knowledges; absence of social interactions; could lead to the exaggeration of plagiarism; copy of the information; teachers not wanting to progress; students will come to school with their works completed but they don't know how to do them by themselves etc.

As far as it goes, some of the main mentioned advantages are: saving time, eliminating biases, and automating repetitive tasks, quick answers, respecting deadlines, makes learning easier, promotes research, develops searching skills, people become independent on working etc.

In addition, regarding AI effectiveness, it helps creating projects in short time, organizing the structure of some information but on the other hand emphasis has been on the loss of human connection,

data privacy and security, replacement of the human mind (that of the educators). It is really scary how fast AI is developing or using the artificial intelligence can affect negatively in people.

Concerning the issue of multicollinearity (Table 11), it is imperative that the correlation values between variables remain within the bounds of -0.7 and +0.7. Exceeding these thresholds may result in a distortion of their impact on the dependent variable.

Table 11. Multicollinearity

Variables	Positive impact	Negative impact	Effectiveness
Positive impact	1		
Negative impact	.383**	1	
Effectiveness	-0.029	.175*	1

Source: compiled by the authors on the basis of the research data, 2024

The subsequent data presented herein demonstrate that the correlation values among the independent variables adhere to the stipulated limits, ensuring the absence of distortion in their interrelation with the dependent variable.

Conclusions

In conclusion, while the rapid expansion of artificial intelligence signals a transformative era across socio-economic domains, its concrete effects and implications within education remain insufficiently defined. The findings highlight both optimism and caution—acknowledging AI's potential benefits while emphasizing concerns regarding the erosion of essential human interaction between teachers and students, which lies at the core of meaningful education. Furthermore, the uniformity of AI's perceived impact across urban and rural contexts suggests that its influence transcends geographical boundaries. Nonetheless, the effective and ethical integration of AI in education requires time, strategic planning, and a balanced approach that safeguards the irreplaceable human dimension of teaching and learning amidst ongoing technological advancements.

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DIRBTINIO INTELEKTO ĮTAKA MOKYMO PROCESUI

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Santrauka

Šio tyrimo tikslas – ištirti dirbtinio intelekto (DI) poveikį mokymo praktikai Albanijoje, daugiausia dėmesio skiriant mokytojų požiūriui į jo galimybes ir rizikas. Nors DI sparčiai įgauna matomumą visame pasaulyje, jo taikymas Albanijos švietimo sistemoje išlieka neaiškus, keliant susirūpinimą, kad technologijos gali silpninti esminę žmogaus sąveiką, kuri suteikia prasmę ugdymui.

Tyrimas buvo atliktas Aleksandro Moišių universitete Duresyje, Albanijoje, platinant klausimynus 126 magistrantūros studentams ir alumnams 2024 m. spalio–gruodžio mėn. Atsakymai buvo analizuoti naudojant SPSS 25 programinę įrangą, siekiant užtikrinti profesionalią statistinę interpretaciją.

Rezultatai atskleidė, kad nors mokytojai pripažįsta DI kaip pasaulinę tendenciją, jo tiesioginis naudojimas klasėse vis dar ribotas. Daugelis respondentų išreiškė nerimą, jog DI gali sumažinti nepakeičiamą žmogaus sąveikos vaidmenį ugdyme. Mokytojai teikia vadovavimą, emocinę paramą ir motyvaciją, ko technologijos negali atkartoti. Todėl DI turėtų būti integruojamas kaip papildanti, o ne pakeičianti priemonė. Svarbu pažymėti, kad nebuvo nustatyta reikšmingų skirtumų tarp miesto ir kaimo mokyklų, nes abi aplinkos pasižymi panašiu taikymo lygiu ir neapibrėžtumu.

