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POSITIVE PEDAGOGY AND DEVELOPMENT OF STUDENTS' EMOTIONAL INTELLIGENCE THROUGH ENGLISH LESSONS

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Abstract

The article is devoted to the problem of positive pedagogy in terms of professional training of students studying English as a foreign language. The work presents the fundamental concepts of positive pedagogy, which develops positive thinking in students. Positive pedagogy develops within the framework of the didactics of optimism, which makes it possible to effectively use pedagogical resources and means. In this regard, the specifics of positive pedagogy are considered and specific recommendations are given in the form of techniques and tasks of a practical nature. The concept of emotional intelligence, which implies the ability to self-regulate and constructively build communication, is also considered. In the professional development of students, it is necessary to model the indicated processes of the emotional sphere in English classes. In particular, the article discusses not only techniques that contribute to the development of students' emotional intelligence through English classes but its effective assimilation as well.

Keywords: emotional intelligence, positive pedagogy, empathy, positive thinking, didactics of optimism

Introduction

Integrating the principles of positive education into university curricula is possible and appropriate, since in our ever-changing world, well-being is as important as academic achievement for the development of a sustainable and strong future generation. Positive education is based on positive psychology research and it aims to help everyone live a fulfilling life. The trends in the development of higher education pay tribute not only to the latest teaching technologies, taking care of the methods of forming professional thinking, but also strive to educate a creative and humane personality of a specialist of the 21st century.

Positive pedagogy and positive psychology (Latin 'positivus' – meaning positive (<https://www.online-latin-dictionary.com>)), as scientific trends, are today at the stage of their active development and conceptualization into independent scientific schools. The ideas of positive pedagogy were born in the depths of humanistic pedagogy. Its prominent representatives - Y. A. Kamensky, J. J. Rousseau, I. G. Pestalozzi, J. F. Herbart, S. A. Amonashvili - assumed in their writings that humans are by nature humane.

The purpose of positive pedagogy is to reveal the positive abilities of each person, to develop the ability to search for the positive in oneself and in another person, in the surrounding reality as a whole. Recognizing the possibility of negative manifestations in life, positive pedagogy involves the development of a person's ability to manage their negative traits. This is facilitated by personal growth at all personality levels - physical, moral, intellectual and emotional.

Positive thinking is the basis for the formation of a positive attitude of a person to the world and gaining the experience of a positive life. After all, it is not the event, fact or phenomenon in itself that is important, but their perception and assessment by the individual. Therefore, the strength-focus of positive pedagogy is the development of positive thinking in a young person, the formation of the ability, and then the skills to search for positive components of events, actions and situations. This super-task can be solved through special technologies of positive pedagogy - promising technologies for the development of positive thinking of the individual. Positive education is a scientific direction in the theory and practice of pedagogy that develops the conditions, content, principles and technologies for shaping a positive personality, characterized by a developed positive thinking, a pronounced positive attitude towards the world, the experience of positive behavior and positive building of one's own life. The key condition for the formation of a positive attitude to life is the positive thinking of an individual.

Positive thinking is closely related to the concept of "thinking". In modern psychology, there are many different theories of thinking that study and describe its mechanisms, processes, possibilities, ways and means of development. For example, associationism, Gestalt psychology, behaviorism, the concept of J. Piaget, semantic, information-cybernetic theories of thinking, E. Gardner's theory of multiple intelligences and others. However, positive thinking is a relatively new kind of thinking in modern psychology. The problem of the development of positive thinking is awaiting its solution and the construction of a system of appropriate pedagogical technologies. Positive thinking most clearly reflects the connection between the intellectual and emotional spheres of the individual. The question of the connection and correlation of thinking and emotions was studied by D. Goleman, K. Izard, M. Seligman, A. Ellis and others. The most developed theory of the relationship between thinking and emotions is the theory of A. Ellis.

The "ABC formula", he created, shows that the activating situation or event (A) "causes" ideas about the situation, thoughts, views, etc. (B), which as a consequence "generate" emotions and behavioral responses (C). According to this model, thinking is primary, since it is it that "starts" the experience of various emotions which act as a result of a person's thoughts and beliefs. According to A. Ellis, it is the interpretation that is important, and not the life situation itself (Ellis, 1997: 23).

LITERATURE REVIEW AND RESEARCH METHODS. The latest research by foreign experts is devoted to the problem of creating a positive attitude in the classroom that promotes students' motivation and creates an atmosphere of openness and cooperation (Legendre, 2005; Cohen, 2006; Nault, Lacourse, 2008; Dubé & Tardif, 2010; Svinivki & McKeachie, 2011; Gaudreau, 2012; Ménard and St-Pierre, 2014). However, most researchers do not single out positive thinking as a separate type with its distinctive features, structure and functions. In various studies devoted to this problem, the following terms similar in content are used: sanogenic, positive, correct, rational, constructive, optimistic, harmonious, creative, healing thinking and, finally, thinking from the perspective of hope.

"Positive intelligence" and its quotient - PQ is noteworthy as well. PQ is understood as the quotient of positivity of intelligence, and the higher it is, the more actively the mind acts as your ally. Relatively recently, training manuals on the development of productive thinking skills appeared (for example, Shirzad Chamine, 2017). Positive psychology emerged in the early 2000s as an innovative branch of psychology. Positive education can be integrated into any educational program. Many institutions are already practicing certain of its principles, perhaps not yet fully understanding the paradigm of positive knowledge formation. Positive pedagogy is sometimes called the pedagogy of success and it develops within the framework of the didactics of optimism. The latter solves the problem of the development of optimism, in particular, within the framework of higher education. The didactics of optimism explores the ways of effective use of pedagogical resources and means of a situation of success.

Positive pedagogy is based on the concepts of psychology, pedagogy and philosophy developed by domestic and foreign scientists. It relies: 1. on the psychological concept of the full functioning by K. Rogers, who believes that optimism is an innate desire of the individual for complete and positive self-realization. Part of it is striving for success and achievement motivation (Rogers, 1965); 2. the philosophical concept of optimal functioning and conscious optimism by M. Seligman. The concept implies the possibility of developing the skills of a positive analysis of the situation and the results achieved, assessing their success. The ability to consciously choose the situation and the course of action contributes to the success and overcoming difficulties (Seligman, Flourish, 2001, 2011); 3. the pedagogical concept of the "joy of cooperation" by Sh. Amonashvili who proposes a set of positively directed pedagogical techniques, as a result of which a favorable psychological climate is formed (Amonashvili, 2011).

Since there is often a discrepancy between the general level of intelligence of the individual and the success of his interaction with society, it is worth mentioning the concept of "emotional intelligence" (emotional intelligence, EI). Emotional intelligence, according to D. Goleman, the capacity for recognizing our own feelings and those of others, for motivating ourselves, and for managing emotions well in ourselves and in our relationships."(Goleman, 1998:65). In psychological science, the problem of emotional intelligence was studied by P. Salovey and J. Mayer, who introduced the term "emotional intelligence" as one of the main types of intelligence (Salovey, Mayer, 1990). Emotional intelligence was also researched by prominent foreign scientists R. Bar-On and G. Gardner (Bar-On, 2004; Gardner, 1993).

Emotional intelligence combines the capacity of a person to communicate effectively by understanding the emotions of others and the ability to regulate their own emotions and influence the emotional state of a communication partner. The ability to self-regulate and the ability to constructively build communication are the most important qualities in the professional activities of a teacher. Communication with people of different statuses, level of professionalism and age, allows to analyze the non-verbal components of communication, quickly and effectively navigate in various situations. These processes in the professional development of students must be modeled in English classes. Let's consider some techniques that contribute to the actualization of the emotional sphere of students in English classes, contributing to its more effective assimilation.

RESULTS AND DISCUSSION. As one of the methods and techniques for the formation of positive thinking, European higher institutions have recently been using the so-called "flipped classes". This methodology is based on the pedagogy of the American and Canadian academic model, which invites students to think for themselves, as if anticipating a new course of study. The methodology may well be taken by us as a replenishment of the arsenal of means and methods of positive pedagogy, since a necessary condition for working in a group of students is the observance of emotional interaction between them and the teacher. According to this technique, students a priori come to the classroom with pre-prepared questions to the teacher on the content of the course. Thus, the critical thinking of students develops; they are encouraged thereby to express their point of view and enrich themselves with the point of view of fellow students. This method prepares them simultaneously for practice in the business world. During internships and new jobs, they will be more prepared to independently solve problems, search for keys to understand and solve them (O'Neill, Stephenson, 2011; <https://pedagogie.quebec.ca/le-tableau/promouvoir-lescomportements-positifs-des-etudiants-par-une-gestion-de-classe-efficace>; Étudier à l'américaine: trois questions à Karine Chauv, directrice du CEFAM à Lyon: <https://www.letudiant.fr/etudes/ecole-de-commerce/etudier-a-l-americaine-3-questions-a-karine->).

Let's take a look at what specific tasks can be used to incorporate the concept of positive pedagogy into teaching practice as a tool to increase the effectiveness of learning in higher education. In the methodological conditions of a communicative approach with priority work in pairs and groups, support, effective interaction and a variety of emotional states are important. The interactive form of work in a student group determines a set of techniques and didactic teaching aids. They are aimed at providing emotional comfort for students with different language abilities and emotional experiences.

1. For example, each student in the group is given the task to talk about an event or the topic that is significant to him: "My best day." The task of the remaining students of the group will be the maximum number of clarifying questions with the award of points for each correct answer. By dividing students into teams, one can qualitatively strengthen the element of competition: *"The best day of my life. My perfect day was, when my friends invited me to go to the picnic. It was a sunny and warm day. We went to the park and made a fire. Everything was wonderful. We were playing different games and talking. I can say that it was my best day"*.

2. Another interesting task can be the writing of thank-you letters by students at their discretion. This task touches upon the concept of gratitude in positive psychology. It can be verbal (1) or written (2) gratitude for congratulations: (1) *Thank you for your great gift!; Thanks for making my day special today!; I appreciate your efforts very much! Thank you for inviting me!;* (2) *Dear Alex, My sister and I thank you for the present sent by you on Saturday. This gadget is my dream come true!. Really, she has always wanted to have a tablet. Now she only has to learn how to use it! Thank you. Yours sincerely, John.*

3. Foreign language teachers have a sufficient number of methods and techniques at their disposal that can be used by students to study the subject of happiness and the role of positive emotions in human life. For instance, interesting facts and statistics can be selected on a chosen topic to play the game *"Do you believe that ...?" / "Do you believe that ...?"*. Or another option, students can be proposed to do a group project "Think Positively" and to search for techniques to help get rid of habits which make a person less happy.

4. Feedback and a combination of verbal and non-verbal means of communication can also be used as techniques. When building a dialogue in English classes, it is necessary to draw the attention of the group to the following methods of speech development: the adequacy of the intonation of the statement, the ability to build basic dialogue structures, the correct emotional and evaluative attitude to the communicative situation, adequate and active use of the language of facial expressions and gestures. For example, the task is given: «Help me create a dialogue on the topic of happiness or a happy person in English (6-...20 lines)»: *«Are you happy?-Yes I am. -Why are you happy?-Because all members of my family are good, I have a good job, I have a dream and soon it will come true. -Do you think it is enough for being happy? -I think yes! -But I know you have some problems with your neighbours, you lost your keys yesterday and your car doesn't work. How can you be happy? -I can't say that these are problems. These are things that happen every day and there is no sense to pay much attention to it. I know that everything will be good. -You are lucky! », etc.*

5. In a group of students in practical classes, it is desirable to diversify the forms of the proposed educational language material, using historical and cultural material and various types of control, game situations. Thanks to this, students get the opportunity to cooperate, adequately responding to the contradiction, to doubt, to take into account the opinions of others, etc. When choosing didactic language material, it is necessary to emphasize the personal experience and individual style of students' cognitive activity.

6. In the course of each specific lesson, one should resort to means of emotional support and creating a psychologically comfortable environment by choosing the complexity, pace and mode of the teaching-learning process. When describing emotions, we can arrange them in accordance with their opposite properties. One of the main difficulties in describing emotions is that the teacher will need to convey in words the nuances of experiences. For the development

of emotional competencies in the classroom, we can offer the following mini-dialogues that we widely use: «- *Oh, John. Thank you for your kind help. I'm very grateful to you for that.* - *You're welcome. No problem at all. I'm happy to help! - I really appreciate it!*»; «- *Thanks for inviting me to the party, Helen!* - *It's my pleasure, Mark. Oh, your present is so nice! I don't know what to say! You shouldn't have!* - *I hope you like it.* - *Thanks ever so much!* ».

7. To develop empathy, we use the “compliment-praise” exercises when exchanging opinions about our friends and acquaintances. The task is also given to use adjectives that describe business qualities, work style, mental abilities, behavior. It is proposed to use the following vocabulary: *active, adaptable, cheerful, competitive, creative, easygoing, friendly, generous, honest, intellectual, reliable, self-confident, successful, tactful, etc.*

8. Openness, flexibility can be shown in exercises like “we give advice.” For example, it is necessary to explain to students that advice in the form of a question. This way it will be less straightforward and more effective. Such an advice question might look like this: *Why don't you...? How about...? Have you tried...? Have you thought about...? Have you considered...?*

9. Emotions play an important part in life, making up the motivational basis for human activity. They inevitably find their expression in the language and in such cases there is an exchange of emotionally significant information for him. In a foreign language class, it is natural to discuss some problems of student or city life: «- *Do you like studying at the university?* – *Yes, I have excellent teachers and wonderful classmates.* – *Were you invited to a students' party?* – *Yes, it will be great- We're going there with Alexander, you can come with us.* - *Yes, it will be fun together*». You can also offer a choice - a discussion on the topic of status for social networks in English, given the possibility of different approaches to its interpretation, the presence of controversial provisions. Social network profiles have a special field for indicating the current status, expressing the mood or state of the user: «*Don't Worry, Be Happy!*; *Never stop dreaming!*; *Fortune favors the brave!*» and others.

10. As part of the discussion on the topic «Happiness», the statements of famous people can be analyzed. In this regard, let us cite the famous statement of John Lennon, an outstanding musician of the last century – «When I was five years old, my mother always told me that happiness was the key to life. When I went to school, they asked me what I wanted to be when I grew up. I wrote down happy. They told me I didn't understand the assignment, and I told them they didn't understand life». Or offer an interpretation of another statement by Albert Schweitzer: «Success is not the key to happiness. Happiness is the key to success».

CONCLUSION. Thus, the concept of positive pedagogy contributes to improving the effectiveness of learning, including the field of higher education. In the process of teaching English, teachers need to pay attention not only to the development of skills and abilities of language proficiency, but also to the formation of students' emotional intelligence as an indicator of their professionalism. A correct emotional and evaluative attitude to the communicative situation, a set of techniques and didactic teaching aids are aimed at ensuring the emotional comfort of students and the development of emotional intelligence, which is the master key to successful interaction with society.

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Étudier à l'américaine : trois questions à Karine Chau, directrice du CEFAM à Lyon

<https://www.letudiant.fr/etudes/ecole-de-commerce/etudier-a-l-americaaine-3-questions-a-karine>

INNOVATIONS IN THE ENERGY SECTOR WITH A FOCUS ON GREENHOUSE GAS EMISSIONS

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Abstract

The aim of this is to highlight the importance the introduction of innovation and information and communication technologies in the energy industry. We have divided the article into several parts. In the first part of the article we defined basic terms such as energy and the energy sector, innovation, and information- communication technologies, digitalisation. We provide a brief review of the definitions of innovation in general as well as according to the approaches of several authors in order to achieve reductions in greenhouse gas emissions and also to ensure sustainable GDP growth. In Chapter 2, we provide some examples of ICT implementation and its positive effects for SMEs as well as for high-growth and innovative enterprises. We also provided a closer look on innovative entrepreneurship and the theoretical approach to innovation and ICT in the energy sector. In the next part of the paper we presented the positive as well as the negative impacts of digitalization in the energy sector. At the same time, we presented priorities for scientific research and development. From specific forms of digitalisation, we defined Big Data, Internet of Things (hereinafter IoT) and Artificial Intelligence. The article is concluded with a practical application of Slovakia in the reduction of greenhouse gas emissions. In the practical part of the article we applied the theoretical knowledge on the position of the Slovak Republic in the field of greenhouse gas emissions, research and development, comparing the Slovak Republic in the given areas with the member countries of the European Union.

