



Education Policies in Line with the Latest Developments in the Field of Artificial Intelligence: Case of Albania

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Abstract: *Recent developments in technologies such as Artificial Intelligence have brought changes in education policies. To avoid the creation of an unemployed generation many countries are trying to create education policies that orient students to choose fields of studies that are better suited to the latest technological developments. This study analyzes the impact of Artificial Intelligence on the creation of new education policies in Albania. The official data published by the Ministry of Education and the Albanian Institute of Statistics have been analyzed. These data show what are the most chosen departments in Albanian universities. New educational policies have been undertaken in Albania to orient students in choosing university fields that promise a secure job in the future. These policies have made it possible to open many vocational schools in Albania. This study shows that despite law and economics remaining among the most chosen professions by Albanian students, there is an increase in the demand of students to enroll in these vocational schools.*

Keywords: *Education policies, Higher education, Artificial intelligence, Albania, New professions*

Introduction

Developments in the field of technology have had an impact on all sectors of society, including the field of education. In contemporary societies information plays a primary role in human activities. For these reasons, investing in human resources is a must and education policies play a key role in this process. In this context educational policies must be adapted to the new needs that arise in society as a result of economic, technological and social developments.

Studies have shown that recent developments in the field of Artificial Intelligence have created new unexplored professions in the labor market. This means that the whole educational process must contribute to the formation of citizens capable of adapting to new technological developments. In this context, education policies

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must be able to prepare citizens capable of coping with ongoing transformations. Education policies should create a population equipped with the knowledge and skills required by the labor market. As the Lisbon Strategy states, “it is necessary for every citizen to possess the necessary competencies to live and work in this information society” through professional training.¹

The transition from a fully centralized economy to a free market, as well as the political changes that took place after the 1990s, were accompanied by significant changes in the labor market in Albania. During the period 1945-1990, employment was guaranteed by the state, but the decline of the regime and the massive privatization of state-owned enterprises were accompanied by structural changes in the labor market.² The post-communist period was characterized by a significant decline in public sector employment. According to the World Bank report: “Albania: A labor market assessment”, the decline in public sector employment has been dramatic, from 850,000 employees per year in 1991, to 176 000 in 2004.³

The main factor that caused an increasing in unemployment rate was the lack of the connection between the education system and employment. In Albania it is noticed that there is a discrepancy between supply and demand. On the supply side there is an excess of graduates in most fields of study, but especially in business, administration and law and on the other hand the market has shortages of graduates from the fields of study of Natural Sciences and Exact Sciences. Developments in the field of Artificial Intelligence have worsened the situation by bringing about the creation of new professions which are not known to students. This has led the Ministry of Education to draft new educational policies that orient students in choosing professions that fit the labor market. More specifically, national education strategies which promote the opening of vocational schools have been drafted. Through these new policies students are encouraged to choose Natural Sciences or branches that are in line with developments in the field of artificial intelligence as field of study.

The aim of this study is to analyze the impact of developments in the field of Artificial Intelligence in the creation of new education policies. More specifically, the study shows how educational policies have changed in recent years in Albania, adapting to the demands of the labor market and how these policies have brought the opening of new departments in universities. The study analyzes how many students are oriented towards choosing the departments that fit most with Artificial Intelligence developments.

Choosing the department in which you will study is one of the indicators of the profession you will have in the future. Although not all graduates work in the professions in which they have graduated, university department selections can serve as an indicator of the most demanding professions on the market. This study will analyze the statistics published by the Ministry of Education and the Institute of Statistics in Albania regarding the most requested departments in universities. A

¹ Blerina Raca, “Treaty of the European Union”, *Ministria e Integrimit European*, 2008, p.17.

² AMSHC, “Raport mbi Tregun e Punës në Shqipëri”, *Agjensia për Mbeshtetjen e Shoqërisë Civile*, 2000, p.2.

³ Banka Botërore, “Albania: A Labor Market Assessment”, *Botim i Bankes Botërore*, 2005, p.21.

comparison of the statistics of the last 5 years makes it possible to compare student choices across the years. Through these statistics, it is intended to see if the creation of new policies in the education field has led to the substitution of the professions considered “traditional” with the new professions created by technological developments.