Albanija tik neseniai pradėjo įsisavinti DI, įvesdama akademines ir mokslinių tyrimų programas, skirtas specialistų rengimui. Tačiau pažangą stabdo riboti žmogiškieji ir finansiniai ištekliai. Tvariai plėtrai reikalingos didesnės investicijos į švietimą, infrastruktūrą ir profesinį mokymą. Apskritai DI Albanijoje dar tik ankstyvojoje vystymosi stadijoje, tačiau jo potencialas švietimo bei kituose sektoriuose yra plačiai pripažįstamas.

Kalbant apie skaitmeninius įgūdžius, maždaug pusė dalyvių nurodė turintys pakankamas technologines žinias, ypač 36–45 metų amžiaus grupėje. Dar 33 % turėjo tik pagrindinius įgūdžius, o daugelis pripažino poreikį tobulinti profesinę kvalifikaciją, kad prisitaikytų prie šiuolaikinių reikalavimų. Mokytojai dažnai naudoja technologijas ugdymo procese, tačiau DI priemones taiko tik mažuma. Nors beveik visi respondentai apie DI buvo girdėję iš socialinės žiniasklaidos, televizijos ar kolegų, 59 % pripažino savo darbe naudojantys labai mažai arba visai nenaudojantys DI įrankių. Priešingai, 18 % nurodė naudojantys juos dažnai ar reguliariai, daugiausia dėl to, kad šias priemones naudoja ir mokiniai.

Kalbant apie rizikas, 38 % mokytojų manė, kad jos visada lydės šią technologiją, o trečdalis suvokė jas kaip mažas arba neegzistuojančias. Nepaisant susirūpinimo, 60 % tikėjo, kad DI artimiausiais metais turės didelę įtaką švietimui, 75 % pabrėžė jo potencialą tobulinti mokymo ir administracinius procesus. Be to, 71 % matė DI naudą padedant pažeidžiamiems mokiniams, o 51 % tikėjo, kad jis gali padėti identifikuoti mokymosi sunkumus. Mokytojai taip pat išskyrė jo galimybes kurti šiuolaikinius mokymo tekstus, palengvinti tyrimus ir padaryti mokymąsi interaktyvesnį.

Vis dėlto pedagogai aiškiai išreiškė susirūpinimą dėl neigiamų padarinių. Beveik pusė baiminosi, kad DI gali sumenkinti mokytojo vaidmenį, 79 % pritarė, jog tai gali trukdyti mokinių kritinio mąstymo ugdymui. Tiek pat mokytojų DI siejo su padidėjusia plagijavimo rizika, o 46 % nuogąstavo, kad jis gali sustiprinti nelygybę ar diskriminaciją. Tarp kitų rizikų paminėta bendravimo įgūdžių silpnėjimas, perteklinis pasikliovimas paruošta informacija, dezinformacija ir socialinių ryšių nykimas.

Teigiamos pusės apėmė laiko taupymą, užduočių automatizavimą, šališkumo mažinimą, tyrimų palaikymą bei mokinių savarankiškumo skatinimą. Daugelis pabrėžė DI vertę lavinant analitinius ir organizacinius gebėjimus, taip pat jo naudą specializuotuose mokymuose, seminaruose bei nuotoliniuose kursuose. Svarbu, kad 84 % respondentų sutiko, jog jaunimo ateitis neišvengiamai bus susijusi su DI.

Apibendrinant galima teigti, kad tyrimas atskleidė ir entuziazmą, ir skepticizmą DI atžvilgiu Albanijos švietime. Mokytojai pripažįsta jo potencialą didinti efektyvumą, teikti personalizuotą pagalbą ir skatinti inovacijas, tačiau taip pat pabrėžia nepakeičiamą žmogaus sąveikos, mentorystės ir kritinio mąstymo reikšmę. Norint sėkmingai integruoti DI, Albanijai būtina investuoti į mokymus, infrastruktūrą ir etinius pagrindus, užtikrinant, kad technologijos papildytų, o ne pakeistų žmogiškuosius ugdymo aspektus.

Pagrindiniai žodžiai: dirbtinis intelektas, mokymo praktikos, švietimas, poveikis, Albanija.