Uluslararası İleri Doğa Bilimleri ve Mühendislik Araştırmaları Dergisi
Sayı 9, S. 70-77, 4, 2025

Araştırma Makalesi

IJANSER

https://as-proceeding.com/index.php/ijanser
ISSN:2980-0811

International Journal of Advanced Natural Sciences and Engineering Researches
Volume 9, pp. 70-77, 4, 2025

Research Article

Examining STEM Education in Albania: A Survey Proposal

Robert Kosova*, Zenel Sina[2], Taulant Kullolli[3], Anna Maria Kosova[4]

[1]*Department of Mathematics, Aleksander Moisiu University Durres. Albania*
[2]*Department of Pedagogy, Aleksander Moisiu University Durres. Albania*
[3]*Department of Marketing, Aleksander Moisiu University Durres. Albania*
[4]*Faculty of Research and Development, Polis University. Tirana. Albania*

*(robertkosova@uamd.edu.al) *Email of the corresponding author*

(Received: 05 April 2025, Accepted: 11 April 2025)

(3rd International Conference on Trends in Advanced Research ICSAR 2025, April 04-05, 2025)

ATIF/REFERENCE: Kosova, R., Sina, Z., Kullolli, T. & Kosova, A. M. (2025). Examining STEM Education in Albania: A Survey Proposal. *International Journal of Advanced Natural Sciences and Engineering Researches*, 9(4), 70-77.

Abstract – STEM education, (Science, Technology, Engineering, and Mathematics), plays a vital role in developing students' abilities in analysis, problem-solving, and critical thinking, which are essential for their success in higher education and future careers. In Albania, recently implemented education reforms have aimed to update the education system and align it with international, particularly European Union, standards. Despite these initiatives, there remains a significant gap between the STEM education provided in high schools and the demands of university courses, creating considerable difficulties for students pursuing scientific and engineering fields. This paper highlights several key challenges facing STEM education in Albania, such as limited resources, outdated lab equipment, and a lack of the technological infrastructure needed to teach advanced STEM topics. The situation is further complicated by insufficient teacher training, as many educators are not prepared to apply modern teaching methods like computational thinking or project-based learning. Moreover, there are gaps in the curriculum, as high school programs fail to adequately cover the abstract scientific and mathematical concepts required for university-level education. To tackle these issues, this research emphasizes the urgent need to create a STEM knowledge questionnaire for Albanian high school and university students.

Keywords – Albania, Curricula, Education, Likert, Stem, University, Questionnaire, Survey.

I. INTRODUCTION

STEM (Science, Technology, Engineering, and Mathematics) education has become a powerful tool of economic and social development and is the key force behind innovation and technological progress. It plays a vital role in today's world, dominated by AI and data science, and impacts significant fields like healthcare, finance, environmental engineering, and others [1]. The change from secondary school to the university is an important milestone in the education of a student, especially for students studying STEM programs. It is well known that high school students who were excellent in STEM subjects will be successful in science and engineering courses at the university [2]. However, gaps and differences in the high school curriculum and university programs may prevent the students from achieving success. Gaps between high school and university performance have been a widely researched issue, with academics and highlighting the relevance of STEM education to academic performance and success [3]. Disparities between secondary school and tertiary education demands pose great challenges to students' fulfillment, particularly in less developed countries [4].

Studies have shown that students who get exposed to STEM at an early age are likely to pursue science, technology, and engineering careers, which result in a very skilled workforce [5]-[7].

STEM education provides students with the capacity to understand complex problems, interpret data, and use scientific and mathematical principles to formulate efficient solutions. From analyzing a technical problem, constructing an experiment, or optimizing an engineering process, STEM is the heart of problem-solving [8], [9].

Logical thought and analytical intellect are the emphases in STEM education. Students are taught to acquire critical thinking skills so they can analyze information, examine evidence, and make sound decisions from facts and not from assumptions. Such skills are not only imperative in science and engineering but also in social sciences, medicine, and finance [10]-[12].