Keywords: *digitisation, innovations, electricity energy, greenhouse gas emissions, information and communication technologies, the energy industry*

JEL classification : D21, L21, L53

Introduction

The aim of the paper is to states possible ways of reducing greenhouse gas emissions in the energy sector, as this sector has the highest share in their production. In this paper, we used sources from both foreign and domestic authors. The methodology we start with collecting information, especially from scientific books or scientific researched "gates". From the scientific methods we mainly used paired methods such as induction and deduction, analysis and synthesis. Using the method of observing, we obtained numerous data processed to the form of charts in the analysed period. For a better presentation of the reached results, we used graphical and mathematical methods, which are mainly used for a clearer and closer presentation of our results in the charts, schemes and tables.

Climate change has become one of the most widespread topics in recent years and the problem is increasingly at the centre of discussions and interest of all societies. This is mainly due to the fact that the effects of climate change are becoming more and more evident every year, which is the reason why society increasingly researched the need to confront and solve this problem. It is very important for society to focus on reducing greenhouse gas emissions as much as possible and by implementing significant innovations and information and communication technologies, in the energy sector and other sectors, too. The reason is, that this sector produced the highest share of greenhouse gas emissions.

The energy sector the extraction of natural gas, its transportation, storage, sale and distribution, as well as the generation of electricity and its distribution to the all categories of final customers. Another important energy need is heat used for industrial, domestic or other purposes. Heat can be generated from fossil fuels, firewood, electricity and other sources, including renewable technologies.

Energy can be divided into several types:

- Primary and secondary energy,
- Commercial and Non-Commercial,
- Renewable and Non-Renewable Energy. (Bureau Of Energy Efficiency. 2021)

Commercial energy means resources that are available at a market price. The most important forms of commercial energy are electricity, natural gas, refined petroleum products and coal. Commercial energy provides for the basis for agriculture, transport, industry and commerce sectors in the modern societies, world. Non-commercial energy, unlike commercial energy, involves energy sources that are not available on the market at market prices. Non-commercial sources can be fuels such as cattle dung, firewood and agricultural waste that are collected and not purchased at cost. (THUMANN, A. – MEHTA, D. P. (2008))

1. Innovation

Over the last thirty years, innovation has evolved as a synonym for technological progress and a force for business success. However, in the early history, innovation was not always valued as it is today and has long been rejected by society, till to the end of the 19th century. From the last decades of the 19th century to the 1960s, interest in innovation grew. The 1960s to the 1990s represent the period when key concepts of innovation and models for analysing innovation processes were developed. Later, innovation became an increasing trend and a word that conveyed a certain modernity. Joseph Schumpeter, an Austrian-born American scientist, is considered to be the first economist to point out the importance of innovation. In the 1930s, he defined five types of innovation:

- The introduction of a new product or a qualitative change in an existing product,
- the introduction of a new production method,
- opening a new market,
- introducing a new way of selling products or buying raw materials,
- changes in organisational structure. (ROGERS, M. (1998))

Implementation of innovation is also an important driver for businesses, as it significantly improves their market position There are now many definitions and definitions of the word innovation. Schumpeter states that innovation is related to small or large changes, which affect structural changes in particular industries and market segments.

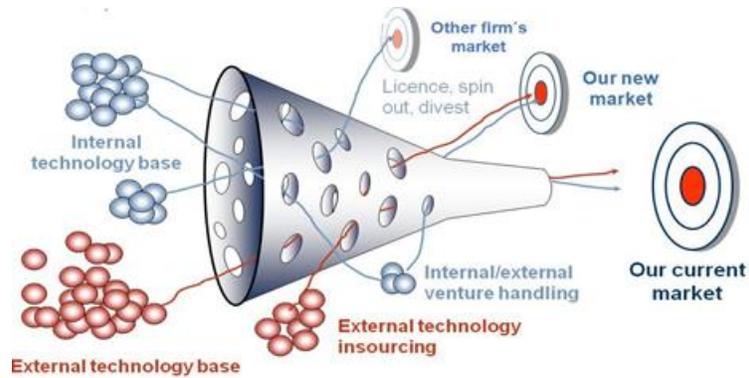
Barnett considers innovation as something: "a new thinking, behaviour, or thing, because are bringing qualitatively different from existing „forms “. (BARNETT, H. G. (1953))

O'Sullivan and Dooley define innovation as change, by the application of practical tools and techniques that make large or small changes in products, processes and services. They result in the introduction of something for an organization and bring new value to customers, what contributes to knowledge retention in organisation. (O'SULLIVAN, D. – DOOLEY, L. (2009)

Aiken and Hage perceived innovation as the creation, adoption and implementation of new ideas, processes, products or services for the first time in an organization. (AIKEN, M. – HAGE, J. (2021). Rasul defines innovation as the process, where new ideas for new or improved products, processes or services are developed and traded in the marketplace. (KOTSEMIR, M.- ROSKIN, A. (2013))

Henry Chesbrough, a professor at the University of California, Berkeley was the first, who referred to an open innovation as of purposeful inflows and outflows of knowledge, with aim to accelerate internal innovation and to expand markets for the external use of innovation. (CHESBROUGH, H. 2003)

Diagram 1: Open innovation



Source: Chesbrough, H. W. (2011): *Open Services Innovation: Rethinking Your Business to Grow and Compete in a New Era*, p. 69.

The most widely used classification of types of innovation, is given by the Organisation for Economic Co-operation and Development (hereinafter OECD), which distinguishes four types of innovation:

- Product innovation - these are innovations, which are related to goods and services,
- Process innovation - the implementation of new or improved methods of production or delivery of goods. It includes significant changes in technology, production equipment or software,
- Marketing innovation - the implementation of new ways of marketing. There are significant changes in the design or packaging of a product during its storage and promotion in the marketplace,
- Organisational innovation - introduces new forms and ways of organising business companies, workplaces or external relations. (KOTSEMIR, M.– ABROSKIN, A. (2013)).

Diagram 2: Classification of types



Source: Own processing according to the Organisation for Economic Co-operation and Development(OECD)

Available at: https://mpra.ub.uni-muenchen.de/45400/1/MPRA_paper_45069.pdf

If Slovakia's level of digitalisation would bring it closer to the countries of Western and Northern Europe, it would bring it an additional 16 billion euros in GDP annually, according to a new study by global consultancy McKinsey.

(http://digitalchallengers.mckinsey.com/files/McKinsey%20CEE%20report_The%20Rise%20of%20Digital%20Challengers.pdf)

Then, Slovakia could belong to the best performing economies in Europe and use its own potential, to order to grow the digital economy. Slovakia's disadvantage is using mostly traditional resources for GDP growth, which are gradually stopping to work, for example cheap labour. For increased level of digitalisation Slovakia implementation of the following being the most crucial:

- good macroeconomic results - growing economy and low labour costs;
- high quality and available digital infrastructure;
- high quality of ICT graduates;
- growing digital ecosystem - thanks to companies like ESET and Pixel Federation.

(ASAFE, Y. N. (2014).

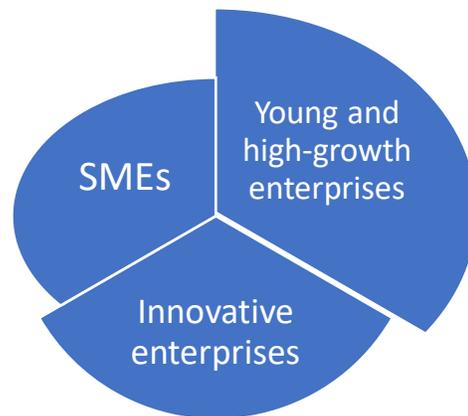
2. ICT and digitalisation in energy sector

The term ICT is now also used to refer to the virtual connections of audio-visual and telephone networks with computer networks through a single interconnection system. ICT has both positive and negative impacts on society.

The positive impacts of ICT on society are faster communication, lower communication costs, efficient and reliable communication, the effective sharing of information, a paperless environment, cross-border communication, and the creation of new jobs in the IT sector.

The negative effects of ICT include, in particular, an increased number of introverts, threats to society through the use of ICT, mental health problems, and loss of employment due to the substitution of human capital by advanced technology. (The Innovation Policy Platform).

Picture 2: The innovation business model (KÜFEOĞLU, Sinan et al. (2019))



Source: Own processing according to The Innovation Policy Platform

Innovative entrepreneurship is very important as it contributes to economic growth, creates new jobs, reduces levels of poverty and can contribute to solving key social challenges. According to The Innovation Policy Platform, the definition of innovative entrepreneurship is derived from the intersection of three areas:

- Innovative enterprises,
- young and high-growth enterprises,
- small and medium-sized enterprises.

Digitalisation is often associated with "smart' energy", the Internet of Things (hereinafter IoT) and Blockchain technology. Its main goal is considered to increase energy efficiency.

An important factor driving digitalisation is the increasingly nature of electricity generation. Digitalisation has the important features that lead to new business opportunities. Electricity is generated within the electricity grid, at many more grids than before. (KÜFEOĞLU, Sinan et al. (2019))

Smart grid (hereinafter SG) is able to intelligently manage active grids to facilitate the integration of renewable energy into the power system. The European Technology Platform defines an SG as an electricity grid that can intelligently integrate the activities of all users connected to it-generators, consumers and those who do both-in order:

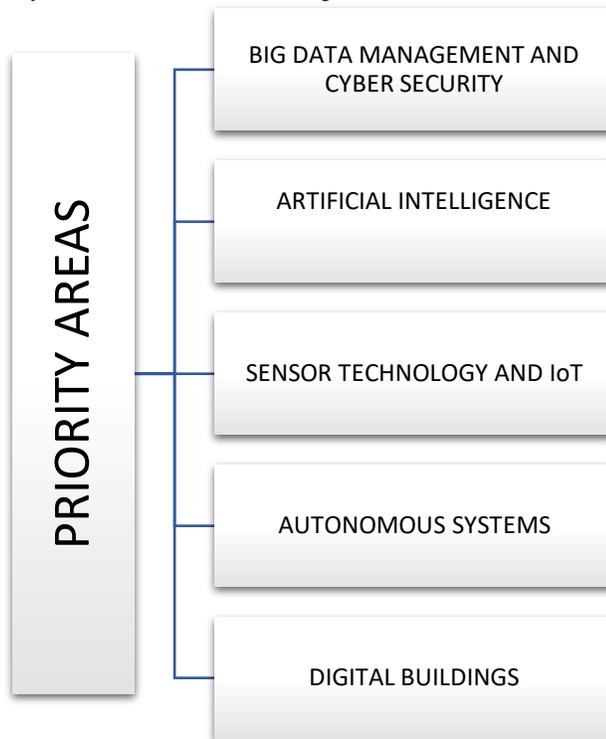
- efficiently provide a secure, economic and sustainable supply of electricity,

- better facilitation of the connection and operation of generators of all sizes and technologies,
- allowing electricity consumers to participate in optimising system operation,
- provide consumers better information and supply choices,
- significantly reduce the environmental impact of the entire electricity supply system,
- improve or maintain existing high levels of system reliability, security and quality of supply,
- maintain and improve existing services,
- promote market integration towards to a European integrated market.(KÜFEOĞLU, Sinan et al. (2019)

According to the Energy 21 strategy, which is supported by the Ministry of Petroleum and Energy in Norway, the priority areas for research, development and innovation in the energy sector are:

- - Big Data Management and Cybersecurity,
- - Artificial Intelligence,
- - Sensor Technology and the Internet of Things,
- - Autonomous Systems,
- - Digital Buildings. ((KÜFEOĞLU, Sinan et al. (2019)

Picture 4: Priority areas for research, development and innovation in the energy sector



Source: Own processing according to the Energy 21 Strategy

For the energy sector, it is important to focus on the application of Big Data technology and processes, rather than on the stand-alone development of fundamental technologies. Access to data, ownership and security risk are seen as the main preconditions for data-driven innovation. Data must be managed securely to ensure integrity and prevent abuse of the data, so the cybersecurity is a key part of the framework for the future energy system. (MAYER-SCHÖNBERGER, V. – CUKIER, K. ((2014)

AI will become necessary for monitoring, controlling and operating the energy system in the future, but we can already see its application in Norway, where they are increasing competitiveness by combining AI and domain knowledge through physical models. This should develop an effective system for Interpretable Artificial Intelligence (hereafter IAI) for the energy supply industry. The application of IAI can allow to gain the necessary real-time information about all critical components of the entire energy system. This will provide a better basis for planning, efficiency and coordinated system optimization for power generators, operators as well as consumers in the energy sector. (RAMOS, C. – LIU, Chen-Ching. (2011)

Sensor Technology and the Internet of Thing (hereinafter IoT) bring new opportunities for accessing big data. Sensors provide reliable data for solutions in the areas of communication, resilience, power and required maintenance. IoT data should be converted locally into compact, relevant and reliable information so as not to overload the communication system. (MOSTUE, L. – MOENGEN, T. ((2020).

Autonomous ship systems are already in operation and Norway is one of the leaders in this field. Autonomous systems with increasing complexity and integration will be needed for automated systems for control, monitoring and operation to ensure security of supply and balance in the grid. Autonomous energy systems require a digitised energy system and need to incorporate effective self-modelling for early warning of adverse developments.

Digital technologies and solutions will be needed to achieve energy efficient and automated buildings. (MOSTUE, L. – MOENGEN, T. ((2020).

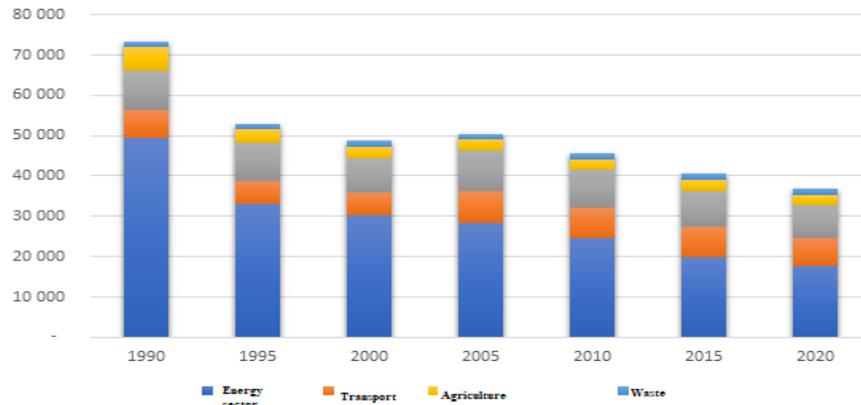
3. Practical application - Slovakia's position on greenhouse gas emissions

Based on the data on GHG emissions collected from the Slovak Hydrometeorological Institute (hereinafter SHMÚ) in 5-year intervals from 1990 to 2020, we can see from followed chart 2 that the total GHG emissions have a decreasing trend for almost the entire period under observation, which is very positive not only within our country, but globally as well. In 1990, GHG emissions were quantified at 73,374.79 Gg CO₂ equivalent (Gigagram CO₂ equivalent). Five years later, in 1995, the figure was 52 840.35 Gg CO₂ eq. In 2000, total greenhouse gas emissions amounted to 48,704.17 Gg CO₂ eq. In 2005, there was a slight increase and total greenhouse gas emissions were quantified at 50 497.83 Gg CO₂ equivalent. From 2005 to 2020 the trend was downwards.

In 2005, total greenhouse gas emissions were quantified at 45,626.24 Gg CO₂ eq., in 2010 at 40,584.75 Gg CO₂ eq. and in 2020 at 36,964.53 Gg CO₂ eq. GHG emissions in 2020 reached the lowest value in the last 30 years in the Slovak Republic, which represents almost a 50% reduction compared to 1990. According to the Department of Emissions and Biofuels of SHMÚ, the record low value in 2020 is mainly due to the situation related to the pandemic COVID-19, the reconstruction of the blast furnace at U.S. Steel, a.s.

In Chart e 2 we can see that the main contributors to GHG production in Slovakia in each year under review are the energy sector, followed by industry, transport, agriculture, and the smallest contributor of each sector is waste.