Theoretical Framework

The Making of Education Policies in Developed Countries

In the scientific and political discourse of the most advanced countries, higher education is considered an important part of the state apparatus. Consequently, the policies undertaken in higher education are of primary importance to the country. More and more advanced countries are trying to create national strategies for education and educational policies that adapt to the latest economic and technological developments.⁴ Making education policies is considered as one of the main steps for the development of the country. Appropriate educational policies equip students with the right skills to meet market demands. By making education policies in line with market demands, a good link is established between the labor market and jobseekers.

Postmodernist developments have called into question the ability of education to meet the new challenges facing society as a result of rapid capitalist developments. At the same time, new capitalist developments and the many changes that have taken place in the social order pose to educational policymakers new tasks that they must fulfill in order to adapt to the transformations of the time. Taking into account these changes, many developed countries have started to design new education policies and make curriculum changes according to the structure of society and changes in this structure.⁵

In developed countries education policies are considered as the first step to make a fair distribution of opportunities among citizens. Thus the granting of the right to education and the provision of conditions for higher education assumes great importance in these countries. Increasing students' access to good-quality higher education remains the main political goal for two main reasons. Firstly graduation from studies will increase and determine individual chances in the labor market. Secondly, high graduation rates can promote equality of opportunity in the job market depending on the level of stratification of an educational system.⁶ Even though increasing participation in high education has recently led in many countries to the problems of overeducating and unemployment.⁷ Given this fact, many

⁴ Czarnecki Krzysztof, “The Higher Education Policy of Post-Communist Countries in the Context of Welfare Regimes”, *Poznań University of Economics*, 14/2 (2014), p.43.

⁵ Whitty Geoff, “Education Policy and the Sociology of Education”, *International Studies in Sociology of Education*, 7/2 (1997), p.128.

⁶ Francis G. Castles and Herbert Obinger, “Worlds, Families, Regimes: Country Clusters in European and OECD Area Public Policy”, *West European Politics*, 31/1 (2008), p.46.

⁷ Fabrizio Bernardi and Gabriele Ballarino, “Participation, Equality of Opportunity and Returns to Tertiary Education in Contemporary Europe”, *European Societies*, 16/3 (2014): 422-442 in Krzysztof, “The Higher Education Policy of Post-Communist Countries in the Context of Welfare Regimes”, p.46.

developed countries have begun to make new education policies that better match the economic and technological developments of the time.

Developments in the field of Artificial Intelligence have made many countries acquainted with new professions in the market. Also more detailed analyzes regarding the professions that will prevail in the future have been done by many developed countries. These analyzes have helped to create new education policies that create a better connection of professionals with the labor market. The following issues provide an overview of the latest developments in the field of Artificial Intelligence. They also show how these developments have influenced the making of education policies.

The Impact of Artificial Intelligence on Labor Market

Artificial Intelligence (AI) is a new field that is becoming one of the most advanced in Computer Science. By seeing the effects that this field will have on people's lives in recent years, the social sciences are starting to conduct studies related to the effects of Artificial Intelligence on society. More specifically in the social sciences is being analyzed the impact of developments in the field of Artificial Intelligence in the labor market. What will be the professions of the future is a question that is increasingly opening debates and desire for research. People are already familiar with the idea that developments in the field of Artificial Intelligence will lead to the creation of computers that aim to copy human intelligence in the performance of daily tasks. Some professions will go out of the labor market and some have started the risk posed by Artificial Intelligence.

However, studies show that the inclusion of Artificial Intelligence in the labor market will not always have negative consequences for society. If people know how to use the latest technological developments they will create new professions that will make their lives easier. The following paragraphs provide some of the positive and negative aspects that have brought about the latest developments in the field of Artificial Intelligence.

The first definition of Artificial Intelligence is that Artificial Intelligence (AI) is involved in computer science and deals with the formation of intelligent systems that have the same features as human beings.⁸ Experts define AI as a technological system that by copying human capabilities can think and act like them. Stuart Russell and Peter Norvig in their book on Artificial Intelligence have shown that the definitions of Artificial Intelligence can be organized into four categories: human thinking, rational thinking, human action, and rational action. Given that it is a new field, the concepts related to Artificial Intelligence will be numerous, however, in summary, it can be defined as an intelligent system with the ability to think and behave like humans.⁹

“When you grow up, you may not have a job.” This is how Yuval Noah Harari begins his analysis on the effect of AI on the future of jobs. He ranks among those

⁸ Kriti Khare, Brian Stewart and Anshuman Khare, “Artificial Intelligence and the Student Experience: An Institutional Perspective” *IAFOR Journal of Education*, 6/3 (2018), p.67.