Students in STEM are taught to think outside the routine and approach problems from multiple angles. Creativity helps improve processes and algorithms and find new ways to address local problems and global challenges [13]-[15].

Most of the STEM activities require teamwork, building teamwork communication, collaboration, and cooperative problem-solving competencies. From a robot competition to computer software code writing or lab experimentation, students build teamworking competencies. Such competencies are essential in working professionals, where multi-discipline teams collaboratively solve a complex problem [16]-[18].

Learning through errors and unknowns allows students to learn resilience, determination, and adapting their methodology to failure. It is highly valuable for professions involving research and development, engineering, and business, where things are difficult and complex [19]-[21].

STEM programs provide training with tools and technologies such as laboratories, coding platforms, engineering software, machine learning, AI, and data analysis. Using these resources in practice enhances the practical skills of students, allowing them to find jobs in fields such as software development, bioengineering, mechanical design, and scientific research [22]-[24].

STEM programs develop a vivid curiosity about how the world works, which leads students to question, explore, and learn on their own. It motivates them to learn about new concepts and technologies, which is required in a world where scientific and technological advancement continually shifts and changes at an accelerating pace [25].

However, many studies have established that unequal access to STEM education, particularly in developing nations, exists [26]. Constraining factors such as outdated learning curricula, inadequate technological learning facilities, and poor teacher capacity development programs prevent the successful utilization of STEM education [27]. A study by the World Bank concluded that gender disparity still prevails in STEM learning, with female students less represented in areas of engineering and computer science studies [28], [29].

II. STEM EDUCATION IN ALBANIA: REFORMS, AND CHALLENGES

In recent years, Albania has implemented reforms to strengthen its education sector towards aligning it with the European Union. Initiatives such as the National STEM Strategy and the establishment of digital classrooms aim at strengthening STEM programs and education at the preuniversity level. Algorithms, coding, and robotics have been added in high school to improve learning of STEM [30].

One such recent project includes the "Generation Next" one launched in 2022 within a joint venture by Vodafone Albania and the Ministry of Education and Sports, integrating STEM curriculum within 100 Albanian state-run schools. The project included training teachers and students in technology and equipping schools with tablets, laptops, and other digital tools [31], [32].

Yet, a number of challenges persist. Most high school graduates in Albania are not adequately prepared to attend higher education STEM subjects, especially mathematics, physics, chemistry, and ICT. University academics describe incoming students as being unprepared in fundamental problem-solving and dealing with abstract, theoretical mathematical and scientific concepts, causing high failure rates in first-year university classes [33], [34].

Another issue is the lack of infrastructure and materials for STEM learning. Many public high schools have poorly equipped laboratories, which makes more difficult the students' engagement in practical scientific experiments; in addition, many teachers do not have the necessary knowledge to incorporate computational thinking and experimental learning into practice [35], [36].

Based on research, participation in STEM programs in Albania has decreased over the last five years. Contributing to this trend are low awareness of job opportunities in STEM fields and the belief that STEM courses are difficult and too challenging [37].

In Albania, the education system has undergone numerous reforms to modernize curricula and align with European Union standards. Despite these reforms, high school STEM education remains poorly developed to prepare students for the intense rigor of university-level science, engineering, and technology courses [38], [39].

Moreover, lack of adequate exposure to current STEM applications at the high school level, such as coding, robotics, and data analysis, deprives students of the chance to develop an early fascination with these fields. Moreover, there are no after-school activities, such as STEM clubs and competitions, that further limit opportunities for students’ exposure to STEM learning beyond the classroom [40], [41].

A major gap in infrastructure worsens educational inequality: urban schools have better digital resources and internet access, while rural schools often lack basic tools like computers and lab equipment. This makes it harder for rural students to develop STEM skills, limiting their chances for university admission and future careers [42], [43].