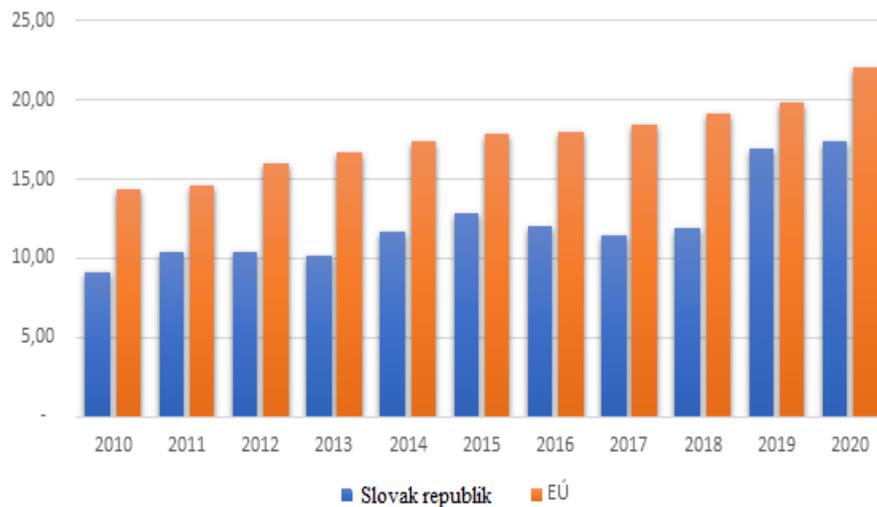
Chart 2 Sectoral shares of total GHG emissions (in Gg CO₂ eq.)



Source: own processing according to SHMÚ

We have already mentioned above that the reason why greenhouse gas emissions are so low in 2020, is also closely linked to the increase the share of renewable energy in gross final energy consumption. In Chart 3 we can see that although we are still below the average of EU Member States in the use of renewables, since 2017 we observe an annual percentage increase in Slovakia.

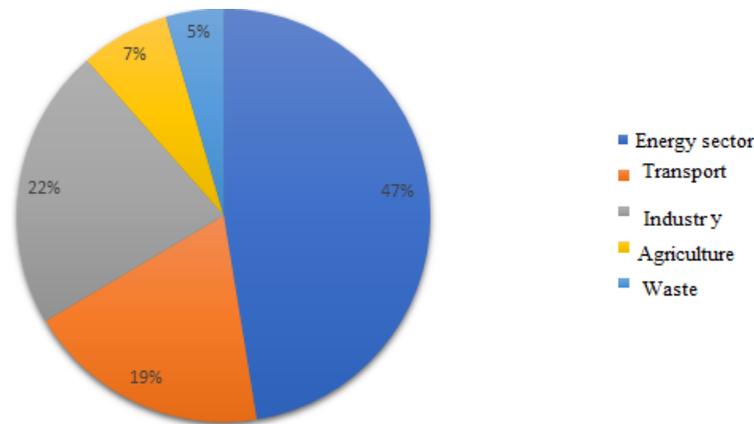
Chart 3: Share of renewable energy in gross final energy consumption (%)



Source: Own processing according to Eurostat

In Chart 4, we analysed the percentage shares of each sector in total GHG emissions in 2020. We can see that the energy sector contributes the largest share of total GHG emissions again this year, up to 47%. That is reason to implement an essential and incremental innovation and digitalisation in this sector, as we have already stated. Consequently, the industrial sector contributes 22% of total greenhouse gas emissions, the transport sector 19%, the agricultural sector 7%, and the smallest percentage is waste, at 5%.

Chart 4 Percentages of total GHG emissions by sector for 2020

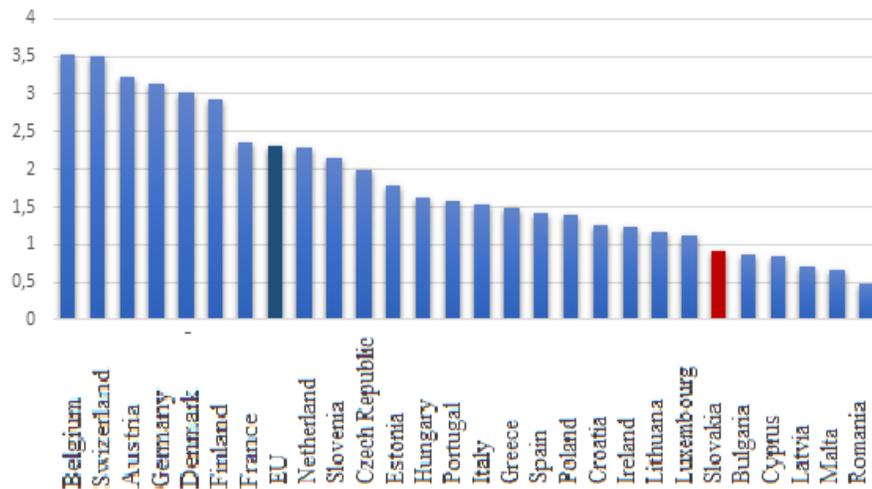


Source: own processing according to SHMÚ

4.1 Slovakia 's position in research and development

As research and development is the driving force of innovation, it is important to look at the position of Slovak research and development in comparison with the European Union and its member countries. In Chart 5 we have shown R&D expenditure as a % of GDP for all European Union countries in 2020. We can see that Belgium, Sweden, Austria and Germany are in the top positions. At the latest rankings of the European Union countries are Romania, Malta, Latvia and the Slovak Republic. Slovakia lags far behind the leading countries and even behind to the EU average. In 2020, its expenditure on research and development as a percentage of GDP was only 0.9%, which is well below the EU average of 2.3%.

Chart 5 R&D expenditure as % of GDP in 2020



Source: Own processing according to Eurostat

Slovakia is not only lagging behind the leading countries such as Belgium, Sweden, Austria or Germany, but also behind the member countries of the Visegrad Group (hereinafter V4), i.e. Poland, the Czech Republic and Hungary. From Table 1 we can see that in every year of our period under review, i.e. from 2016 to 2020, the Slovak Republic is well below average compared to the V4 countries in terms of total R&D expenditure as a % of GDP. In contrast to the Czech Republic is at the top of the V4 countries and its total R&D expenditure as % of GDP is almost double that of the Slovak Republic in each year.

Table 1 Total R&D expenditure as % of GDP in the V4 countries

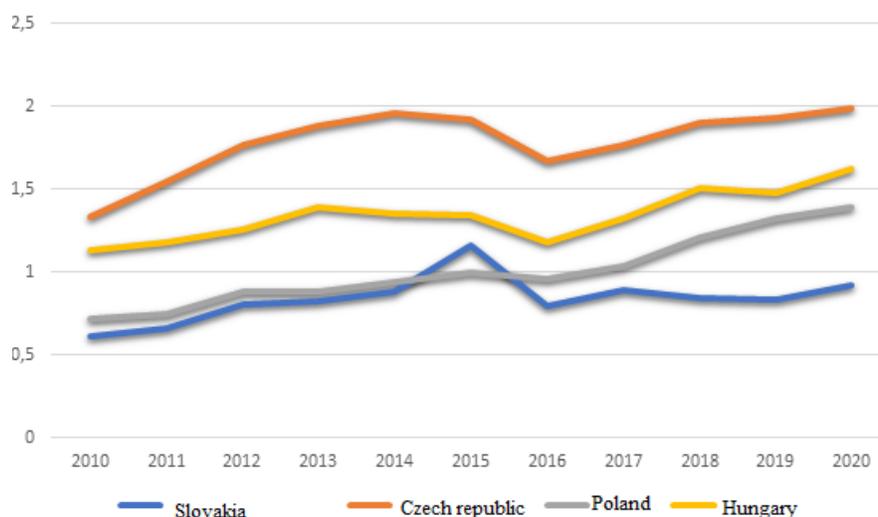
	2016	2017	2018	2019	2020
EÚ	2,04	2,08	2,12	2,15	2,32
Slovak Republic	0,79	0,89	0,84	0,83	0,92
Czech Republic	1,67	1,77	1,9	1,93	1,99
Hungary	1,18	1,32	1,51	1,48	1,62
Poland	0,96	1,03	1,21	1,32	1,39

Source: Own processing according to Eurostat

In the next chart we show the evolution of total R&D expenditure as % of GDP from 2010 to 2020 among the V4 countries. We can see that there has been no significant increase in Slovakia since 2010, except in 2015, but this was followed by a significant drop in 2016.

According to the Supreme Audit Office of the Slovak Republic, the increase in 2015 was due to the drawdown of European Structural Funds from the second programming period.

Chart 6 Evolution of total R&D expenditure as % of GDP from 2010 to 2020

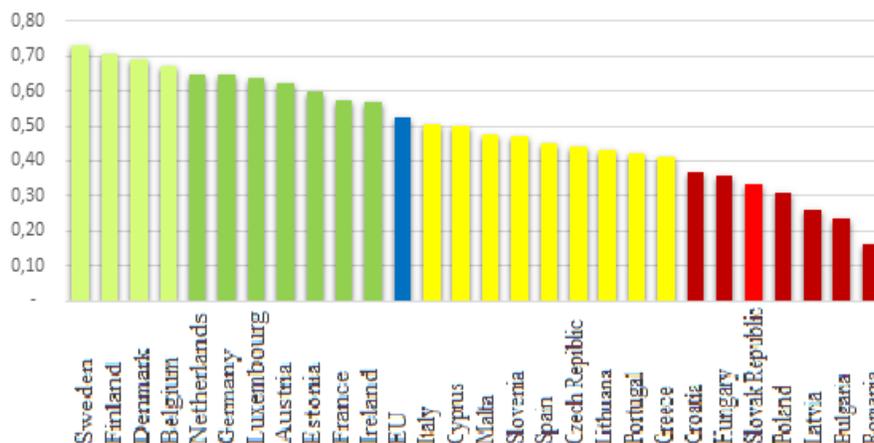


Source: Own processing according to Eurostat

In Chart 7, we show the average innovation performance of EU Member States for 2021 based on the European Innovation Scoreboard (EIS 2021), which is supported by the European Commission. The index is a composite indicator obtained as an unweighted average of 32 indicators. On the basis of the given 2021 results, EU Member States can be divided into four groups. The first group is made up of countries that are leading in the way and perform above 125% of the EU average. From Chart 7 we can see that the innovation leaders are Sweden, Finland, Denmark and Belgium. The next group consists of countries whose performance is between 100% and 120% of the EU average.

Among strong the countries that are strong innovators are the Netherlands, Germany, Luxembourg, Austria, Estonia, France and Ireland. The third group of so-called average innovators includes Italy, Cyprus, Malta, Slovenia, Spain, the Czech Republic, Lithuania, Portugal and Greece. Their performance ranges between 70% and 100% of the EU average. The fourth group of Member States is made up of countries that perform below 70% of the EU average, making them moderate innovators. These countries include Croatia, Hungary, the Slovak Republic, Poland, Latvia, Bulgaria and Romania.

Chart 7 Innovation performance of EU Member States in 2021



Source: Own processing based on European Innovation Scoreboard (EIS) 2021, European Commission R&D

In terms of the Slovak Republic's regional innovation performance, the country is very diversified in terms of regional distribution. Of the four regions of the Slovak Republic, only the Bratislava region can be classified in the third group of average innovators, ranking 138th in innovation performance out of 240 regions in the EU Member States. The other three regions, Western Slovakia, Central Slovakia and Eastern Slovakia, are ranked in the last group, i.e. they show a level of performance 70% below the EU average. Western Slovakia is ranked 200th, Central Slovakia 194th and Eastern Slovakia as high as 202nd out of all 240 EU Member State regions.

Table 2 Regional innovation performance within the Slovak Republic in 2021

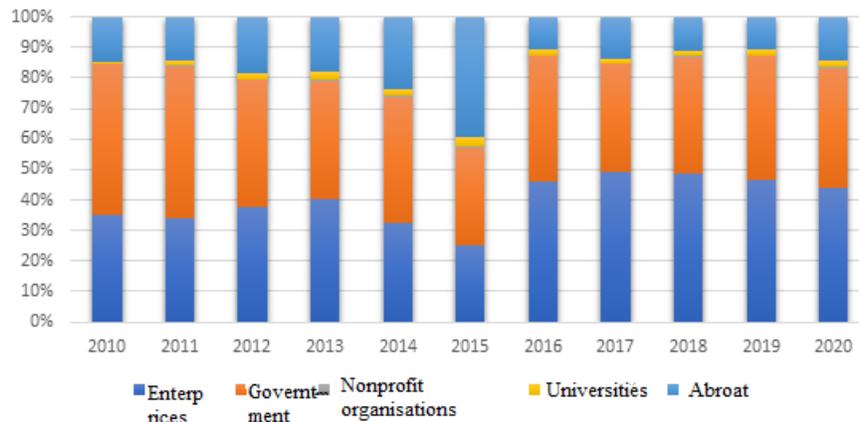
Region	Ranking
Bratislava region	138.
Western Slovakia	200.
Central Slovakia	194.
Eastern Slovakia	202.

Source: Own processing based on European Innovation Scoreboard (EIS) 2021, European Commission

However, it is very important to look at where the sources of funding for research and development in the Slovak Republic come from. In Chart 8 we can find the different sources of R&D spending in the Slovak Republic in millions of EUR. We can see that from 2010 to 2014, the prevailing sources of funding were mainly state funding.

In 2015, state sources of finance also dominated over the private sector, but in 2020 we can see an increased growth of foreign sources compared to previous years. (This is related to the drawdown of the European Structural Funds from the second programming period). From Chart 8 we can see that from 2016 to 2020, the largest proportion of financial resources came from private sector entrepreneurs. After the private sector, the financial resources came in the second largest proportion from the state, foreign countries, universities and, lastly, from non-profit organisations.

Chart 8 Sources of R&D funding in the Slovak Republic, (EUR million)

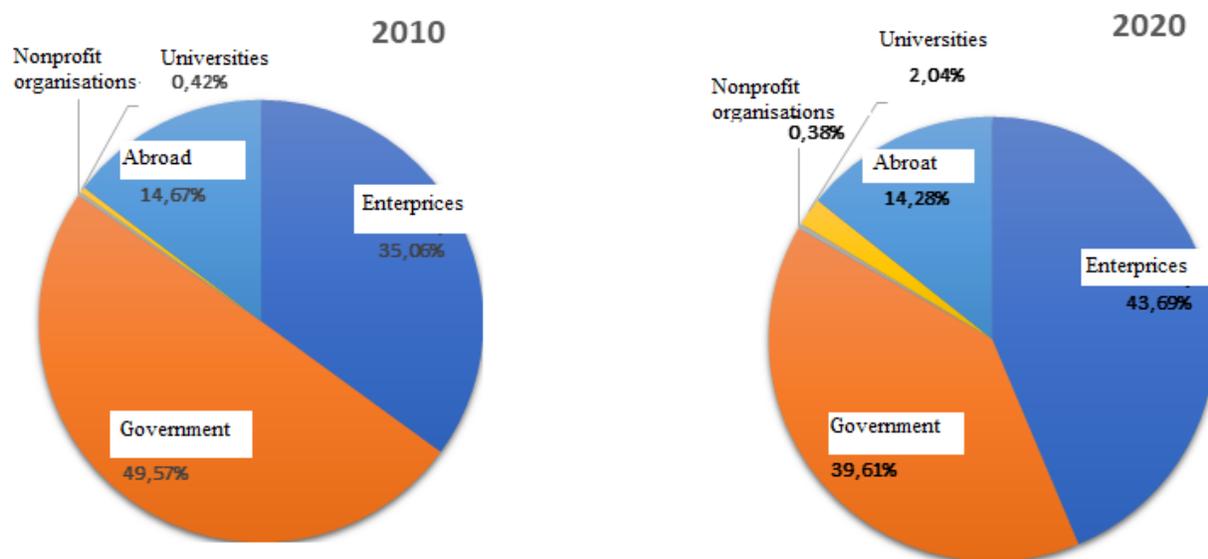


Source: Own processing according to Eurostat

In a closer comparison of 2010 and 2020 in Chart 9, we see that while in 2010 government funding for R&D accounted for 49.57% of total funding, in 2020 it was nearly 10% less at 39.61%. In contrast, the share of private sector funding sources in 2020 has increased compared to 2010, for 35.06% of total R&D funding in the SR. In 2020, the share rose to 43.69%.

The share of foreign financial resources has not changed significantly. In 2010, the share of foreign funding sources was 14.67% and in 2020 0.39% less, 14.28%. Funding sources from universities in the Slovak Republic accounted for 0.42% in 2010, rising to 2.04% of the total funding sources for R&D in the Slovak Republic in 2020. Non-profit organisations account for the smallest share, increasing from 0.28% in 2010 to 0.38% in 2020. This trend is very positive and it is crucial that more and more private companies get involved in research and development and come to the market with new innovations that can be of great benefit not only to our country, but also to the whole world.