⁹ Stuart Russell and Peter Norvig, eds., *Artificial Intelligence: A Modern Approach*, England: Pearson, 2016, p.2.

researchers who believe that Artificial Intelligence will bring in more unemployed people than it will create new jobs. He emphasizes the idea that in the long run all work will be affected by automation and that no work will be left untouched by the automation process. However, he says that at least in the short term, Artificial Intelligence cannot delete entire industries from the labor market. More specifically, the jobs that will be automated will be those that require specialization in processes considered as routine processes. As for jobs that have unforeseen scenarios where important decisions are required and where the human mind becomes important will not be easily replaced.¹⁰

Technology has often damaged large industries and employment sectors, says Martin Ford in his study “Can Artificial Intelligence Create an Unemployment Crisis.” Workers, however, have managed to adapt repeatedly by acquiring new skills. In his paper Ford makes an analysis of the impact of computerization on the labor market in the past comparing it to the effect that computerization has today. He concludes that today's technology will do more harm by damaging important employment sectors that will leave large groups of people jobless.¹¹

The impact is already being felt in a number of professions. But not all professions are affected in the same way. According to him, there are some types of professions that may be more vulnerable than others. In his analysis, Ford mentions what will be some of the most affected professions as a result of developments in the field of Artificial Intelligence. He emphasizes well-paid jobs and professions considered like white-collar jobs.

According to him, lawyers and sports journalists have already been replaced by software known as e-discovery. These professions are automated by machines that can accurately select some documents needed for the job. Also services related to customer service such as: costumer service or sales assistant can be easily replaced by applications he explains. Ford points out that grocery store sellers may also be affected by technological developments. For example, Amazon can be a substitute for these services because it offers faster services and purchases can be made online, saving time for the buyer.¹²

Researchers take two different approaches when it comes to the effects of Artificial Intelligence on the labor market. Some see it as a machine that will eliminate a lot of work and some see it as a very effective solution to computerize difficult work processes making them easier for the workers who perform them. So not always developments in the field of Artificial Intelligence will be harmful.

While analyzing the effects of technological development into the labour market Klaus Schwab takes an unbiased position. He clarifies that history shows that the result of technological developments is likely to be somewhere in the middle. He says that the effect of AI in labour market it has two sides:

¹⁰ Yuval Noah Harari, *21 Lessons for the 21st Century*, London: Jonathan Cape, 2018, p.35.

¹¹ Martin Ford, “Could Artificial Intelligence Create an Unemployment Crisis?”, *Communications of the ACM*, 56/7 (2013), p.2.

¹² Ford, “Could Artificial Intelligence Create an Unemployment Crisis?”, p.3.

First, there is a destruction effect, forcing workers to become unemployed or to reallocate their skills elsewhere. Second, this destruction effect is accompanied by a capitalization effect in which the demand for new goods and services increases and leads to the creation of new occupations, businesses and even industries. It has always been the case that technological innovation destroys some jobs, which it replaces in turn with new ones in a different activity and possibly in another place. As human beings, we have an amazing ability for adaptation and ingenuity.¹³

Although some researchers focus on the job losses that will be caused by developments in the field of Artificial Intelligence, it must be said that some of them focus on new professions that will come as a result of these developments. More specifically, they focus on adapting people to these new jobs created by Artificial Intelligence. Spyros Makridakis in his article: *The Forthcoming Artificial Intelligence (AI) Revolution: Its Impact on Society and Firms* says that the main concern with AI should be in how people will get used with these new jobs. This is how he concludes his analyses:

The greatest challenge facing societies and firms would be utilizing the benefits of availing AI technologies, providing vast opportunities for both new products/services and immense productivity improvements while avoiding the dangers and disadvantages in terms of increased unemployment and greater wealth inequalities.¹⁴

A study conducted by the MitSloan School of Management has provided information about new categories of human work that will emerge as a result of AI development. According to them, these works do not look at all like the ones that exist today. More specifically, their research reveals three new categories of jobs in the AI. The authors have labeled them as trainers, explainers and sustainers.