III. MATERIALS AND METHOD

This study utilizes a mixed-methods approach to evaluate the effectiveness of STEM education in Albanian high schools and its influence on students' readiness for university studies. By integrating both quantitative and qualitative research methods, the study aims to provide an analysis of how STEM curricula, teaching methodologies, and technological resources contribute to students' preparedness for higher education [44], [45].

A crucial element of this research is the development and implementation of a structured questionnaire tailored to high school students. The questionnaire is designed to assess multiple dimensions, including:
STEM knowledge: students' understanding of key STEM concepts and their ability to apply them.
University preparedness: their confidence and readiness for higher-level STEM courses.
Perceptions and attitudes: how students view STEM subjects, including their interest, motivation, and perceived career prospects.

The questionnaire is structured using the Likert 5-point scale, which is a widely recognized tool for measuring attitudes, perceptions, and opinions in social science research. This scale allows respondents to indicate their level of agreement or disagreement with statements related to STEM education [46]. The Likert scale, first developed by Rensis Likert in 1932, has since been applied in various fields, due to its effectiveness in capturing subjective opinions in a quantifiable manner. It is applied in various fields, such as:
Customer satisfaction: to assess customers' experience and satisfaction with a product or service.
Student evaluation: to measure students' opinions on teaching quality, instructional methods, or course content.
Scientific research: to quantify perceptions in education, psychology, management, and other fields.
Employee assessment: to evaluate job satisfaction, leadership effectiveness, or workplace conditions [47].

The response options of 5-points Likert scale are as follows:

1 = Strongly disagree: the student feels no confidence in their abilities or knowledge.
2 = Disagree: the student has minimal confidence but recognizes some familiarity with the subject.
3 = Neutral: the student feels somewhat prepared but acknowledges gaps in understanding.
4 = Agree: the student is comfortable with STEM concepts and feels well-prepared for university studies.

5 = Strongly agree: the student has a strong grasp of STEM subjects and is fully prepared for higher education challenges.

Alternatively, answer Yes/No where applicable.

Section 1: Computer Hardware and Systems

Focus: Understanding and applying hardware knowledge to STEM projects.

1. I can identify key computer components (CPU, RAM, motherboard) and explain their roles.
2. I know how hardware specifications (CPU speed, RAM size) impact computer performance.
3. I can compare different storage types (HDD, SSD) and their role in handling large amounts of data.
4. I feel confident assembling or upgrading basic PC components (e.g., RAM) for a project.
5. I understand the role of BIOS/UEFI in system operations.

Section 2: Programming and Algorithms

Focus: Developing computational thinking for STEM problem-solving.

6. I can explain what an algorithm is and outline its key steps.
7. I am comfortable using programming language (Python, Java, C++) for simple tasks.
8. I can write code using loops, conditionals, and functions to solve problems.
9. I understand why algorithm efficiency (e.g., time complexity) matters in programming.
10. I can break down a STEM-related problem (e.g., data analysis, simulation) into logical steps.

Section 3: Digital Literacy and Cybersecurity

Focus: Navigating technology safely and efficiently.

11. I can use internet browsers and search engines effectively for research and coursework.
12. I know how to manage browser settings (e.g., cache, extensions) to optimize performance.
13. I can recognize and avoid online threats such as phishing and malware.
14. I understand the role of antivirus software and basic cybersecurity measures.
15. I can explain the benefits and limitations of private browsing for protecting personal data.

Section 4: Operating Systems and Software Management

Focus: Managing digital tools and environments for STEM learning.

16. I can check a computer's specifications (e.g., RAM, storage) and optimize performance.
17. I know how to install, update, and troubleshoot software and drivers for academic tasks.
18. I can resolve basic OS issues (e.g., slow performance) on Windows, Linux, or macOS.
19. I understand file systems and can organize project files effectively.
20. I can establish and troubleshoot internet connections for academic use.

Section 5: Office and Productivity Tools

Focus: Using software for STEM communication and analysis.