Chart 9 Share of individual sources of R&D funding in the Slovak Republic in 2010 and 2020



Source: Own processing according to Eurostat

Conclusion

Protecting the climate and aiming to reduce greenhouse gas emissions should be the interest of society because only this way is the objective achievable. In order the societies to be effective in maximising the reduction in greenhouse gas emissions and thus also in dealing with the effects of climate change, it is essential for we focus and support research and development, which is the driving force behind innovation and digitalisation, to a large extent, and take the necessary measures.

The main aim of this paper is to highlight the importance of information and communication technologies and innovation in the energy sector. In the theoretical part of paper, we state the basic concepts related to innovation and the information and communication technologies in the energy sector. From the obtained results we can conclude that in the five analysed annual intervals from 1990 to 2020, GHG emissions in Slovakia had a decreasing trend except for 2005. The energy sector is one of the main contributors to GHG emissions, with a share of 47% in 2020. On the basis of the data collected, it can be stated that the Slovak Republic has long been below the average of EU Member States in the use of renewable energy sources. Also, in the analysis of expenditure on research and development, Slovakia also significantly lags behind not only the leading countries, but also the average of the EU countries and the V4 countries, too. In 2020, R&D expenditure as a % of GDP in Slovakia was only 0.9%, which is significantly below the EU average of 2.3%. According to the European Innovation Scoreboard, an index of the European Commission, Slovakia belongs to the group of countries that have a level of innovation performance below 70% of the EU average and thus ranks at the end of this ranking.

From a regional viewpoint, we can only the Bratislava region include in the group of regions, which show an innovation performance in the range of 70% to 100% of the EU average and thus ranked 138th place of all 240 regions included in this index. Since 2016, the main source of funding for R&D in the Slovak Republic has come from the private sector, which is a major change compared to the 2010 baseline year, as previously funding sources came mainly from the state budget.

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(KÜFEOĞLU, Sinan et al.

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TEACHING LAW WITH TECH: REFLECTIONS ON FLIPPING THE CLASSROOM IN A LEGAL ENGLISH COURSE FOR GERMAN STUDENTS

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Abstract

The authors converted a legal English course previously taught entirely physically and synchronously into one based on flipped-classroom methods. The authors chose this approach because they anticipated their Generation Z students would find such a format engaging, convenient, and better aligned with their tech-oriented generational culture. The article first outlines the theory underpinning blended-learning teaching formats, and then proceeds to explain how the course was flipped. The authors then analyse a selection of student and teacher responses to the new course. The authors' hypothesis that Generation Z students would respond positively to tech-based learning was borne out: most students were enthusiastic about the new course, finding it engaging, enjoyable, and convenient. However, some were resistant to the digital elements and found the workload too onerous. Among teachers, some took the view that the new format required more teaching preparation time, but all agreed it had given rise to deep and active learning in the classroom. The new format had also allowed them to track student performance and provide students with better feedback. All teachers preferred the new format to the old one. Accordingly, the authors are of the view that, while creating the flipped course was onerous, overall the new format had clear benefits for both students and teachers. However, given not all students responded well to the new format, there is plainly still a need for traditional face-to-face teaching in blended-learning modules. Finally, the blended-learning format allowed the course to be rolled out effectively under pandemic conditions.

Keywords: legal English; blended learning; flipped classroom; Generation Z; online teaching; asynchronous teaching

1. Introduction

Technology can be both friend and foe, and using it in the classroom can simultaneously delight and distract learners. In today's fast-paced, anytime-anywhere culture, it is imperative for teachers in higher education to engage "Generation Z" students in the learning process. In addition, the Covid-19 pandemic has made it essential for teachers to integrate online learning formats into existing courses and find alternatives to traditional physical teaching.

This article explores the use of e-learning to improve a legal English course and enhance student learning. It explains why and how a traditional course, formerly taught physically and synchronously to German law students, was converted into a partially asynchronous online module organised around flipped-classroom and blended-learning methodologies. The research further details how an online assessment tool was utilised creatively to develop a course that was both interactive and engaging for Generation Z students. Finally, drawing on the perspectives of both students and teachers, the article evaluates the effectiveness of the new learning format and foregrounds various pitfalls that may arise when educators adopt this particular methodological approach.

In general, the authors found that the flipped classroom format enhanced student learning, motivation and engagement with the course material; assisted teachers in monitoring plagiarism and tracking student performance; allowed the course to be delivered in a more flexible and Covid-secure manner; and enabled teachers to engage with students more actively during class time, improving overall teaching satisfaction. However, not all students responded

well to the new format, indicating that at least some Generation Z students remain wedded to more traditional teaching methods. Another drawback was that some teachers were of the view that the new format entailed an increased workload for them and did not significantly improve their rapport with their students. However, such problems can be overcome by teachers/administrators judiciously limiting the amount of technology used in the course.

2. Background

The authors are teachers¹ at a private German law school² whose students have an English competency at the upper-intermediate to advanced level.³ The focus of their studies is German law but, given the prominence of English as an international business language,⁴ students are required to complete certain courses in Anglo-American law as part of their LLB. The object of these courses is principally to (1) improve students' written and oral fluency in legal English, and (2) give them an overview of the common-law system. To this end, the law school offers a mandatory team-taught⁵ course entitled Foundations of Contract Law ("FCL") to its first-year students. This course exposes students to the key vocabulary and concepts of Anglo-American contract law.

Originally, the course was taught in a traditional physical format: students were required to attend 10 classes of 90 minutes each over the course of a trimester. Typically, each class began with a lecture that lasted about 30 minutes. While teachers intended this portion of the class to take the form of a Socratic dialogue,⁶ in practice it often did not. Students tended to sit passively⁷ as the teacher explained the concepts to them. Thus, at least during this part of the class, the teacher acted as the archetypal "sage on the stage", imparting his or her wisdom to the students.⁸ The second part of the class tended to be more student-centred and focused on group work and peer-to-peer learning techniques,⁹ the object being to activate students' English skills and develop their legal analytical skills. Accordingly, during the second part of the class the teacher acted as the proverbial "guide on the side",¹⁰ being only occasionally directly involved in the learning process.

In recent years, it became clear that the traditional course format was not working optimally for our "Generation Z" students.¹¹ Some teachers found it difficult to motivate students to take part in class discussions, and there was sometimes a soporific atmosphere in the classroom. It also became clear to teachers that students were not regularly completing their weekly reading tasks. In addition, students appeared not to proactively and diligently take notes during the formal lecture. Moreover, some teachers reported that students seemed unduly passive during the first part of the class, while others appeared distracted by activities on their laptops and smartphones.

¹ The term "teacher" in this article means any of the following types of university educators: lecturers, associate professors, and trainers.

² Bucerius Law School gGmbH – Hochschule für Rechtswissenschaft in Hamburg, Germany. See generally Christoph Luschin, *A German Ivy? The Bucerius Law School*, 19 *SOUTHWEST. J. INT. LAW* 32 (2012).

³ This is equivalent to a B2/C1 under the Council of Europe's *Common European Framework of Reference for Languages: Learning, Teaching, Assessment – Companion Volume* (2020), www.coe.int/lang-cefr (accessed 18 May 2021).

⁴ See generally Pamela Rogerson-Revell, *Using English for International Business: A European Case Study*, 26 *ENGLISH SPECIF. PURP.* 103, 104 (2007).

⁵ Four teachers are usually involved in tutoring FCL.

⁶ See generally Max Huffman, *Online Learning Grows Up – And Heads to Law School*, 49 *IND. L. REV.* 57, 59-61 (2015).

⁷ See Charles D. Morrison, 'Sage on the Stage' to 'Guide on the Side': *A Good Start*, 8 *IJ-SOTL* 1, 2-4 (2014).

⁸ Alison King, *From Sage on the Stage to Guide on the Side*, 41 *COLLEGE TEACHING* 30, 30-35 (1993). See generally Michele Pistone, *Law Schools and Technology: Where We Are and Where We Are Heading*, 64 *J. LEGAL EDUC.* 586 (2015).

⁹ See also David Boud, *Introduction: making the move to peer learning*, in *PEER LEARNING IN HIGHER EDUCATION: LEARNING FROM AND WITH EACH OTHER* 1, 3 (David Boud et al. eds., 2013), who writes that peer learning "suggests a two-way, reciprocal learning activity".

¹⁰ See King, *supra* note 10.

¹¹ Generation Z is also known as the generation comprising "digital natives". This term refers to people born after 1995 – the year the commercialisation of the internet began. See Marc Prensky, *Digital Natives, Digital Immigrants Part 1*, *ON THE HORIZON: THE STRATEGIC PLANNING RESOURCE FOR EDUCATION PROFESSIONALS*, Sept. 2001, at 1.

This behaviour did not come as a great surprise to us. After all, Generation Z students prefer interactive, experiential¹² and collaborative learning, and are very comfortable with technology.¹³ In particular, such students are not unduly wedded to conventional face-to-face teaching by means of lectures and tutorials:

Those who have grown up using digital technology for communication and interaction may work and learn in fundamentally different ways from those who grew up before digital technology became ubiquitous. The traditional in-person lecture or tutorial teaching paradigm that is very familiar to digital immigrants may no longer be as useful to digital natives, who may have little time or need to attend lectures, and who are more likely to want to access the Internet for relevant resources.¹⁴

In addition, Generation Z students are accustomed to using the internet and sourcing information online from a variety of platforms.¹⁵ Such students have also grown up with technology and are adept at using it:

For members of Gen Z, as for Millennials, the world has always been a place of rapid technological growth and change. But there is one key distinction between Gen Z and all other generations, including Millennials, in this regard: Gen Z is the first to enter adolescence with access to smartphones. The iPhone was launched in 2007, when the oldest members of Gen Z were about twelve years old, and the smartphone's effect on today's students cannot be overstated.¹⁶

Not only were our students very comfortable with, and motivated to use, new forms of technology,¹⁷ but all of them have broadband internet access and suitable devices for viewing online content. Accordingly, the authors expected that students would find a more tech-oriented and partially online course more engaging, stimulating and in tune with their needs as learners.¹⁸ In this regard, research has shown that “students not only want more online offerings, but also that online classes can deliver the same quality learning experience as live classes”.¹⁹ In addition, it has been suggested that, if online courses are of a high quality and delivered well, they can be as effective as live ones.²⁰ Moreover, the advancement of technology has repercussions for the practice of law, meaning that lawyers in the current context will need to hone their legal tech skills to thrive professionally.²¹

From the vantage point of educators, many of our teachers reported dissatisfaction with the first portion of the traditional class.²² Some felt it was an anachronistic method of conveying course content,²³ while others found that explaining the legal concepts in granular detail to the students in class unduly onerous.²⁴ This latter point is of particular relevance for the teaching of legal English, where the focus is on activating and developing legal language skills and less about understanding every nuance of a legal concept. It was generally agreed among the teachers that the time spent in class orally explaining the course content to the students was inefficient and left teachers feeling time-pressed during the second, more interactive part of the class.²⁵

For these reasons, the decision was made to migrate the course towards a mode of delivery that would involve a substantial element of online learning.²⁶ In particular, the teaching format was updated to a “flipped classroom” one

¹² See Tahirih Lee, *Technology-Based Experiential Learning: A Transnational Experiment*, 64 J. LEGAL EDUC. 455, 455 (2015) for an interesting example of an experiential learning game.

¹³ See [Corey Seemiller](#) & Meghan Grace, *Generation Z: Educating and Engaging the Next Generation of Students*, ABOUT CAMPUS, Jul. to Aug. 2017, at 22-23, where the authors emphasise the importance of learning from video content for Generation Z students.

¹⁴ Stephen Colbran & Anthony Gilding, *E-Learning in Australian Law Schools*, 23 LEGAL EDUC. REV. 201, 215 (2013) (footnotes omitted).

¹⁵ See generally Satria Fadil Persada et al., *Understanding the Generation Z Behavior on D-Learning: A Unified Theory of Acceptance and Use of Technology (UTAUT) Approach*, 14 IJET 22 (2019).

¹⁶ Laura P. Graham, *Generation Z Goes to Law School: Teaching and Reaching Law Students in the Post-Millennial Generation*, 41 U. ARK. LITTLE ROCK L. REV. 29, 49 (2018) (footnotes omitted).

¹⁷ See Marina Nehme, *E-Learning and Students' Motivation*, 20 LEGAL EDUC. REV. 223, 229 (2010).

¹⁸ See Huffman, *supra* note 8, at 57, 69.

¹⁹ Yvonne M. Dutton et al., *Assessing Online Learning in Law Schools: Students Say Online Classes Deliver*, 96 DENVER U. L. REV. 493, 497 (2019).

²⁰ See *id.* at 520.

²¹ See Pistone, *supra* note 10, at 586.

²² See Gerald F. Hess et al., *Fifty Ways to Promote Teaching and Learning*, 67 J. LEGAL EDUC. 696, 723 (2018).

²³ See Dutton et al., *supra* note 21, at 498-99, where the authors discuss the traditional methods of instruction at U.S. law schools.

²⁴ See Part 5.

²⁵ See William R. Slomanson, *Blended Learning: A Flipped Classroom Experiment*, 64 J. LEGAL EDUC. 93, 99-101 (2014).

²⁶ See Huffman, *supra* note 8, at 58.

involving online videos located within the context of a blended-learning approach.²⁷ The decision was taken that WISEflow,²⁸ a digital exam and assessment platform, would be used to deliver the online content to the students.²⁹

3. Blended learning and flipped classroom

As the updated FCL course incorporated both information technology and electronic media, it was a good example of “e-learning”.³⁰ The revised course was fundamentally organised around blended-learning and flipped-classroom methodologies, and also contained elements of both synchronous and asynchronous learning,³¹ the idea being that the new format would maximise active learning.³²

Blended, or “technology-enhanced”,³³ learning is a hybrid form of learning:

Blended learning generally refers to the combination of online and face-to-face teaching and learning modes within the one course. Blended learning departs from the idea that one mode of learning such as a lecture is always superior to another such as an online discussion board and instead considers the diverse benefits that different mediums can offer to achieve the intended learning outcomes and asks for a purpose focussed approach to the learning design.”³⁴

The flipped classroom³⁵ has been defined as involving shifting the delivery of key content from the classroom to some period prior to when the class takes place:

A “flipped” course format is a particular type of technology-enhanced, hybrid course. One traditional course format, common in higher education, has students read material before class and then the teacher lectures on the content in class. The “flipped” format conveys the content to students online via short video lectures. The subsequent class session focuses on application, problem solving, analysis, and other active methods to deepen student learning. The “flipped” format does not replace face-to-face classes with online instruction; instead, it is intended to free up class time for activities other than lecture.³⁶

Thus, in practical terms, flipping the classroom involves, for example, making course content that would normally have been explained and discussed during class time available to students via an online platform. Typically, students would be required to engage with such content in their own time, prior to class. Using such a format enables

²⁷ These concepts will be explained in detail in Part 3.

²⁸ WISEflow <<https://www.uniwise.co.uk/>> (accessed 19 April 2021).

²⁹ See Part 4.

³⁰ See Nehme, *supra* note 19, at 223, who defines e-learning simply as “a method of learning that is supported by the use of information technology”. See also Albert Sangra et al., *Building an Inclusive Definition of E-Learning: An Approach to the Conceptual Framework*, INTERNATIONAL REVIEW OF RESEARCH IN OPEN AND DISTANCE LEARNING, Apr. 2012, at 152, where the authors provide a more elaborate definition of the term as “an approach to teaching and learning... that is based on the use of electronic media and devices as tools for improving access to training, communication and interaction and that facilitates the adoption of new ways of understanding and developing learning”.

³¹ See Nehme, *supra* note 19, at 237, who writes: “Synchronous communication is a form of direct communication where all parties involved in the discussion are present at the same time. Live chat rooms are an example of synchronous communication. Asynchronous communication, on the other hand, does not require that all parties involved in the communication be present and available at the same time. Emails and discussion boards are examples of asynchronous communication.”

³² See CHARLES C. BONWELL & JAMES A. EISON, ACTIVE LEARNING: CREATING EXCITEMENT IN THE CLASSROOM 19 (1991), who write that the concept of active learning is difficult to define but generally means that “[s]tudents are involved in more than listening”, “[l]ess emphasis is placed on transmitting information and more on developing students’ skills”, “[s]tudents are involved in higher-order thinking (analysis, synthesis, evaluation)”, “[s]tudents are engaged in activities (e.g., reading, discussing, writing)”, and “[g]reater emphasis is placed on students’ exploration of their own attitudes and values”.