More specifically, the report says that the people in these roles will ensure that the work of the machines is effective and responsible. Thus, trainers will serve to teach AI systems how to perform. Make fewer mistakes in translation and learn algorithms on how to mimic human behavior. Explainers: explain to non-technical professionals how complex algorithms work. Sustainers: will check if the AI systems are working properly.¹⁵

Changes in Education Policies according to the Developments in the Field of Artificial Intelligence

Given the risk that developments in the field of Artificial Intelligence have brought to the labor market, many countries are trying to build a sustainable labor market that adapts to the latest technological developments. Being education the main link

¹³ Klaus Schwab, "The Fourth Industrial Revolution", Geneva: World Economic Forum, 2016, p.38.

¹⁴ Spyros Makridakis, "The Forthcoming Artificial Intelligence (AI) Revolution: Its Impact on Society and Firms", *School of Economic Sciences and Business*, 1/3 (2017), p.1.

¹⁵ H. James Wilson, Paul R. Daugherty and Nicola Morini-Bianzino, "The Jobs That Artificial Intelligence Will Create", *Mit Sloan*, 58/4 (2017), p.14-15.

that provides a job in the future many governments are focused on the field of education to make changes in relation to the latest developments in the field of Artificial Intelligence. Governments and educational institutions are rebuilding educational programs that help students cope with developments of the AI in all aspects of social activity. By designing education policies locally but also globally, many countries are involved in designing new curricula that prepare students who are willing to take advantage of new technological innovations. Often policy makers in education make requests to scholars, students but also citizens to have discussions about the latest developments in the field of AI and the challenges that lie ahead to have a sustainable and modern education.

A recent United Nations report in the field of education and Artificial Intelligence entitled: *Artificial Intelligence in Education: Challenges and Opportunities for Sustainable Development* shows some of the steps taken in the field of education by different countries. Thus according to this report in 2016, the Ministry of Education of China decided that at least 8% of the budget of each educational branch should go to the digitalization of education. One of the biggest advances so far in China is the introduction of AI computer devices to correct student essays and papers. From this practice it was seen that essay correction by AI systems had a level of accuracy that matched humans in 92% of cases. The essay grading machine is based on AI neural network and is improving its ability to understand human language using deep learning algorithms. It is also noted that the comments and grades set by the AI are the same as those of the teachers.¹⁶ In 2016, the Chinese government drafted a plan with the aim of being the most developed country in the field of AI in education by 2030. China decided to create its own national AI strategy for education in order to adapt to new developments in the field of AI.¹⁷

In an effort to better understand AI developments, many countries are seeking to make AI-related professions more attractive. France, for example, has drafted a report on new developments in curricula related to the field of AI. This report shows what are the new steps that education policy makers need to take regarding AI. With this report France aims to establish research laboratories to study how AI transforms the workplace; monetary incentives for AI researchers to attract domestic and international talent; and the development of AI programs at the bachelor, master, and doctoral levels. France also aims to open technical and vocational education and training programs in the field of AI.¹⁸ The country also aims to build more collaborations between academics and job industries. By creating partnerships between universities and other institutions, the aim is to create a network that best studies and analyzes developments in the field of AI. For this reason, the state allocated 1.5 billion euros, which will be managed by the National Research

¹⁶ Francesc Pedró et al., *Artificial Intelligence in Education: Challenges and Opportunities for Sustainable Development*, (Working Papers on Education Policy), UNESCO, 2019, p.13.

¹⁷ Jing Meng, "China Wants to Bring Artificial Intelligence to its Classrooms to Boost its Education System", *Science & Research, South China Morning Post*, 2018, in Pedró et al., "Artificial Intelligence in Education: Challenges and Opportunities for Sustainable Development", p.13.

¹⁸ Cédric Villani et al., *Donner un Sens à L'intelligence Artificielle: pour Une Stratégie Nationale et Européenne*, Mission confiée par le Ministre, 2018.

Institute for Informatics.¹⁹ Medium or low income countries are also considering opportunities to change education curricula and education policies in line with the latest developments in the field of AI. Although at an early stage Kyrgyzstan is trying to establish systems that deal with the management of educational information based on individual student tracking that can allow personalized learning. This opens up the possibilities of introducing AI into their systems in the near future.²⁰ Albania is also making efforts in this direction focusing on the opening of new study departments related to AI. The third part of this study deals with precisely these developments of Albania in the field of AI.