21. I can create well-formatted reports documents using word processors (Word, Google Docs).
22. I can use spreadsheets (Excel, Google Sheets) for calculations, graphing, and data analysis.
23. I can design engaging presentations (e.g., PowerPoint, Canva) for coursework or research.
24. I understand how databases (e.g., Access, SQL) help manage scientific data.
25. I can use collaboration tools (e.g., Google Drive, Notion) for group STEM projects.

Section 6: High School STEM Textbooks

Focus: Evaluating how well high school textbooks prepared students for STEM studies.

26. The textbooks I used in high school provided clear explanations of STEM concepts.
27. The exercises and examples in my textbooks helped me develop problem-solving skills.
28. My high school textbooks included real-world applications of STEM topics.
29. I found my textbooks well-structured and easy to navigate when studying independently.
30. I believe my high school textbooks prepared me well for university-level STEM courses.

Section 7: Teachers' Ability to Deliver STEM Knowledge

Focus: Evaluating how well teachers conveyed STEM concepts in high school and university.

31. My STEM teachers explained concepts clearly and made them easy to understand.
32. My teachers encouraged problem-solving and critical thinking in STEM subjects.
33. I received sufficient practical examples and applications of STEM concepts during lessons.
34. My teachers were knowledgeable about the subject and could answer in-depth questions.
35. I feel that my STEM education was engaging and well-taught, preparing me for further studies.

Section 8: Mathematics and Natural Sciences

Focus: Assessing readiness for university-level STEM courses.

36. I feel confident in my high school math skills (e.g., algebra, calculus) for university STEM courses.
37. I can apply physical or chemical principles to solve real-world problems (e.g., circuits, reactions).
38. I am comfortable analyzing data using mathematical or scientific methods.
39. I feel prepared for university STEM subjects, such as engineering or computer science.
40. I understand how mathematical models are used to explore real-world scenarios (e.g., motion, chemical processes).

Section 9: Problem-Solving and Creative Thinking

Focus: Developing skills for innovation and critical analysis in STEM.

41. I can approach technical problems logically and find effective solutions.
42. I enjoy solving challenges, such as coding problems, puzzles, or science experiments.
43. I can evaluate multiple solutions to a problem and select the best approach.
44. I can think creatively when designing experiments, apps, or engineering solutions.
45. I see logic and creativity as essential for success in STEM fields.

Section 10: Practical STEM Applications

Focus: Applying STEM knowledge to real-world tasks and careers.

46. I can edit media (e.g., images, videos, PDFs) for STEM reports and presentations.
47. I have experience with image editing tools (e.g., Photoshop, GIMP) for enhancing visuals.
48. I can install an operating system (Windows, Linux) using a bootable USB.
49. I understand how STEM skills (coding, data analysis) are applied in careers like engineering, and IT.
50. I feel confident in using technology to solve real-world problems in science, math, or engineering.

Section 11: Web Design and STEM Communication

Focus: Creating digital content and showcasing STEM projects.

51. I can build a basic website using platforms like WordPress, Wix, or Google Sites.
52. I understand the basics of HTML and CSS for designing simple web pages.

53. I can make a website responsive so it works on different devices (e.g., phones, tablets).
54. I know how to add interactive elements (e.g., buttons, forms) to a website for STEM projects.
55. I can use web design to present my STEM work (e.g., portfolios, research findings).

The questionnaire will be distributed to a sample of more than 200 high school students in Durres city, (Leomnik Tomeo, Naim Frasheri) and university students (University Aleksander Moisiu Durres, Polytechnic University of Tirana). The collected data will be analyzed using both qualitative and quantitative methods to identify trends, challenges, and potential areas for improvement in STEM education. The findings of this study will contribute to policy recommendations aimed at bridging the gap between high school and university STEM education in Albania.

IV. CONCLUSION

STEM education investment in Albania remains essential to make students ready for demanding university coursework together with emerging workplace requirements. The recent technological developments in artificial intelligence and renewable energy as well as data science need a solid STEM base for boosting innovation and global marketplace performance.

Surveys generate data that reveals matters that are not clearly discoverable using traditional research approaches. The analysis should examine both emotional distress among students alongside psychological issues combined with financial problems and social interaction challenges.