³³ See Gerald F. Hess, *Blended Courses in Law School: The Best of Online and Face-to-Face Learning*, 45 MCGEORGE L. REV. 51, 52 (2013).

³⁴ Kathy Douglas & Belinda Johnson, *Legal Education and E-Learning: Online Fishbowl Role-Play as a Learning and Teaching Strategy in Legal Skills Development*, 17 ELAW J. 28, 37 (2010). See also Dutton et al., *supra* note 21, at 506.

³⁵ See Christopher Nwosisi et al., *A Study of the Flipped Classroom and Its Effectiveness in Flipping Thirty Percent of the Course Content*, 6 INTERNATIONAL JOURNAL OF INFORMATION AND EDUCATION TECHNOLOGY 348, 348 (2016), where the authors provide an alternative description of the concept as “reverse teaching” or a “backwards classroom”.

³⁶ Hess, *supra* note 35, at 56 (footnotes omitted).

the teacher to use contact time with students to troubleshoot, answer their questions, and engage in activities that will enhance their capacities to apply the course content and thereby produce knowledge.³⁷

4. New curriculum design

4.1 Micro-videos

Our updated FCL course incorporated blended learning in that it contained both physical face-to-face teaching as well as a number of online elements. In particular, the traditional 30-minute lecture described above was effectively replaced by a comprehensive suite of micro-videos containing the essential course content. Students were expected to watch these videos in their own time and familiarise themselves with the core content before class. Thus, the revised module involved the integration of pre-class and in-class content. In addition, before class each week the students were required to complete an online assignment that consisted of various questions linked to the content in the micro-videos. Accordingly, there were multiple learning modes in our course catering to the many and varied learning styles of our students. Importantly, the online assignments were used as a form of scaffolding³⁸ for the key concepts.

Once the authors had reviewed the course curriculum, they flipped the course mainly by converting pre-existing written learning materials (such as course handouts, notes and PowerPoint slides) into a series of micro-videos the students could access asynchronously online.³⁹ As Generation Z students are accustomed to accessing information in “bite-sized” form, the video segments were kept as brief as possible.⁴⁰ These “short-form videos” have been found to be the most effective way of holding the attention span of viewers.⁴¹ Thus, each video offered “basic doctrinal coverage” regarding a concept, case or idea.⁴² A “less is more” approach was adopted, with the authors choosing only the most crucial topics for inclusion in the videos – for example, topics traditionally taught in Anglo-American contract law course such as offer and acceptance, terms, breach, and remedies for breach. Thus, an early video in the series addressed the fundamental requirements for a valid contract, while a later one explained the differences between void and voidable contracts. The authors found that the occasional use of humour was an important tool to retain the interest of the viewers, as was the use of carefully curated images, illustrations, and diagrams. The authors intended the videos to work together as a suite,⁴³ providing students with a series of short tutorials on the fundamental principles of contract law that would then serve as a clear knowledge framework students would then fill out by means of additional reading and in-class discussions.⁴⁴

The authors took particular care when drafting the scripts for the micro-videos and sequencing the concepts and principles contained in them. The aim was for the scripts to be drafted in a clear and engaging style. The authors did not want the scripts to have the formal, staid manner of a legal textbook. Thus, when drafting the scripts, the authors were careful to keep their sentences short and avoid unduly wordy explanations. Rhetorical questions were added to the scripts to make them more interactive, maximise viewer interest, and generate a more “vibey and alive” tone. The authors’ aim was for the overall look and feel of the videos to be clear, direct, upbeat, and conversational. Furthermore, the authors supplemented explanations of the key legal concepts with carefully chosen practical examples. In addition, images and diagrams were inserted into the videos to further illustrate the concepts and engage the interest of viewers. As the scripts were essentially based on pre-existing course materials, they could be produced fairly quickly, in a matter of weeks. However, it took significant amounts of time to peruse potentially relevant materials and convert them into a style and form that would be suitable for the micro-video style of presentation.

³⁷ See Morrison, *supra* note 9, at 6.

³⁸ See BRIAN BELLAND, *INSTRUCTIONAL SCAFFOLDING IN STEM EDUCATION: STRATEGIES AND EFFICACY EVIDENCE* 18 (2017), who writes that the concept of scaffolding has been defined as “temporary [instructional] support that is provided as students are engaging with problems”.

³⁹ See Kathy Douglas et al., *Technology Aided Learning in Dispute Resolution and Evidence: Combining Video with Online Annotation/Discussion in a Blended Learning Design*, 19 *MACQUARIE L. J.* 189, 196-98 (2019).

⁴⁰ Generally, the videos were approximately three-and-a-half minutes long. However, some of them were five minutes in duration, while the very longest ran to some seven minutes.

⁴¹ See P.J. Guo et al., *How Video Production Affects Student Engagement: An Empirical Study of MOOC Videos*, paper presented at L@S 2014, March 4-5, 2014, Atlanta, Georgia, USA.

⁴² See Debora L Threedy & Aaron Dewald, *Re-Conceptualizing Doctrinal Teaching: Blending Online Videos with in-Class Problem-Solving*, 64 *J. LEGAL EDUC.* 605, 614 (2015).

⁴³ The series ultimately consisted of 48 micro-videos.

⁴⁴ See Melissa Castan & Ross Hyams, *Blended Learning in the Law Classroom: Design, Implementation and Evaluation of an Intervention in the First Year Curriculum Design*, 27 *LEGAL EDUC. REV.* 143, 148 (2017).

Thus, it is suggested that teachers intent on flipping a course devote a considerable amount of time, ranging from several weeks to a few months, to the script-writing process.

The following is an excerpt from a video script in which students are introduced to the concept of “misrepresentation by silence” and the “duty to speak”. As will become evident, the explanation of the principle is brief, clear and conversational, providing only the bare outline of the concept, and is then followed immediately by a simple practical example. The clip ends with a rhetorical question in which the student is encouraged to pause for reflection:

The common law generally imposes fewer duties to provide information to contractual counterparties than is the case in civil-law jurisdictions.

The general rule in the common law is that there is no duty to speak. It is the responsibility of each party to the contract to educate himself/herself and ask questions if he/she wants specific information from the other party.

This approach is encapsulated in the Latin maxim *caveat emptor*, which means “let the buyer beware”.

...

For example, an estate agent, John, shows a prospective purchaser, Tim, around a house that is on the market. John and Tim walk out of the house into the garden, which seems to be large and appears to extend all the way to a stream apparently marking the boundary of the property. Tim tells John that he is very interested in buying the house because of its huge garden “which goes all the way to that beautiful stream over there”. John knows that the property does not extend all the way to the stream; although there is no fence, the boundary of the property is about 10 metres from where they are standing. John says nothing because he wants to make a sale. Is there a duty to speak in this case? What do you think?

It was agreed that the Director of the Foreign Language Communication Programme would be the main presenter of the videos. At first, shooting the videos was extremely time-consuming.⁴⁵ Thus, the authors would suggest that teachers intending to convert a traditional course into a partially flipped one containing micro-videos be mindful of the significant practical and logistical demands involved in doing so. In this regard, we would suggest that months, rather than days or weeks, should be set aside for the filming process. That having been said, after the first two sessions the filming process became quicker and easier, and shooting time was reduced to just one or two takes per video. The speed with which it was possible for us to film the videos can largely be attributed to the presenter’s previous teaching experience and the fact that she had been involved in writing and editing the scripts which formed the basis of the presentations. Both factors made it easier for her to convey the content in an efficient and engaging manner in front of the camera. Finally, the authors worked closely with a professional film production company in the post-production phase. During this period, the company gave the authors invaluable advice on various key issues, such as how long the video clips should be and which visual aids to use in them.⁴⁶

4.2 Online learning platform

Another asynchronous aspect of the updated FCL course was the teachers’ use of weekly online exercises aligned with the micro-videos. As noted earlier, in order for our proposed flipped-classroom approach to be pedagogically effective, it was essential that teachers knew that students had watched and critically engaged with the core content before class.⁴⁷ To ensure students had interacted meaningfully with the content of the videos before the class took place, they were required to answer various substantive and language-based exercises pertaining to the videos.⁴⁸ These exercises were intended to reinforce and consolidate the critical concepts explained in the videos, and enable students to check whether they had properly understood the core content, to ensure that a meaningful

⁴⁵ Four sessions were needed to shoot all the footage. With each session lasting for two-and-a-half hours, this amounted to 10 hours of total filming time.

⁴⁶ Eight additional hours were needed to finalise the post-production edits.

⁴⁷ See Liz Polding, *Leading Change – Integrating E-Learning into an Existing Course*, 7 LIM 59, 60 (2007), where the author discusses the usefulness of online quizzes in motivating students to engage with flipped content.

⁴⁸ See *id.* at 60.

“knowledge transfer” had taken place.⁴⁹ An important objective of the online exercises was therefore to encourage students to reflect on their learning process.⁵⁰

The teachers adapted existing language exercises and groupwork tasks for use as online assignments, and doing so reduced the amount of time they needed to produce appropriate online materials. For example, in the physical classroom the teacher would have explained the key legal concepts by means of a Socratic lecture, and thereafter facilitated a student case briefing or group-based task. In contrast, in the new format the students were required to watch several micro-videos and then complete a series of language-based exercises and concept-related multiple-choice questions before coming to class.⁵¹

The video-based exercises also provided a valuable tool for monitoring student participation.⁵² On average, students would spend approximately 45 minutes a week on each weekly assignment. The time spent on the assignment amounted to a certain number of notional study hours and counted towards the student’s participation grade, which in turn constituted 20% of the overall mark for the course. The online assessment platform’s autocorrect feature meant that the online platform could mark the student’s work and award him or her a grade for the exercise – without any drain on the teachers’ time or intellectual energy resources. However, the authors decided that the participation grade should be determined simply on the basis of how many assignments the student had submitted, not on how well he or she had performed in them, and the assignments were therefore used as formative assessments providing students with additional scaffolding.⁵³

⁴⁹ See Threedy & Dewald, *supra* note 44, at 615.

⁵⁰ See Hess, *supra* note 35, at 76.

⁵¹ See Dutton et al., *supra* note 21, at 527, where the authors describe students’ fondness for “formative assessments as a feature of a quality online learning experience”.

⁵² Teachers were required to scroll through the completed WISEflow tasks each week to check whether students had completed the exercises.

⁵³ See Huffman, *supra* note 8, at 64, who writes that “[f]ormative assessments are measurements of outcomes taken at an intermediate stage in the particular course or program, while summative assessments are measurements of outcomes taken at the end of the course or program”. See also Hess et al., *supra* note 24, at 708.

Pre-contractual statements



TRANSCRIPT

Video 19: Pre-contractual statements

Now I wish to look at various forms of pre-contractual statements and the form of liability they incur if breached. In other words, how may contract terms be classified, and, in particular, which terms, when breached, entitle the injured party to terminate the contract?

First, you should realise that not all statements made in contract negotiations will create a legally binding obligation. Puffs or puffery (advertising language and hype phrases such as "fantastic value", "good buy", "unbeatable bargain") are not intended and generally will not be seen as creating legally binding obligations.

For instance, in *Lambert and Lewis* of 1981, a manufacturer claimed in his promotional material that his product was fool-proof and that it required no maintenance. These statements were held not to be a binding term because they were "not intended to be, nor were they acted on as being express warranties". However, a more precise claim made in promotional literature may be deemed a term (for example, a claim that a smoke ball would prevent the contraction of influenza, as the famous case of *Carhill v Carbolic Smoke Ball Co*). Therefore, a distinction must be drawn between indiscriminate praise and specific claims or assertions of verifiable facts in certain circumstances.

English law also distinguishes between a representation and a contract term. A representation is defined as a statement of present fact which induces the other party to enter into the contract in reasonable reliance on that statement.

The principal criterion for classification of statements as contract terms or representations is the question of intention. In cases of doubt, the parties' intention has to be objectively ascertained. Nevertheless, certain guidelines have been established by case law.

First, what happens when the representation is made by a third party to a contract? For instance, in *Hedley Byrne v Heller* of 1964, a bank gave a credit rating to a company which was contemplating extending a loan to an advertising agency. The credit rating was accompanied by a disclaimer for its accuracy, but the finance institution nevertheless relied upon it and extended the loan. When the debtor went insolvent, the finance institution was left with no other target for redress other than the bank. The court held that, but for the disclaimer, the bank would have been liable for negligent misrepresentation and, because of the special relationship of reliance and trust, would have had to provide compensation for the pure economic loss (that is, the financial loss) suffered.

Secondly, let us turn to the rule pertaining to the situation when the representation is made by a party possessing superior skill or knowledge relating to the subject matter of the contract.

For example, in *Oscar Chess Ltd v Williams* of 1957, the seller was a private car owner who made the innocent misrepresentation that the car was a 1948 model when in fact it was a 1938 model. The Court of Appeal held that the statement was not a term but a representation, as the buyers, being car dealers, were in just as strong a position as the seller to verify the truth of the statement. By contrast, in *Dick Bentley Production Ltd v Harold Smith (Motors) Ltd* of 1965, a car dealer gave a false statement as to the mileage of a Bentley motor car, and the Court of Appeal held this to be a warranty.

Question 1

Watch the video above and/or read the transcript, and then answer the following questions.

Match the legal principle to the relevant case.

Trade puffs attach no liability. They are not meant to be taken seriously.

A manufacturer claimed in promotional material that a product was foolproof and that it required no maintenance. These statements were held not to be a binding term because they were 'not intended to be, nor were they acted on as being express warranties'.

A representation made without skill or expertise is less likely to be a term.

The seller was a private car owner who described his car as a 1948 model Morris 10, when in fact it was a 1938 model. The motor dealers sued as the value of the car was lower than they paid. The action failed as the defendant had no specialist skill, and was relying on the registration documents in making the statement. The

1

Lambert and Lewis [1981]

2

Oscar Chess Ltd v Williams [1957]

[Sample of the embedded video, transcript and matching exercise.]

Question 1

Watch the video above and/or read the transcript, and then answer the following questions.

Match the legal principle to the relevant case.

<p>Trade puffs attach no liability. They are not meant to be taken seriously.</p> <p>A manufacturer claimed in promotional material that a product was foolproof and that it required no maintenance. These statements were held not to be a binding term because they were 'not intended to be, nor were they acted on as being express warranties'.</p>	<p>1 <i>Lambert and Lewis</i> [1981] ✓</p>
<p>A representation made without skill or expertise is less likely to be a term.</p> <p>The seller was a private car owner who described his car as a 1948 model Morris 10, when in fact it was a 1938 model. The motor dealers sued as the value of the car was lower than they paid. The action failed as the defendant had no specialist skill, and was relying on the registration documents in making the statement. The court held that it was merely an innocent misrepresentation.</p>	<p>2 <i>Oscar Chess Ltd v Williams</i> [1957] ✓</p>
<p>Puffs with an attached promise may attach liability because, although made in connection with a mere puff, the promise is sufficiently specific to be relied upon.</p> <p>In this famous case a claim was made that a smoke ball would prevent the contraction of influenza. The court found that the advertisement constituted a unilateral offer. It held further that the statement that 100 pounds would be paid was understood by the public to be an offer which was to be acted upon.</p>	<p>3 <i>Carlill v Carbolic Smoke Ball Co.</i> (1893) ✓</p>
<p>Action against the negligent representation made by a third party to the contract is possible in tort where there is a special relationship and it is reasonable for a party to rely on the advice.</p> <p>A bank gave a credit rating to a company which was contemplating extending a loan to an advertising agency. The credit rating was accompanied by a disclaimer for its accuracy but the finance institution nevertheless relied upon it in extending the loan.</p> <p>The House of Lords held that but for the disclaimer, the bank would have been liable for negligent misrepresentation and, because of the special relationship of reliance and trust, would have had to compensate the pure economic loss suffered.</p>	<p>4 <i>Hedley Byrne v Heller</i> [1964] ✓</p>
<p>If one party relies on the other party's skill and judgement, then it is likely to be a term.</p> <p>A car dealer gave a false statement regarding the mileage of a motor car. The court held this to be a warranty, as the car dealer had greater expertise and the claimant relied upon that expertise.</p>	<p>5 <i>Dick Bentley Productions v Harold Smith Motors</i> (1965) ✓</p>

[Sample of a matching exercise to concept-check legal principles.]