Research Methodology

The methodology used in this study is the literature review. This study will provide and analyze statistics showing the actual effects of AI on the labor market in Albania. More specifically, it analyzes statistics showing the most selected fields of study by students in Albania. It also analyzes if there is any change in students' choices after the governance made changes in education policies. It will show how the opening of vocational schools and departments that are related to AI have affected student's choices. These statistics are published by the Ministry of Education and the Albanian Statistical Institute. In addition, an analysis of statistics in academic journals is made. The study will provide government-published statistics showing the expected future changes in the labor market as a result of the impact of Artificial Intelligence and changes made in education policies to better fit with these changes.

The main questions of the study are:

Are the fields of study in Albania updated with the latest developments in the field of Artificial Intelligence?

Have the changes made in education policies contributed in the opening of new subjects related with AI in universities?

Are the student's choices of the field of study affected by these new education policies?

Results

Artificial Intelligence in Albania and its Impact on Education Policies

Recent developments in the field of AI have also affected the field of education in Albania. Among the main steps taken by education policy makers in Albania, we can mention two most important ones: the digitalization of education and the opening of vocational schools and new branches of study. With these steps, Albania aims to update students, teachers, professors and designers of educational curricula with the latest technological developments. The aim is to prepare citizens who will be able to quickly get used to the new professions required by the labor

¹⁹ Pedró et al., "Artificial Intelligence in Education: Challenges and Opportunities for Sustainable Development", p.22.

²⁰ Pedró et al., *Artificial Intelligence in Education: Challenges and Opportunities for Sustainable Development*, p.15.

market. Despite remaining a developing country with a fragile economy, education policymakers have taken steps to help the country adapt to the latest technological developments in the field of AI.

A study entitled “Digitalization of the Economy and its Impact on the Labor Market: Challenges for Albania” was conducted by Albanian researchers and academics working in the field of Artificial Intelligence. The study shows that the level of development of digitalization in Albania, unlike economic or social and legal parameters, has been moving at a satisfactory pace in line with developed countries. It should be noted here that Albania is almost a user of the technological innovations coming from digitalization.²¹

Studies in the field of Artificial Intelligence Albania show that there is adaptation to technological developments. At the same time, these studies show that the country is not well prepared to adapt to the innovations that Artificial Intelligence brings. Thus in the study entitled: “Information and Communication Technology in Enterprise,” conducted in 2016 by the Bank of Albania, it is suggested:

Due to the relatively high costs of new technology, public institutions related to education and business organizations in Albania should anticipate more funds available for the purchase of digital equipment that helps to understand developments in the field of Artificial Intelligence. These funds need to anticipate not only the cost of acquiring technology but also the costs of partly covering its labor market consequences. Specifically, these funds will be needed for staff training as well as social support for those social classes that cannot be integrated with the new technology.²²

Developments in the field of Artificial Intelligence have brought changes in the Albanian labor market. Alongside the tendency to introduce the newest technological innovations in these professions there is also the fear of eliminating some professions. Also one of the main concerns of researchers is the adaptation of the younger generations to these technological innovations. Opportunities for the opening of new departments of study dealing with basic knowledge of Artificial Intelligence have been considered in Albania.

Education policies in Albania aim the implementation of new technologies, but in practice the implementation of these technologies in the education programs is very difficult to be made. Universities in Albania are paying more attention to complete the standards of education in response to the development in AI. They have found the choice in implementing the latest technology and opening new subjects that discuss developments on AI.

The Impact of Educational Policies on Curricula and the Opening of New Courses related to AI

²¹ Adriatik Kotorri, *Digitalizimi i Ekonomisë dhe Ndikimi i tij në Tregun e Punës: Sfidat për Shqipërinë*, Friedrich Erbert Stiftung, 2018, p.11.

²² Banka e Shqipërisë, Raport Teknologjia e Informacionit dhe Komunikimit në Ndërmarrje, 2016, p.11.