The evaluation of curricula combined with textbooks and teaching methods relies on survey data. Surveys enable evaluators to pinpoint sections that contain content that is no longer current or fails to make sense or is not meaningful.

Survey data serves as foundational evidence that supports decision-making for people serving in educational roles as well as policymakers and administrators. The gathered information enables policymakers to make evidence-based choices regarding curriculum transformations as well as resource assignments and student support programs.

Surveys help measure the complete educational conditions through evaluations of learning spaces and campus infrastructure along with student assistance systems. Educational organizations can use the acquired information to establish a more positive learning environment that embraces inclusion.

A combination of survey tools helps educational institutions evaluate student satisfaction about their academic programs and student interaction within the educational environment.

ACKNOWLEDGMENT

This publication was made possible with the financial support of the UAMD (Aleksander Moisiu University Durrës, Albania) project, "Evaluation of the Impact of STEM Programs on the performance of university students. An analysis of problems, ideas and proposals for improvement". The content is the responsibility of the author, and the opinion expressed is not necessarily the opinion of UAMD.

REFERENCES

[1] Baran, E., Canbazoglu Bilici, S., Mesutoglu, C., & Ocak, C. (2019). The impact of an out-of-school STEM education program on students' attitudes toward STEM and STEM careers. *School Science and Mathematics*, *119*(4), 223-235.

[2] OECD: https://www.oecd.org/content/dam/oecd/en/publications/reports/2020/05/oecd-reviews-of-evaluation-and-assessment-in-education-albania_09d45b3e/d267dc93-en.pdf

[3] Kosova, R., Bushi, F., Kapçiu, R., Cullhaj, F., & Kosova, A. M. (2024). An analyses of Albanian pre-university education system, and the missing surveys.

[4] Kazu, I. Y., & Kurtoglu Yalcin, C. (2021). The effect of stem education on academic performance: A meta-analysis study. *Turkish Online Journal of Educational Technology-TOJET*, *20*(4), 101-116.

[5] OECD: https://www.oecd.org/content/dam/oecd/en/publications/reports/2020/11/curriculum-overload_167e276d/3081ceca-en.pdf

[6] Gjana, A., & Kosova, R. (2021). Traditional Class, and Online Class Teaching. Comparing the Students Performance Using ANCOVA. *Journal of Multidisciplinary Engineering Science and Technology (JMEST)*, 14806-14811.

[7] Kosova, A. G. R. The Performance of University Students and High School Factors. Statistical Analyses And ANCOVA.

[8] Vrapi, A. (2015). LEARNING THROUGH PROBLEM SOLVING. European Journal of Research and Reflection in Educational Sciences Vol, 3(4).

[9] Starja, D., Shity, B., & Nikolova, N. (2020). The role of ict in improving problem-solving in teaching mathematics. In *EDULEARN20 Proceedings* (pp. 2651-2659). IATED.

[10] CANIA, L., & PRENDI, L. (2024). Artificial Intelligence in Public Administration: Opportunities, Challenges, and the Path Forward. *Proceedings of IAC in Budapest 2024*, 168.

[11] Starja, D., & Nikolova, N. (2020). From pencil and paper to ICT in mathematics teaching. An overview of the role of ict in mathematics teaching in albania. *EDULEARN20 Proceedings*, 2635-2644.

[12] Uka, A. (2023). Creativity in Education: Fostering Creativity in the Classroom Using Creative Teaching Methods Violeta Xhomara1.

[13] Kosova, R., Hajrulla, S., Kosova, A. M., Kodra, A., Xhafa, A., Kapxhiu, I., & Psatha, R. (2024). Creative programming. Assessing and improving mathematical algorithms with students. *performance computing*, *8*, 10.

[14] Thanasi, T., & Beqiri, O. (2024). Bridging the Gap: Aligning High School and University Mathematics Curricula in Albania. *EIRP Proceedings*, *19*(1), 486-494.