5. Discussion

5.1 Student responses to the new format

It was especially important for teachers to gauge students' views on the updated FCL module.⁵⁴ Thus, the student course evaluations from 2018, 2019 and 2020 were perused so that teachers could obtain a sense of how the

⁵⁴ See Dutton et al., *supra* note 21, at 496-97.

students had responded to the new course format. In this regard, it was plain that some students had resented the time they had spent watching and critically engaging with the flipped content:

“It took a lot of time to write the essays, to create the presentation and watch all the wiseflow videos and in the end to prepare for the exam. I would recommend dividing more of these elements into other trimesters.”⁵⁵

“In my opinion, the weekly Wiseflow system took up a lot of time and had a rather low learning success.”⁵⁶

“The scope of the English course was too large. The wiseflow quizzes every week were beyond the scope.”⁵⁷

“For me, the videos on the Wiseflow tasks were unfortunately not optimal preparation. Although they are graphically nicely designed and appealing, they were unfortunately not suitable for me personally. The videos as the sole teaching material meant additional work and above all time expenditure for me. I had to watch the videos several times or take notes in order to retain the content.”⁵⁸

“The weekly Wise flow assignments plus 2 essays and the case presentation took a lot of my time.”⁵⁹

These criticisms are understandable when one considers that students were required to spend a considerable amount of time perusing the course content outside class time, and thus the new format required a significant amount of additional effort on their part. However, it is important to note that this work fell within the scope of the notional workload allocated to the course.⁶⁰

Other students found the videos difficult to follow and indicated that they would have preferred to have read the video transcripts instead:

“The content of the WiseFlow videos should be provided as a transcript to facilitate follow-up.”⁶¹

A transcript of each video has now been uploaded to the online learning platform, so that students have the choice whether to watch the video (if they are visual and auditory learners) and/or read the transcript (if they learn better by reading and writing).⁶²

Some students appeared resistant to the flipped-classroom methodology and seemed to call for a return to more traditional teaching methods:

“I personally don’t like the flipped classroom system because it takes way too much time (the instructor could present the relevant in 5 minutes instead of 15min by the student). Furthermore, the lessons could be more effective and interesting (I really liked contract drafting, legal translation, the negotiation session!) if we wouldn’t necessarily repeat all of the wiseflow content in the lessons. This would enable us to do much more practical work.”⁶³

“The concept of the last trimester, where the material of the lesson took place in the form of a short presentation by the lecturer, I liked better and the material was still directly present for the next lesson.”⁶⁴

⁵⁵ Student response (2018).

⁵⁶ Student response, translated from the original German (2018).

⁵⁷ Student response, translated from the original German (2018).

⁵⁸ Student response, translated from the original German (2019).

⁵⁹ Student response, translated from the original German (2020).

⁶⁰ The course is worth four European Credit Transfer System (ECTS) points, which means students are required to spend approximately 120 notional study hours completing it.

⁶¹ Student response, translated from the original German (2018).

⁶² See Neil Fleming & Colleen Mills, *Not Another Inventory, Rather a Catalyst for Reflection*, 11 TO IMPROVE THE ACADEMY 137 (1992). See generally [VARK | a guide to learning styles \(vark-learn.com\)](https://vark-learn.com) (accessed 1 October 2021).

⁶³ Student response (2019).

⁶⁴ Student response, translated from the original German (2018).

Other students responded well to some of the blended-learning features, but less positively to others:

“The revision section (and especially the PowerPoint slides) were extremely useful. The weekly wiseflow assignments however did not really help. The videos are of high quality, but when you focus on the exercises you really do not listen to the content. The exercises itself were undemanding. It seemed like we had to do them not because it is useful, but because we just need to do something to earn four credits. In short: Videos: great! Wiseflow exercises: not so great.”⁶⁵

However, the student feedback in the main indicates clearly that the migration of FCL from a traditionally taught course to a blended-learning one was successful in the eyes of the majority of the students:

“I would like to expressly praise the fact that those responsible obviously took a well-founded look at the feedback for the latter event and, as a consequence, developed the learning videos and the tasks on Wiseflow, for example. This was an innovative and good move, because it allowed us students to flexibly schedule the assignments for the course. Also, the interactive format is basically appealing.”⁶⁶

Flipping the course content was also well received by the students on the whole, as evidenced by their generally positive comments in this regard:

“Videos are a good thing, especially as preparation for lesson (Wiseflow end please not on Sundays!)”⁶⁷

“The videos on Wiseflow were also clear and easy to understand. Nevertheless, I would have liked to recall the most important topics of the videos in the course, then the following application tasks would probably have been more fruitful.”⁶⁸

“Further, I enjoyed the videos as they were short, informative and a good preparation for class.”⁶⁹

“The integration of videos at Wiseflow was great, keep it up!”⁷⁰

“Additionally, I also really liked the weekly Wiseflow assignments and found the videos really helpful. However, I think in the assignments as well as in class, some more exercises to apply the law would also be great.”⁷¹

“The lessons were great, and I think the ideas of the preparation videos and the presentations given by students are useful.”⁷²

It would seem that the new teaching format is especially well-suited to our tech-savvy Generation Z students who are adept at navigating their way across various online learning platforms. As can be seen from the comments below, the flipped-classroom format greatly enhanced student learning, motivation and engagement with the course material:

“The course was great fun, especially thanks to the great instructor and the helpful wiseflow preparations!”⁷³

“The Wiseflow videos were very helpful in preparing for the exam Before but too extensive and difficult to remember A general overview would have helped at the beginning The mindmap was great.”⁷⁴

⁶⁵ Student response (2018).

⁶⁶ Student response, translated from the original German (2018).

⁶⁷ Student response, translated from the original German (2018).

⁶⁸ Student response, translated from the original German (2018).

⁶⁹ Student response (2019).

⁷⁰ Student response, translated from the original German (2019).

⁷¹ Student response (2019).

⁷² Student response, translated from the original German (2019).

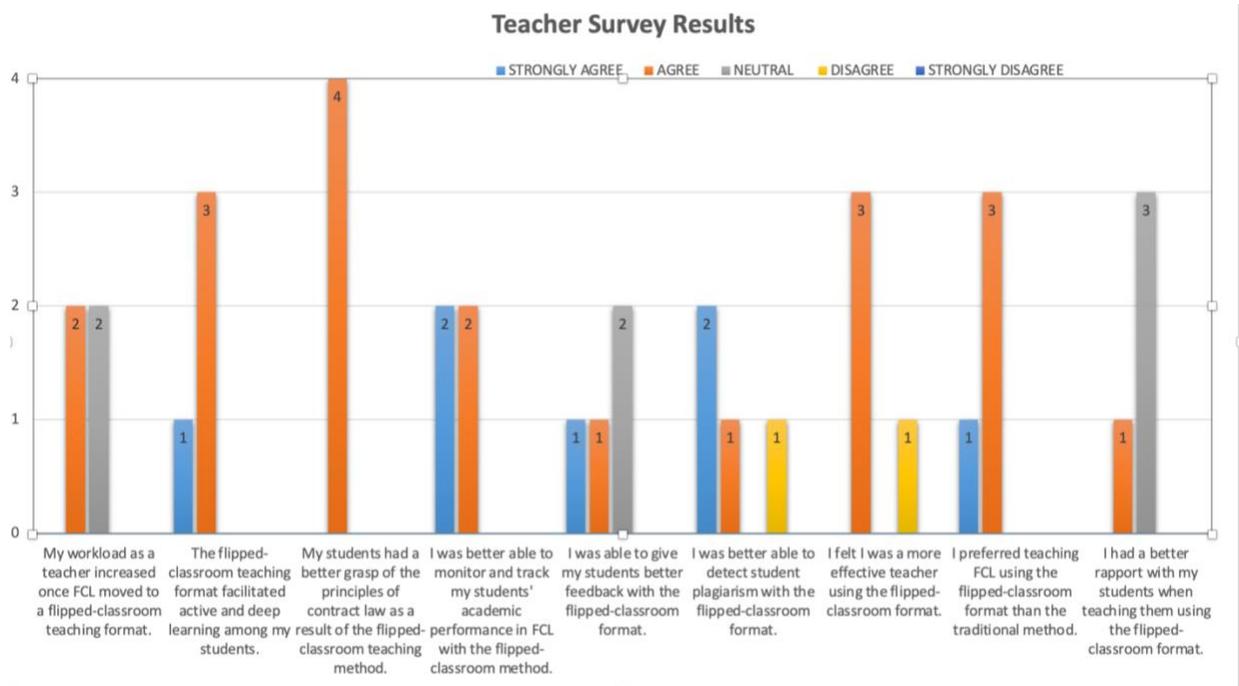
⁷³ Student response, translated from the original German (2019).

⁷⁴ Student response, translated from the original German (2020).

5.2 Teacher responses to the new format

As FCL is team-taught, the support of all four teachers involved in tutoring the course regarding the change in the instructional format was essential. The authors' aim was to support the teachers so that they felt comfortable with the new mode of delivery and enthusiastic about the hi-tech revamp of the course. Thankfully, it became apparent from informal discussions in departmental meetings that all the teachers involved in teaching FCL were comfortable users of technology and willing and able to adapt to the new teaching format without undue difficulty. They enthusiastically put it into practice, both in the physical classroom and online.

In August 2021, after the course had been taught using the new format for some three years, the authors conducted a survey to gauge teachers' attitudes to the flipped-classroom instructional method using a five-point Likert scale questionnaire in which 1 indicated "strongly agree", 2 "agree", 3 "neutral", 4 "disagree", and 5 "strongly disagree". Nine statements were put to the teachers regarding the effectiveness of the flipped-classroom teaching format.



With regard to the statement "My workload as a teacher increased once FCL moved to a flipped-classroom teaching format", two of the teachers agreed with it and two were neutral. Thus, it seems clear that the flipped-classroom format may involve additional preparation time for some teachers. Indeed, in this regard one of the teachers made the following comment:

"The flipped classroom model entails some extra work, as I did not record the videos myself, and so needed to watch them and note the content to ensure that there were no discrepancies between what was said in the video, and the cases or points of law that I wished to cover in class. Furthermore, I also needed to review the students' answers to their weekly assignments."⁷⁵

However, an equal number of teachers regarded the additional time involved in watching the online videos and making notes on them as qualitatively and quantitatively similar to the time they would normally spend preparing to deliver material in class using a more traditional teaching format.

⁷⁵ Teacher 4.

The teachers were all in strong agreement that the flipped-classroom method promoted active and deep learning among students. In response to the statement “The flipped-classroom teaching format facilitated active and deep learning among my students”, three teachers agreed, and one strongly agreed. The teachers’ comments reflect their positive view of the quality of in-class learning that had taken place in the flipped course:

“My overall experience using the flipped-classroom format is extremely positive. The format has facilitated deeper learning and enabled us to engage students in more activities and more thorough discussions.”⁷⁶

“The new format allowed me to spend more time in class talking with students and addressing their specific conceptual difficulties.”⁷⁷

“The new format allowed for greater flexibility as students had already been primed for the class content. Discussions in class were more informed.”⁷⁸

“The [format] is something I would like to implement on some of my own courses, as it allows more time for discussion and case studies in class... On the whole, I really liked... being less “rushed” in class, so that we could do the case studies in more depth.”⁷⁹

However, one of the teachers noted that the flipped-classroom method might not be suitable for some students’ individual learning styles:

One aspect to bear in mind however, is that not all students learn effectively when watching a video on their computer (or even iPad) and answering questions immediately after. Some students said that they found it difficult to recall the content of the videos in this way, or found themselves distracted by emails/messages/other thoughts. They felt like they were more likely to make notes in class, than in the video/assignment format.”⁸⁰

The teachers were also asked whether they felt that the flipped-classroom method assisted students in their grasp of the substantive law. With regard to the statement “My students had a better grasp of the principles of contract law as a result of the flipped-classroom teaching method”, all four teachers agreed that this was so. There an especially instructive comment in this regard:

“The format particularly enables us to check and reinforce content learning, rather than present content for the first time, work on it, and then simply move on... For me personally, I appreciate being able to address individual points in greater detail that may demand more attention, based on the experience and feedback of students. In the traditional format this would not always be possible to such an extent.”⁸¹

All the teachers felt the flipped-classroom method and, in particular, the online assessments were extremely helpful in monitoring and tracking students’ performance in the course. In response to the statement “I was better able to monitor and track my students’ academic performance in FCL with the flipped-classroom method”, two teachers strongly agreed and two agreed. Comments from two of the teachers illustrate how the online teaching method assisted in this regard:

“I like that I was able to monitor whether my students had completed the homework tasks.”⁸²

“Furthermore, I also needed to review the students’ answers to their weekly assignments. However, this review aspect is, in my opinion, one of the major advantages of the flipped classroom model: I was

⁷⁶ Teacher 1.

⁷⁷ Teacher 2.

⁷⁸ Teacher 3.

⁷⁹ Teacher 4.

⁸⁰ Teacher 4.

⁸¹ Teacher 1.

⁸² Teacher 3.

able to see which questions gave the students difficulties and then directly address those points of law in class.”⁸³

With regard to the statement “I was able to give my students better feedback with the flipped-classroom format”, the teacher responses were more mixed. One teacher strongly agreed with the assertion, one agreed, and two were neutral. Some teachers were of the opinion that the online software allowed teachers to provide students with tailored, varied feedback:

“The software enabled me to give me varied feedback (eg. voice recordings, more detailed written feedback). The rubric [embedded in the online assessment software] enabled provided more detail regarding the criteria. The annotation tool in the software is not entirely user-friendly.”⁸⁴

Another teacher found that reviewing the online assessments and identifying students’ conceptual problem areas was important for giving oral feedback in class:

“I was able to see [from the online assessments] which questions gave the students difficulties and then directly address those points of law in class.”⁸⁵

It is possible that two teachers were neutral with regard to the question of improved feedback given that the main assessments in the course are two written assignments and a class presentation. While the written assignments are submitted and graded using the online assessment software, the process of grading has largely remained unaltered from how it was done when the course was taught conventionally. However, as noted in a teacher’s comment above, the grading process is now conducted in accordance with a new and more detailed marking rubric.

In response to the statement “I was better able to detect student plagiarism with the flipped-classroom format”, two teachers were strongly in agreement, one teacher agreed, and one disagreed. These varied responses can perhaps be explained by the fact that, while the online assessment software can detect similarities between students’ work, and between a student’s work and material on the internet, sometimes the identified similarities can be misleading. For example, in one assignment students were given a handout they were expected to use extensively to write a legal opinion. As all the students had been using the same material as the basis for their answers, there were very high rates of textual similarities between the students’ responses. Thus, while the software is a very useful tool for detecting textual similarities, teachers must use it intelligently and always carefully peruse students’ work before making any determination as to whether plagiarism has taken place.

With regard to the assertion “I felt I was a more effective teacher using the flipped-classroom format”, three teachers agreed and one disagreed. In general, the teachers seemed to enjoy the flipped format and had a positive experience with it in class, given that students had already been exposed to the topic prior to the class and were able to engage more fruitfully with the teacher’s questions about it. The view of one teacher that the flipped method had not made him/her a more effective teacher could possibly be explained by the difficulties associated with the learning styles of individual students. It might be more difficult to teach a student effectively using the flipped method if that student prefers more traditional face-to-face instruction and to be provided with conventional written reading material.⁸⁶

When faced with the statement “I preferred teaching FCL using the flipped-classroom format than the traditional method”, three teachers agreed with it and one strongly agreed. This response is corroborated by the teacher comments quoted above, in which their enthusiasm towards the new format is very apparent.

Finally, the teachers were asked whether their rapport with the students had improved using the flipped-classroom format (“I had a better rapport with my students when teaching them using the flipped-classroom format”). In this regard, three teachers were neutral about the statement and one agreed with it. It seems that, while the teachers valued having the additional time in class to explain and discuss concepts in more detail, three of them did not feel that this had any effect on the quality of their rapport with their students. It may be that the teachers already felt confident that their rapport with their students was good, and therefore that the additional time to engage with the students more personally and informally did not materially have an impact on this aspect of their teaching. However,

⁸³ Teacher 4.

⁸⁴ Teacher 3.

⁸⁵ Teacher 4.