Some universities have realized the importance of developments in the AI and have begun to place it as part of their curricula. To be mentioned is the case of UNYT University with its own Egomon electronic system. This new discipline summarizes the best knowledge from Artificial Intelligence. This new technology applied in this Albanian university makes it easy to learn more about AI. This program contains some key steps: Collects data and processes it, transforms this data in a way that is convenient and understandable for students and finally through algorithms interprets and evaluates this data.²³

As many public sectors like education apply new technology and try to learn more about AI, students in Albania tend to choose professions in which AI will not have a negative impact. The reason for these might not be directly related to developments in AI, but such subjects like business administration and management are very preferable by Albanian students. Data on formal education from the Ministry of Education, Sport and Youth show that vocational education has been a priority for education policymakers in recent years. Seen as an opportunity to meet the continuing need for specialized staff in various professions the education policymakers have tried to make it a good choice for students in Albania. By putting a very low limit of points as a criteria of admission they have made it easy for students to enter in these universities. For this reason, participation in vocational education has increased year by year. Vocational education enrollment for 2017-2018 accounts for 20.6% of the total education enrollment. Among the top occupations remain the business administration departments and a department that has been opened in recent years such as management.²⁴

According to the National Institute of Statistics in Albania, the labor market in Albania has benefited from digitalization in recent years. Implementation of digital devices has enabled the opening of over 20,000 jobs in call center companies, accounting offices, designer offices, IT and more. These provide services to companies mainly from EU countries. In Albania, there are favorable parameters regarding the future of digitalization in the country. The relatively young age of the population and the relatively satisfactory level of education coupled with the demands for a higher quality of it provide the basis for a faster and easier implementation of innovations that will stem from technological advances.²⁵

However, there is a need for legal adjustments in line with the changes and challenges that the revolution in the field of Artificial Intelligence will bring. While adapting to technological developments has been good, a lack of knowledge in the field of Artificial Intelligence may pose a problem in the future. Training is required for unskilled and above average workers unable to train on new equipment requirements. On the other hand, there is a need for the younger generations to be prepared to adapt to developments in the field of Artificial Intelligence. Here's how one of the Albanian scholars illustrates this idea:

²³ Albi Dode, "Technology and Democratic Citizenship Connection in Albania", (Unpublished Paper), University of New York Tirana, 2014, p.4-5.

²⁴ Banka e Shqiperise, *Vjetari Statistikor Raport*, 2018, p.77.

²⁵ INSTAT, *Raport Teknologjia e Informacionit dhe Komunikimit në Ndërmarrje*, 2016, p.25.

Job digitization has created many new professions that require high technical training and occasional training to adapt to developments in the field of Artificial Intelligence. These information and training needs preclude existing experienced staff from integrating into new jobs. This is because they do not have the time needed for training and integration. Softwares and electronics have been advancing rapidly over the last two decades. High-speed devices, systems with high data storage capacity and software have been developed that can process this data in real time. However, the use of these software will be impossible unless investments are made in the field of education. Young people should be familiar with the latest developments in the field of Artificial Intelligence.²⁶

The Impact of New Education Policies on the Selection of Fields of Study by Students

The lack of academic staff makes it difficult to open new departments dealing with Artificial Intelligence topics. There are also few studies in Albania addressing the effect of Artificial Intelligence on the labor market. This makes the universities pay no attention to the opening of new departments.

However, despite the lack of orientation of the education system according to the demands of the labor market in Albania, there is a great interest in getting acquainted with the developments in the field of Artificial Intelligence. Many vocational schools have been opened in Albania aiming to teach young people coding. Developments in the field of Artificial Intelligence consider coding a profession that will remain in the job market. Albanian youth driven by curiosity to learn about Artificial Intelligence have created the Artificial Intelligence community. The creation of this community was made possible by City AI in Berlin and young enthusiasts from Albania. Adriapol Institute in cooperation with City AI Berlin held its first meeting in Albania regarding the developments of the AI. The topic was “Albanian Community of Machine Learning and Artificial Intelligence”. This meeting was held near the Innovation Building in Tirana and had a large participation of young people. The purpose of this event was to bring together people with a common interest in Artificial Intelligence.²⁷

Such meetings nevertheless represent the interest of only a small part of the Albanian youth. In general there is a lack of orientation of students in the labor market. They often choose professions whose future is at risk from developments in the AI field. However, statistics show that over the years there is a growing tendency to choose occupations as business administration. Such professions are thought to be less vulnerable to developments in the field of Artificial Intelligence. Even if they are affected, only the automatic part of the job will be replaced by robots. The table below reflects the choices of Albanian students study departments in recent years.