[15] Kosova, R., Kapçiu, R., Hajrulla, S., & Kosova, A. M. (2023). A Revıew of Mathematical Conjectures: Exploring Engaging Topics for University Mathematics Students. *International Journal of Advanced Natural Sciences and Engineering Researches (IJANSER)*, *7*(11), 180–186. https://doi.org/10.59287/asijanser.581

[16] Kosova, Robert; Sinaj, Valentina; Scarelli, Antonino; Kosova, Anna Maria; and Stana, Alma, "Academic staff performance evaluation, using decision analyses method and application" (2017). UBT International Conference. 124. DOI 10.33107/ubt-ic.2017.124. https://knowledgecenter.ubt-uni.net/conference/2017/all-events/124

[17] Krasniqi, M., & Kalaja, R. (2020). Challenges and employment opportunities of nursing students after finished the master in “surgical nursing”. *Interdisciplinary Journal of Research and Development*, *7*(1), 13-13.

[18] Kosova, R., Sina, Z., Kapçiu, R., Kosova, A. M., & Kodra, A. (2024). Solving math problems with computer programs. The benefits for the high school students.

[19] Stana, A., Kosova, R., & Rista, A. (2024, November). Benefits of using ICT Tools in Higher Education Institutions in Albania. In *2024 5th International Conference on Communications, Information, Electronic and Energy Systems (CIEES)* (pp. 1-6). IEEE.

[20] Tabaku, E., Duçi, E., Kapçiu, R., & Kosova, A. M. EXPLORING THE IMPACT OF ARTIFICIAL INTELLIGENCE IN BANKING: A CASE STUDY ON THE INTEGRATION OF VIRTUAL ASSISTANTS IN CUSTOMER SERVICE.

[21] Tabaku, E., Duçi, E., Kapçiu, R., Kosova, R., & Lazaj, A. THE EVOLUTION OF TECHNOLOGY IN ACCOUNTING AND CORPORATE FINANCE: IMPLICATIONS FOR BUSINESS ADAPTATION AND COMPETITIVENESS.

[22] Sina, Z., Kosova, R., Reka, A., Biçaku, A., & Starova, A. (2024). The missing mathematics in high school. Theorems, proofs and geometric constructions.

[23] Stana, A., Toti, L., Kosova, R., & Prodani, F. (2019). FUTURE OF DURRES: SMART CITY AND SMART UNIVERSITY. *European Journal of Engineering and Technology Vol*, *7*(6).

[24] Stana, P. E. A., Toti, P. E. L., Kosova, P. R., & Prodani, P. F. (2023). The Future of Durrës-Smart University&Smart City. *Journal of Survey in Fisheries Sciences*, *10*(2S), 1971-1981.

[25] Starja, D. (2021). Personalized teaching of mathematics through ict and the personal perception of teachers of using ict in the learning process. In *EDULEARN21 Proceedings* (pp. 5973-5979). IATED.

[26] Kosova, R., Thanasi, T., Mukli, L., & Pëllumbi, L. N. (2016). Traditional mathematics and new methods of teaching through programming together with students.

[27] Kosova, R., Bushi, F., Kapçiu, R., Cullhaj, F., & Kosova, A. M. (2024). A review of primarily tests and algorithms: Engaging students to code for mathematics. *International Journal of Advanced Natural Sciences and Engineering Researches*, *8*(2), 182-195.

[28] Xhindi, T., & Gjika, I. (2022). The Gender inequality and participation of women in stem fields. *Yearbook of UNWE*, *60*, 133-144.

[29] Munoz Boudet, A. M., Rodriguez Chamussy, L., Chiarella, C., & Oral Savonitto, I. (2021). Women and STEM in Europe and Central Asia. Report No: AUS0002179. *World Bank.*

[30] WORDBANK: https://documents1.worldbank.org/curated/en/257831642743451543/pdf/Attracting-More-Young-Women-into-Stem-Fields.pdf?_gl=1*1egxc4y*_gcl_au*NzgzNDQwMTQ2LjE3MTg3Mzg1MzQ.