⁸⁶ As noted above, transcripts have been embedded beneath the videos to accommodate the needs of students who learn better by reading rather than watching the content.

one teacher specifically mentioned that improved rapport with students was a beneficial by-product of the new teaching format:

“The new format allowed me to spend more time in class talking with students and addressing their specific conceptual difficulties. The additional class time also meant that I was able to build a better rapport with my students. I enjoyed contact time with my students more because I did not have to orally explain in great detail new concepts to the class.”⁸⁷

5.3 Covid-secure teaching

The new teaching methodology also had some unexpected but very welcome benefits. With the onset of the Covid-19 pandemic in March 2020, repeated lockdowns meant that the physical teaching aspect of the course necessarily fell away. However, the course continued to retain elements of both synchronous and asynchronous learning. The synchronous aspect of the course now took the form of weekly online live ZOOM⁸⁸ calls. Thus, these sessions effectively replaced the physical classroom and allowed the course to continue in its revised format. Given that much of the course content was already available for the students online when the pandemic arrived, the teachers were more quickly and easily able to convert the blended-learning course to one that was taught entirely online than it would have been had the course remained in its traditional format. In other words, the revised format assisted the teaching team to roll out the course under pandemic conditions more easily, while also delivering an educational product that was both pedagogically effective and Covid-secure.

In addition, certain elements of ZOOM (for example, the polling and breakout rooms features) proved very useful in simulating groupwork activities and in-class quizzes in a virtual setting. For example, quizzes were adapted for the ZOOM polling feature, generating a real-time feedback-loop for the teacher during the virtual class and providing him/her with the opportunity to clear up any misconceptions immediately. The polling feature is inherently interactive and also stimulates law students' competitive natures. A teacher's use of the polling feature can be a good means of effectively “waking up” a class in which the teacher can see that the students' attention and energy are beginning to wane. Furthermore, the breakout room feature allows students to be divided into groups and allocated to smaller virtual sessions where they can discuss assigned case studies in a more intimate setting, allowing for fruitful peer-to-peer learning. The teacher can then enter these smaller sessions and provide students with tailored and more personal guidance and advice.

6. Conclusion

The authors are confident that the flipped-classroom format greatly improved the effectiveness of FCL, given that the overall satisfaction of both students and teachers involved in the course was plainly much enhanced as a result of its adoption. The easy availability of the flipped content enabled students to prepare productively in their own time for class discussions, which improved the quality of classroom interactions and maximised overall student and teacher enjoyment of the course. The video content coupled with the weekly online assignments reinforced the content of the course and provided flexibility to students who had missed a class. In addition, students who had failed to adequately understand the legal principles, or simply wished to review key concepts in his/her own time, were better able to do this in the new blended-learning format. Furthermore, teachers could maximise the benefit of contact time with students and establish a better rapport with them. From the student standpoint, the move towards active learning empowered them to take a more hands-on approach to their learning and be more than mere passive recipients of legal information in class.

However, a blended-learning format may not be appropriate for students with limited internet access or for whom internet access is inordinately expensive.⁸⁹ In addition, a partially online format may not be suitable for learners who for whatever reason find the technology intimidating.⁹⁰ Furthermore, given that our research shows that not all students respond positively to blended learning, course convenors should ensure that the final course design contains a careful balance between synchronous physical/virtual classroom teaching and online elements,⁹¹ to enable teachers to establish a sound rapport with their students. Indeed, in this regard the authors would suggest that the first two

⁸⁷ Teacher 2.

⁸⁸ <<https://zoom.us/>> (accessed 19 April 2021).

⁸⁹ Unfortunately, this remains the case in large swathes of the developing world.

⁹⁰ For example, mature students and other digital immigrants.

⁹¹ See Polding, *supra* note 49, at 62.

weeks of the course take the form of largely conventional synchronous physical/virtual classroom teaching. In addition, given that some Generation Z students remain wedded to conventional teaching methods, outsourcing key course content to online videos or other blended-learning modalities should always be supplemented by careful in-class consolidation by the teacher concerned. It is also crucial that in-class tasks and weekly homework assignments are constructively aligned with the content of the video content, and that the teacher carefully works through the material in class to activate the production of knowledge in a structured manner. Thus, the flipped classroom and blended-learning approach, while useful and inspiring for both students and teachers alike, ultimately cannot replace the involvement of a knowledgeable, committed and engaged teacher in the learning process.⁹² Accordingly, in the final analysis blended learning should be considered as a teaching strategy which complements rather than supplants the role of the traditional classroom teacher.

Nomenclature

ABOUT CAMPUS	<i>About Campus: Enriching the Student Learning Experience</i>
DENVER U.L. REV.	<i>Denver University Law Review</i>
ELAW J.	<i>Murdoch University Electronic Journal of Law</i>
ENGLISH SPECIF. PURP.	<i>English for Specific Purposes</i>
IJET	<i>International Journal of Emerging Technologies in Learning</i>
IJ-SOTL	<i>International Journal for the Scholarship of Teaching and Learning</i>
IND. L. REV.	<i>Indiana Law Review</i>
INT. REV. RES. OPEN DIS.	<i>International Review of Research in Open and Distance Learning</i>
INT. J. INF. EDUC. TECHNOL.	<i>International Journal of Information and Education Technology</i>
J. LEGAL EDUC.	<i>Journal of Legal Education</i>
LEGAL EDUC. REV.	<i>Legal Education Review</i>
LIM	<i>Legal Information Management</i>
MACQUARIE L. J.	<i>Macquarie Law Journal</i>
MCGEORGE L. REV.	<i>McGeorge Law Review</i>
ON THE HORIZON	<i>On the Horizon: The Strategic Planning Resource for Education Professionals</i>
SOUTHWEST. J. INT. LAW	<i>Southwestern Journal of International Law</i>
TO IMPROVE THE ACADEMY	<i>To Improve the Academy: A Journal of Educational Development</i>
U. ARK. LITTLE ROCK L. REV.	<i>University of Arkansas Little Rock Law Review</i>

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⁹² See *id.* at 60.

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ZAN SUBSTRATUM IN WESTERN GEORGIAN PHYTOTOPONYMS

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Abstract

In the vocabulary of the western dialects of the Georgian language layers of the Zan language (Megrelian-Laz) are tangibly represented, which is qualified in the specific literature as a *Zan substratum*. Substratum is the trace of the defeated (foreign or related) language in the toponymy of the victorious ethnos as a result of the mixing of languages, thus, for example: Zan substratum in the toponymy of South-West Georgia; Svan substratum in the toponymy of mountainous Samegrelo, etc. In the substratum material, phytonyms of Zan origin and toponyms obtained on the basis of phytonyms (phytotoponyms) attract our attention. The interrelationship of Georgian toponyms and phytonyms is multifaceted: The etymology of a significant part of the toponyms is related to the names of plants and vice-versa; models of naming or word formation of phytonyms and toponyms are often similar; toponyms store the layers from different times, reflecting the vocabulary of plants. The names and toponyms of plants of ancient origin play one of the main roles in the study of such an issue as determining the first residence of ethnic groups according to linguistic data. The study of geographical names named on the basis of phytonyms (phytotoponyms) provides us with valuable information not only about the flora of certain geographical area, but also about the economic and cultural conditions of its population. The article deals with the phytonyms of Zan origin: *marqvali, jashkuta, okralo, otkachua, okhokua* as well as the phytotoponyms: *tsipori, bilantsro, chkonagora, olughi, ochikarti, ochinari, otopnara, ochorchkhine*. The structural-semantic analysis of phytonyms and phytotoponyms of Zan origin confirms that their naming and word formation models are similar. In addition, important aspects are highlighted: 1. Hybrid (Zan-Georgian) production; 2. The distinctive role of the Zan **o**-prefix.

Keywords: Zanisms, substratum, linguistics, phytotoponyms, etymology, toponymy

1. Introduction

Linguistic material is often crucial for reconstructing important details of ethnic history. The language reflects the reality and preserves such information, which fulfills the duty of the historical source in the absence or lack of written historical sources about the appropriate historical period. Therefore, it can be safely said that language is an infallible chronicler that needs proper reading and relevant analysis.

In this respect, the substratum confirmed in a certain language is an exceptionally interesting material, since, as mentioned, the substratum is the sedimentation of a certain language or dialect in another language (or dialect). When two or more languages (dialects) come into direct contact with each other as a result of the migration of peoples, this leads to the mutual influence of these languages (dialects), which manifests itself in the form of divisions throughout the existence of the language (dialect). During the change of generations, the encountered language is forgotten, and only some of its phenomena are reflected in the form of a layer (substratum) in the newly established language. Both related as well as genetically different languages may come into such contact (Jorbenadze 1989:89-90).

In the vocabulary of the western dialects of the Georgian language, the layers of the Zan language (Megrelian-Laz) are tangibly represented, which is qualified in the specific literature as a Zan substratum.

In the substratum material, phytonyms of Zan origin and toponyms obtained on the basis of phytonyms (phytotoponyms) attract our attention, since: a) It is noted that the names of plants are one of the most diverse, rich areas of the vocabulary of the language, and a part of it belongs to the basic lexical fund of the language, and in the study of such an issue as determining the first place of residence of ethnic groups according to linguistic data, this material is assigned one of the main roles. In this regard, it is valuable not only to study the etymology of ancient phytonyms, but also to confirm substrate phytonyms in the vocabulary of this or that language (dialect); b) By means of toponyms, the boundaries of ancient settlement of peoples are established, because the designation of territories by the names of plants comes from ancient times; c) The study of geographical names named on the basis of phytonyms (phytotoponyms) provides us with valuable information not only about the flora of certain geographical area, but also about the economic and cultural conditions of its population; d) Toponymy, including phytotoponymy, is an exceptionally stable field of vocabulary that firmly preserves the substratum material; e) The interrelationship of Georgian toponyms and phytonyms is multifaceted: The etymology of a significant part of the toponyms is related to the names of plants and vice-versa; models of naming or word formation of phytonyms and toponyms are often similar; toponyms store the layers from different times, reflecting the vocabulary of plants.

2. Structural-Semantic Analysis of Zan Phytonyms

In the western Georgian dialects, there is a set of phytonyms, whose linguistic formation has traces of Zan (Megrelian-Laz) language and the motivation of their naming can be determined only by the data of the Megrelian-Laz language. Here are some examples:

Simple forms. Rarely, but still, phytonyms of Zan origin are confirmed in a simple form, for example, the name of mushrooms in Adjarian - **Marqvali/a** (= Caesar's Mushroom *Amanita caesarea* (Scop.) Pers, Meadow Mushroom *Agaricus campestris* L., Horse Mushroom *Agaricus arvensis* Schaeff.) (Makashvili 1961, Nizharadze 1971). **Marqvali** is a Megrelian-Laz name for egg. It is noted that "in Megrelian, this word is almost everywhere replaced by egg... but in the name of "Caesar's mushroom" *Markvalish-guri* this root is preserved: Markvalish-guri - "egg yolk" (Chikobava 1938:110). The motivation for naming **Marqvali/Marqvala** is related to the shape and color of the mushrooms (egg shape and yolk color). Cf., also other synonymous names for Caesar's Mushroom (Nikvi): **Carsar's Mushroom Egg** (Lower Imereti), **Egg Mushroom** (Imereti, Guria); **Egg-Yolk** (Orbeliani 1991, Chkonia 1910), **Mushroom Egg** (Eristavi 1884, Chubinashvili 1984). The Zan name used for the mushroom (**Marqvali**) in Georgian will have the -a suffix, which renders names phyto-meaning (Cf., **Marqval-a**), whereas the modifier-modified *Markval-is gur-o* is of the so-called hybrid formation – the origin of the components' roots is Zan while the derivation is Georgian (-is sign of possessive case and derivational suffix -o).

Compound Forms. In lower-Imeretian and Gurian dialects the plant silk-vine *Periploca graeca* L. is called **ჯაშკუტა** **Jashkuta** (Makashvili 1961). The name is confirmed in old Georgian dictionaries too: „Jashkuta (tree) silk-vine” (Orbeliani 1993, Eristavi 1884, Chubinashvili 1984). There are also phonetic variations: **Jashakura** (Chubinashvili 1961), **Jashkura** (Chubinashvili).

The phytonym **Jashkuta** (*/jashakura/jashkura*) is considered to be of Zan origin and accepted with the phonetic modification of Megrelian **Jashqvidu** name (**Jashqvidu** is still confirmed today as the Megrelian name of Silk-vine). Various ways of acceptance have been considered. Our suggestion is as follows: Megr. Jash+shqvidu > *Georg.* Jashqudu > Jashqud-a > Jashkut-a (Jashkura/Jashakura), where *Megr.* Ja(l) – dzel-i (i.e. “pole”) and shqvidu – “suffocating”.

It is significant that the Georgian names of plants are often composites of this kind of construction: I component (modifier) is a noun in possessive case and II component (modified) is a subjective participle, lastly – a derivative suffix is added to the entire compound word, e.g. *Georg.* **Shindimatsilobela** (<*shind-is+matsilobel-a*). Motivation of the phytonym **Jashkuta** (<*Jashqvidu*) relates to a peculiar feature of this plant – the ability to entwine and fade trees by “choking”.

Derived Forms. Derivative roots are formed with o-o and o-u-a confixes. One set of phytonyms is distinguished, which are represented by the o-prefix of Zan origin. This o- is similar to the Georgian *sa*-prefix of purpose and is a very productive prefix in Zan: In Megrelian, together with certain suffixes, it forms names of place, destination, weapon,

and future participle (Kipshidze 1994:181), in Laz it can be found with verbal noun or participle (Chikobava 1953:45). The purpose-denoting words beginning with the Zan *o*-prefix were successfully established in literary Georgian as well, which was also reflected in EDGL – Explanatory Dictionary of the Georgian Language.

We assume 3 ways to produce phytonyms derived with *o--o*, *o--u-a* confixes:

I. *o-o*: *o-ser-o*, *o-ghval-o*, *o-knato* (Gur.), *o-shosh-a/o/e* (Imer., Gur., Rach., Lechk.), *o-kral-o* (Imer.), *o-mtxvar-o* (Imer., Lechkh.) These forms are derived with the Zan *o*-prefix and the Georgian-Zan *o*-suffix. The latter is confirmed in the Georgian *sa-o* (sa-balakh-o) and Zan *o-o* (o-pich-o) confixes.

II. *O-u-a*: *O-khok-ua*, *O-lagh-ua* (Imer., Gur.), *Okralua/ue* (Imer.)

Here, the purpose-denoting name derived with the Zan *o*-prefix and the Georgian-Zan *o*-suffix is added appended with the Georgian *a*-suffix, and the derivational root (noun, participle) may be Georgian as well, e.g.: *o-kral-o* >**o-kral-o-a* >*o-kral-u-a/o-kral-u-e* (Imer.) (=Ujangari *Artemisia annua* L.). Here the base is Georgian (*m*)*kral-* ("Mkrali – "something that stinks, has a bad smell" - EDGL). The motivation for naming the phytonyms *Okralo*, *Okralua/e* is the unpleasant, pungent smell of the denoted plant. (Cf., other synonyms of the plant: *Tush. Mkrala*, *Kakh. Mkrala*, *Mkrala-balakhi*; *Z-Imer. Krala-balakhi*, *Q-Imer. Krala-krala*, *Lechkh. Momkralue* (N. Khocholava 2000).

III. *O-u-a*: *Otkachua*, *Onjakhua*, *Okhatua* (Gur.), *Okhotua* (Achar.) Future participle with Zan *o-u* derivatives is added with phytonym-forming *a*-suffix.

The motivation for naming these phytonyms is related to the features and purpose of the denoted plant, e.g. *o-ktach-u-a* (= Ontkofa *Physalis*) means "crackling", which is related to the peculiarity of the fruit of this plant - the fruit, placed in its inflated red cup like a balloon, bursts when ripe and emits the crackling sound.

As it turned out, the derivation of the above-mentioned phytonyms is Zan-Georgian (hybrid), because here a Georgian *a*-suffix is attached to the purpose-denoting noun or participle formed with a Zan prefix (*o-*) and a Zan-Georgian suffix (*-o*), or a Zan prefix-suffix (*o--u*). Phytonyms of this Zan (or Zan-Georgian) formation express the use-purpose-property of the denoted plant. The mentioned forms are confirmed in the western dialects of Georgian, but are not seen in Zan proper, in turn, where the purpose-use phytonyms formed with the *o*-prefix and *-ia*, *-aia*, *-e*, *-al* suffixes are tangible: *Megr. o-khokh-ia*, *o-kharkal-a-ia*, *Laz. o-sul-e*, *oh-kos-al-e...*

The mentioned production (the *a*-suffix added to the noun of the purpose or the participle of the future tense) is a morphological change of the Georgian phytonyms of similar form: *Imer. Sa-machr-i-a* (< sa-machr-e-a), *sa-skhep-i-a* (*Mokh.*, *Mtiul.*), *sa-ptsqvn-el-a* (*Kakh.*), *sa-tsovar-a* (*Rach.*, *Lechkh.*).