²⁶ Roland Çela et al., *Zhvillimi Ekonomik dhe Arsimi Profesional - Mireqenie per Shqiperine*, Fondacioni Friedrich Ebert, 2014, p.4.

²⁷ Komuniteti Shqiptar per Mesimin e Mjeteve Robotike dhe Inteligjences Artificiale, “Tirana Artificial Intelligence”, 02.03.2017, last accessed 28 October, 2020, <http://albpartners.com/tirana-artificial-intelligence/>.

Table 1. Study Fields of Albanian Students in Recent Years

Academic year	2014-15	2015-16	2016-17	2017-18	2018-19
Education	13,654	11,236	11,779	10,689	10,062
Art and Humanities	17,588	17,095	17,278	15,441	14,348
Social Sciences and Journalism	10,462	13,073	10,004	12,259	14,086
Business and Law	42,089	41,523	36,471	30,233	33,447
Natural Sciences, Mathematics and Statistics	10,473	6,719	7,816	6,325	7,060
Information and Communication Technologies	9,560	8,260	7,487	8,228	10,016
Engineering and construction	18,728	18,005	18,480	18,730	20,019
Agriculture, forestry, fishing and veterinary	10,171	8,383	7,086	4,564	4,999
Health	22,780	21,550	20,900	19,837	20,727
Services	5,022	2,433	2,306	3,088	4,279
Unknown Area of Study	2,017	0	0	0	0
<i>Total</i>	160,527	148,277	141,410	131,833	139,043

* *Data are obtained from INSTAT, National Institute of Statistics in Albania*

As can be seen from the chart, the most popular profession among Albanian youth in recent years is business. There are different approaches to how Artificial Intelligence is affecting MBA students. Alain Goudey, chief digital officer at France's Neoma Business School, says. It is important to keep MBA students informed about the latest developments in the field of AI. One of the biggest ethical dilemmas that business students will have in the future is the automation of jobs by AI. AI-powered devices, for example, are replanting millions of trees by helping the environment. There are robot factories today that organize, collect and send thousands of orders online every day. AI-powered robots can do many physical tasks in less time and more efficiently than human beings. It is therefore important that MBA students are introduced to the latest developments in the field of AI.²⁸

The second approach is that AI will not make people work useless. Contrary to many researchers' beliefs that AI will leave many people jobless AI can actually help them find work. Some researchers say that by collecting data from MBA alumni on their career paths, aspirations and current employers MBA students can be offered more employment opportunities. AI can identify the skills that current students need to have to adapt to developments in the field of AI.²⁹ As can be seen, the approaches to the effect of AI on the business profession are different. Students who choose this profession may not feel so at risk of developments in the field of AI if

²⁸ Seb Murray, "5 Ways Artificial Intelligence is Impacting MBA Students", Business Because, 3 December, 2019, last accessed 28 October, 2020, <https://www.businessbecause.com/news/mba-degree/6341/5-ways-artificial-intelligence-is-impacting-mba-students>.

²⁹ Dode, "Technology and Democratic Citizenship Connection in Albania", p.9.

they will get more knowledge about AI. Despite the efforts of the Albanian university to teach students the latest developments in the field of AI, the impact of AI on the education system in Albania is a topic that deserves to be addressed extensively.

One of the main concerns of digitalization of work processes is the impact that AI is expected to have at the level of unemployment in Albania. In principle, it is expected that there will be job cuts and difficulties in staying in their posts for old staff. But the impact of Artificial Intelligence on the Albanian labor market is not a one-dimensional issue. The younger age of the population makes it easier to train for new occupations that require new digital equipment.

Despite the optimism results it is necessary to deepen studies in the field of Artificial Intelligence. The lack of academic research in this area and the disorientation of students in the labor market may be a factor that would directly affect the growth of unemployment. Statistics show a tendency of students to choose business administration as their favorite department. However, high numbers of students who prefer professions like health or engineering should not be overlooked. It is necessary to update such departments in accordance with the latest developments in the field of Artificial Intelligence. This would bring a better orientation of young people in the labor market by adapting to developments in the field of Artificial Intelligence.