[31] MAS: https://eurydice.eacea.ec.europa.eu/eurypedia/albania/national-reforms-school-education

[32] STEM: https://albaniatech.org/stem-the-program-of-the-digital-generation-announces-the-winners-of-the-second-phase-of-the-project/

[33] Prendi, L., Hadroi, A., & Prendi, K. (2023). Labor Market in Albania: Overview, Components and Analysis. *Interdisciplinary Journal of Research and Development*, *10*(1 S1), 159-159.

[34] Shasivari, A., Shasivari, P., & Kajo Mece, E. (2024, June). Predicting bachelors' students' academic performance. In *Proceedings of the International Conference on Computer Systems and Technologies 2024* (pp. 237-241).

[35] Sina, Z., Kosova, R., Hajrulla, S., & Gjana, A. (2024). Analysis of High School STEM Program Impact on Students' University Performance. *International Journal of Advanced Natural Sciences and Engineering Researches*, *8*(7), 233-240.

[36] Ferhataj, A., Memaj, F., Sahatcija, R., Ora, A., & Koka, E. (2025). Ethical concerns in AI development: analyzing students' perspectives on robotics and society. *Journal of Information, Communication and Ethics in Society*.

[37] Kalaja, R., & Krasniqi, M. (2022). Evaluation of Teaching Methods in Medical Technical Science Department of Aleksander Moisiu University of Durres. *Interdisciplinary Journal of Research and Development*, *9*(1), 9-9.

[38] Dhamo, A., Dhamo, I., & Manastirliu, I. (2023). Fundamental Rights and New Technologies. *Interdisciplinary Journal of Research and Development*, *10*(3), 121-121.

[39] Kullolli, T., & Trebicka, B. (2023). Generation Z and the evolution of social media: A two-decade analysis of impact and usage trends. *Interdisciplinary Journal of Research and Development*, *10*(3), 77-77.

[40] Prendi, L., Kraja, G., & Nexhipi, O. (2021). UNIVERSITY-BUSINESS COOPERATION: THE CASE OF ALBANIA. *International Journal of Economics, Commerce & Management*, *9*(11), 134.

[41] Kosova, R., Kapçiu, R., Bushi, F., & Kosova, A. M. (2024). Algorithmic Thinking: Preparing Students from High School to University.

[42] Kosova, R., Kapçiu, R., Hajrulla, S., & Kosova, A. M. (2023). The Collatz Conjecture: Bridging Mathematics and Computational Exploration with Python. *International Journal of Advanced Natural Sciences and Engineering Researches (IJANSER)*, *7*(11), 328-334.

[43] Lamçja, D., & Pellumbi, S. (2025). Blended Education and the Role of Albanian Teachers in an AI-Enhanced Educational Landscape. In *Teachers' Roles and Perspectives on AI Integration in Schools* (pp. 31-76). IGI Global Scientific Publishing.

[44] Shehu, E., & Qafa, M. (2024). Technology Driven Inequality: An approach on Western Balkan Countries. *Management, Enterprise and Benchmarking in the 21st Century*, 189-201.

[45] Kosova, R., Halidini, D. Q., Xhafaj, E., Gjikaj, N., & Kosova, A. M. (2023). Assessing tourism service quality in Albania: A 5-scale Likert survey analysis and interpretation with SPSS. In *Proceeding Book of 4th International Conference on Engineering and Applied Natural Sciences ICEANS*.

[46] Kosova, R., Naço, A., Hajrulla, S., & Kosova, A. M. (2024). Addressing missing data in surveys and implementing imputation methods with SPSS. *International Journal of Advanced Natural Sciences and Engineering Researches*, *8*(2), 40-50.

[47] Trebicka, B., Tartaraj, A., & Harizi, A. (2023). Analyzing the relationship between pricing strategy and customer retention in hotels: A study in Albania. *F1000Research*, *12*, 690.