Conclusion

This study aimed to analyze the main developments in the field of Artificial Intelligence in Albania. This study analyzed what are the most chosen fields of study in Albania by students. Some of the main questions that were asked were: What are the new education policies that are undertaken in different countries as a result of latest developments in the field of Artificial Intelligence? What is the impact of developments in the field of Artificial Intelligence in education system in Albania? Have policymakers in Albania made changes in education curricula according to the latest developments in the field of Artificial Intelligence? Is the future of Albanian youth at risk from new occupations? Is the labor market in Albania up-to-date with the latest developments in the field of Artificial Intelligence? Are young Albanians oriented to new professions and prepared to practice them?

The study showed that studies on Artificial Intelligence are still in their infancy in Albania. However, some Albanian universities have adapted their teaching curricula to the most recent developments in the field of Artificial Intelligence. This has led some new departments to add Artificial Intelligence to the list of study programs that Albanian students can choose from. However, not all students in Albanian universities have access to these new departments. This is due to the fact that most of them are opened in Albanian private universities.

Young Albanians are very interested in learning more about AI. This is also demonstrated by their high participation in programs dealing with AI-related topics. Among the most favorite professions of the Albanian youth was the one of business administration. This profession will be positively influenced by developments in the AI field, making it easier for all students to find work. However, a

large proportion of students have not chosen careers that are positively affected by developments in the AI field. This is due to the lack of good coordination of curricula with the labor market.

Education system in Albania needs to be in coherence with technology and developments in the field of Artificial Intelligence. In this study was analyzed which are the professions that are required the most by students in Albania and it was noticed a shift in the professions chosen by them in previous years. Albanian youth have difficulties when choosing a profession. Often influenced by family or social circle, they choose occupations that do not always reflect their desires, but most of all do not respond to market demands. In Albania not only the student choices but also the study programs offered by different universities are not in line with market demands. Such a discrepancy between the education system and the labor market in Albania makes it even more difficult for young Albanians to orientate themselves in the professions highlighted by the latest developments in the field of Artificial Intelligence.

Developments in the field of AI raise the need to design new policies in the field of education that will make educational institutions more capable of adapting to the labor market. To achieve this requires a study of education policies, educational institutions and educational programs along with the labor market. This would bring the possibility of creating educational policies that would be in line with the latest technological developments. Looking at the educational performance of teachers, professors and students, one can see where the problems lie and make educational policies that aim to overcome these difficulties. Studies in the field of education should not be more numerous in number but it is more important that they be oriented differently having as main goal the latest developments in the field of Artificial Intelligence.

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Yapay Zeka Alanındaki Güncel Gelişmelere Uygun Eğitim Politikaları: Arnavutluk Örneği

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Öz: Yapay Zeka gibi teknolojilerdeki son gelişmeler eğitim politikalarında değişiklikler getirmiştir. İşsiz bir neslin oluşmasını önlemek için birçok ülke, öğrencileri en son teknolojik gelişmelere daha uygun çalışma alanlarını seçmeye yönlendiren eğitim politikaları oluşturmaya çalışmaktadır. Bu çalışma, Yapay Zekânın Arnavutluk'ta yeni eğitim politikalarının yaratılmasındaki etkisini ele almaktadır. Bu doğrultuda Milli Eğitim Bakanlığı ve Arnavutluk İstatistik Enstitüsü tarafından yayınlanan resmi veriler analiz edilmektedir. Bu veriler, Arnavut üniversitelerinde en çok seçilen bölümlerin hangileri olduğunu göstermektedir. Diğer ülkelerde olduğu gibi Arnavutluk'ta da yeni eğitim politikaları oluşturulmuştur. Yeni eğitim politikalarının hedefi öğrencilerin gelecekte güvenli bir iş pozisyonu sağlayabilecek çalışma alanlarını seçmelerini sağlamaktır. Bu politikalar Arnavutluk'ta pek çok meslek okulu açılmasını mümkün kılmıştır. Çalışma, Arnavut öğrencilerin en çok tercih ettiği meslekler arasında hukuk ve iktisat kalmasına rağmen, öğrencilerin bu meslek okullarına başvuru talebinde artış olduğunu göstermektedir.

Anahtar kelimeler: Eğitim politikaları, Yüksek öğretim, Yapay zeka, Arnavutluk, Yeni meslekler