The semantics of these derived phytonyms is often obscure (*onjakhua*, *olaghua*, *oncho*, *osero...*), although it becomes possible to specify it as a result of some investigations. For example, in Gurian and Imeretian, we have phytonyms of Zan derivation: *Okhokua*, *Okhakua/e* (=ordinary burdock *Arctium lappa* L.). The motivation behind the naming of these plants seems unclear. In the derived form, we can single out the derivative roots of *Khok*, *Khak*. In addition, *Khok* is confirmed in the Imeretian names of a completely different plant (=Jimsonweed *Datura stramonium* L.), but not with Zan but Georgian formation, Cf.: *Khok-i*, *Khok-ina*, *Khok-ana*, *Khok grass*. We note that the name Khoki can be found in Georgian with several meanings (N. Khocholava-Machavariani, 2000); This time, its following meaning is noteworthy for us: "*Khoki* is a kind of disease of domestic animals (primarily pigs and buffaloes)" (EDGL). We believe that the name of the animal disease is the origin of the Imeretian names of the Jimsonweed (*Khoki*, *Khokina*, *Khoki grass*). It appears that this plant was used for the treatment of certain diseases of cattle, which is clearly expressed by its Megrelian descriptive names: *Chkhoushi chirishi tsamali* "cow plague medicine", *Qvapushi tsamali* "pig disease medicine". The same can be said about the phytonyms of Zan origin of our interest (*Okhokua*, *Okhakua/e*). Here, too, the derivative root *Khok* (*/khak*) should refer to the name of the disease ("*Khok*"), and the full derived name *O-Khok-u-a* (the name of the purpose + the phytonym-forming *a*-suffix) is the purpose name of the of the Zan-Georgian formation (*O-Khok-u-a* < *o-khok-o-a* < *o-khok-o*). It is of exactly the same origin and expresses the same semantics as another, fully-Georgian formaton name *Sa-khok-i-a* (=dog's tongue *Cynoglossum officinale* L.), i.e. "Intended for Khoki". It should be noted that this last phytonym is somehow confirmed only in Megrelian and it seems to be a Georgian borrowing.

3. Structural-Semantic Analysis of Zan Phytotoponyms

Designation of territories by plant names dates back to ancient times. Phytotoponymy reflects the noteworthy process of people's knowledge of the world of plants, perception of the environment, evaluation and naming. Phytotoponyms are tangibly presented in the toponymy of the Kartvelian languages. We are interested in

phytotoponyms where the Zan substratum is confirmed. Such forms, as we mentioned, are found mainly in the western dialects of the Georgian language. We will present here the structural-semantic analysis of some of them.

Simple Forms. Simple-root phytotoponyms are the oldest layer of toponyms. These are the names of plants, which are named directly, without the derivation, to a certain geographical object and they often name the vegetation that is widespread (or previously existed) there. As indicated, "the names of plants presented without descriptive affixes and denotative words, are very often confirmed in the role of names of large populated places in singular form, in the entire territory of Georgia and include the area of distribution of all three Georgian languages (T. Gvantseladze, 1998:102-105). According to our material for analysis, the names of the plants mostly refer to small geographical areas, while the same phytotoponym may refer to different places. Examples:

Tsipori (Adjarian) - mowing, pasture, arable land. This is the Zan name of the well-known tree (Beech *Fagus*), cf., *Megr.* "Tsipuri – Tsipela *Beech*" (Kobalia 2010); *Laz.* "**Tsipuri/Tsipri** - Tsipela" (Tandilava 2013). The mentioned areas are still rich in beech forests.

Bilantsro (Adjarian) – pasture, slope. In the Machakheli gorge, one of the species of the fern is called **Bilantsro**. Also, in Georgian dictionaries, we have the following names for one of the fern species: **Blentsara** (I. Bagrationi, N. Chubinashvili, D. Chubinashvili) and **Blentsnara** (S.S. Orbeliani, R. Eristavi, D. Chubinashvili) (=mountain fern *Dryopteris filix-mas* (L.) Schott). We also have **Bilontsa** in Laz, cf. "**Bilontsa** - a type of fern" (Tandilava 2013). In A. Makashvili's "Botanical Dictionary" it is presented as a list of common names of ferns (Al. Makashvili, 1961; Z. Tandilava, T. Narakidze, 1986: 94). In the toponymy of the Machakheli gorge, **Sabilansro** (forest, pasture) is also confirmed. We think that the phytotoponym **Bilantsro** confirmed in the Machakheli gorge comes from the Laz name of the fern, and is its phonetic version. We do not exclude that this is a Laz borrowing and not a substratum, because it is believed that the current indigenous population of the Machakheli gorge lived here historically and was a linguistic group speaking on the Georgian dialect.

Compound Forms. Chkonagora (Gur.) - a village in Guria. Phytotoponym **Chkhonagora** is created by combining two words. Here, the first component **Chkoni** is the Zan name of the oak tree (*Quercus*), cf.: *Megr.* "Chkoni - oak", "Chkoni - oak" (Kobalia 2010); *Laz.* "Chkoni/Mchkoni/Mchoni - oak". It is believed that the regular correspondence of the Zan **chkon**-root is Georgian **tskan-/tskn-**, which is confirmed in a number of Georgian toponyms (Arn. Chikobava, 1938: 128). The second component ("**gora**"-"hill") is Georgian, cf.: "hill - a round elevated place; small mountain, big hill" (EDGL). We assume that the "sacred oak tree" should have stood in the elevated place mentioned by this phytotoponym, where the local population went to pray, to perform certain folk rituals. This kind of thing is confirmed in the entire territory of historical Georgia (Bardavelidze ///).

Derived Forms. O-prefix formation. In word-formation models, prefix derivation seems the ancient one. These are the forms made with the Zan o- prefix of purpose, which are found only in the names of small places, fields, or pastures. Examples:

Olughi (*Achar.*) - hayfield. Here, the root **Lugh-** is Megrelian-Laz origin and refers to the fig tree (*Ficus carica* L.), cf. *Laz., Megr.* "**Lughi** - fig" (Tandilava 2013; Kobalia 2010). It is believed that **Lugh** is secondary in common Zan, it should have been (<***loghu-**). For the period of Georgian-Zan unity, the ***laghu-** archetype is restored (T. Gudava 1960: 122, Z. Sarjveladze 2000: 302). We share a different opinion, according to which the common Georgian archetype ***lagh** is restored, respectively: *Kart.* **Leghv-i** (<**lagv-i**), *Zan.* **Lugh-i**, *Svan.* {**Laghu**}, *Ma-Gla* (M. Chukhua 2017).

The phytotoponym **o-lugh-i** is *Kart.* "**Saleghve**, a place for fig" (N. Akhvlediani, 2009:21).

Ochikarti (*Achar.*) - pasture. The origin of this phytotoponym seems to be the name of the plant **Chikart-a**. It is confirmed in the Kiziki dialect (Al. Ghlonti 1985; S. Menteshashvili 195//), and we have the form **Chikarti** (*Veronica polita* Fr.-Fr.) as a scientific name in Al. Makashvili's "Botanical Dictionary" (1962).

Thus, **Ochikarti** is a Zan form, where the derivational root **Chikart-** is Georgian, and the purpose o-prefix is Zan. It is interesting that the **Chikartana Ghele** is recorded in the Khulo region (M. Kamadadze, 1992:142). Here the root **Chikart-** is added by **-an-a**.

O--ar, o--nar-a, o--e prefix-suffix formations.

Ochinari - garden. The root of this phytotoponym is **Chin-**, which is Zan, cf.: *Megr.* "**Chin-i** rod, whip" (Kobalia 2010); *Laz.* "**Chunu** - a stick with which they weave a fence, see **Chinu**", "**Chinu, Chino** - rod" (Tandilava 2013). Megrelian **Chin-/Chun-** and *Laz.* **Chin-/chun-** roots can be singled out, whose Georgian counterpart is **tsan/tsn** (da-v-**tsan**, **tsn-el-i**) (H. Fenrich, Z. Sarjveladze 2000: 660). The formation of this phytotoponym (**o-chin-ar-i**) with a Zan derivation root is also of Zan origin: **o-** prefix and **-ar** suffix can be distinguished (N. Akhvlediani, 1998:91). It should refer to the Georgian "**satsnele**". From the point of view of this semantics, an interesting lexical unit is *Megr.* **Ochinue**, which is "a grove of new forest, a thicket, a thicket of slender trees; forest for producing rods" (Kobalia 2010).

Otopnara (*Achar.*) - tea plantation. **O-** is a prefix of Zan origin, as for the **-nar** suffix, as it is known, in Georgian it is attached to the root of the plant name and denotes the place where this plant is found abundantly (A. Shanidze, 1973:130). Cf.: *Tkhemlnari* (alder forest), *Kopitnari* (ash-tree forest), *Ipnari* (ash-tree forest), etc. We assume **Topur-** as a derivational root, which is the name of a herbaceous plant in Megrelian (=Clover *Trifolium*, Red Clover *Trifolium pratense* L.). Adding the complex suffix **nar-a** to it should have caused the reduction of the root element **-ur**: **otop-nar-a** < **otopur-nar-a** < **o-topur-i**.

Ochorchkhine (*Achar.*) - stream. Zan-language layer is confirmed in Dekhva valley. In particular, the village of Dagva has an outlying district called "Lazistani". The informants remember the old name of this part, **Tkhelvake/Khelvake**, and note that this place received the new name "Lazistani" not so long ago (T. Kukuladze, 1981:50-51). The forest next to "Lazistani" is called "Ochorchkhine forest", which is a product of Zan origin with the prefix **o-** and means "broom forest". According to the locals, the "broomcorn", a plant used as a broom, grows here.

We believe that this is a phytotoponym of Zan origin, where the derivation root **Chorchkh-in** can be singled out, cf.: *Megr.* "**Chkhorchkhi** – laden abundantly" (Kobalava 2010); *Laz.* "**Chorchkhoia** – laden abundantly" (Tandilava 2013). The word "**Chorchkhi**" is still used in the Dekhva valley and refers to a large broom made of leafy plant stems, which is used to sweep the yard and the area around the house, whereas the one used for sweeping the room was usually called **tsotskhi** "broom". If we take into account the correspondence of Megrelian-Laz and Georgian consonants, we have a complete identity between the roots: **chorchkh/tsotskh**.

As for the **o--e** affix of purpose, it is mentioned in the specific literature that "**o-** prefix (alone or together with **-e** suffix) can indicate: 1. a place where there is a set of the same type objects, or 2. a place that is intended for something, designated... an object, a thing that is for someone or is intended for something, designated...(EDGL). From the point of view of compatibility, pure Laz-Megrelian formation would be **o—a** derivation, but we have a contaminated, hybrid affixation: **o--e** (**o-** corresponds to the Georgian **sa-** prefix, and **-e** is assimilated from Georgian)" (Laz-Megrelian Grammar 2015: 162).

The phytotoponym **Ochorchkhine** may be derived from: 1. Modifier-modified "**Ochorchkhinesh Ghele**", where Zan Genitive Case sign **-sh** has been lost, correspondingly, "Satsotske Ghele" (cf. **Okhora** (<**Okhorash Ghele**) - village of Kvatia, **Papakho** (<**Papash Akho**) - place of farming; "**Ochorchkhine Ghele**" was supposed to be the place where the broom plant was obtained; 2. **O-Chorchkhin-e** is a Zan analogue of another phytotoponym confirmed by the Georgian derivational inventory (**sa--e**) and confirmed in Adjara, cf.: "Sa-chorchkh-e" (pasture, forest; Chkhutuneti village - N. Kakhidze, 2020:57). From the point of view of hybrid derivation, phytotoponym **Ochorchkhis Tke** ("Broom Forest") presented in Genitive case modifier-modified form is very interesting, where the first component (modifier) is a Zan derived name formed with Georgian Genitive case sign, and the second component (modified) – is entirely Georgian.

4. Conclusions

The models of nomination or word formation of phytonyms and phytotoponyms of Zan origin are similar. In Georgian dialects, they can be confirmed as phonetically changed (**Jashkuta, Jashkura...**; **Ochorchkhine, Bilantsro...**) or unchanged (**Markvali, Markval-a...**; **Olughi, Ochikarti...**).

A number of phytonyms lost in Megrelian-Laz were preserved by the western subdialects of Georgia in the form of a Zan substratum (**Markvali, Okhokua...**). Zan phytonyms and phytotoponyms of one type singled out in Western Georgian subdialects can be considered as Zan substrata not only on the semantic, but also on the morphological levels, because their prefix-suffix formation (and, to a large extent, the derivational root) is of Zan origin. One important detail is highlighted - the so-called hybrid derivation, in particular: a) the suffix part of phytonyms, phytotoponyms with a Zan root and formed with a Zan **o-** prefix, may be of Georgian origin, i.e. we have a contaminated affixation; b) the Georgian phytonym-forming **a-** suffix is attached to plant names of Zan formation (**o-u-a**) – **Okhokua**. It is significant that such

names are represented only as phytonyms in Georgian and they create a new order in the language system; c) compound names of hybrid composition are also confirmed - one component of the composite is of Zan origin, the other is Georgian (**Chkonagora**).

In the analyzed material, the role of the Zan o-prefix (proved in all forms) is particularly evident. It is a powerful and, also, common derivational inventory for derived phytonyms or phytotoponyms. The purpose of the Georgian phytonym-forming a-suffix is also distinctive: It should have been added to the mentioned phytonyms later for the "Georgianisation"(turning into Georgian) of the already blurred semantics of the Zan name. The formations of phytonyms and phytotoponyms of our interest are often morphological similarities of the formations typical for Georgian. The analysis of hybrid forms is particularly noteworthy in order to assess the amount of substratum, its origin and dynamics of change.

The Zan substratum is significant for western Georgian phytonyms and phytotoponyms. Zan elements can be found with both common (Zan) as well as the lexical material specific to Megrelian and Laz.

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STUDENT'S MOTIVATIONS FOR ENTREPRENEURSHIP (ALBANIAN STUDENTS STUDY CASE)

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Abstract

The entrepreneurship of young people is of a particular importance not only for their future but also for the economic and social future of the country. Based on the Planned Behavior Theory developed by Ajzen as well as on the methodology of GUESSS Project (Global University Entrepreneurial Spirit Students' Survey), this paper focuses on the personal factors that motivate Albanian students towards entrepreneurship. An important focus is given on the evaluation of the perception of students 'career in entrepreneurship as well as their expectations on the results they will achieve through entrepreneurship.

The methodology used is qualitative, based on the GUESSS survey tools. The survey has been distributed to students via e-mail and social media, in total the answers were received from 434 students. The findings of the paper present important recommendations for students to orient themselves in the design of their future careers, universities in strengthening entrepreneurial education and public institutions for creating a pro-entrepreneurship access.

Keywords: students, entrepreneurship, motivation factors, GUESSS survey.

1. Introduction

This paper is based on GUESSS project, which means "Global University Entrepreneurial Spirit Students 'Survey'" and it is one of the largest entrepreneurship research projects worldwide, organized and managed through a cooperation of the University of St. Gallen and the University of Bern. The main research focus is students' entrepreneurial intentions and activities and every 2–3 years a global data collection effort takes place. For every participating country, there is one responsible country team which coordinates data collection in that country. Albania is part of 3 editions in GUESSS and the authors of this paper are part of GUESSS - Albania team. In the 2021 edition of GUESSS, 6 Albanian universities participate:

- 1) European University of Tirana
- 2) Tirana University
- 3) Polytechnic University of Tirana
- 4) "Aleksandër Moisiu" University of Durrës
- 5) Agriculture University of Tirana
- 6) Mediterranean University of Tirana

Below we present some of the reasons that motivate this research project which aims to determine the career choices and goals for student entrepreneurship. We consider this project important in the light of the entrepreneurial university, academic entrepreneurship, joint work with international partners and the creation of a rich database that provide data on the entrepreneurship and economic development of the country.

- Entrepreneurship and innovation are two fundamental pillars in modern economic systems, given that they promote their growth and development. Before technological innovation can influence the economy in any way, a person must first perceive an entrepreneurial opportunity (Shane, 2000)
- One way to promote and motivate entrepreneurial behavior is through the formal education provided by universities, as these contribute to training students with abilities, skills and attitudes aimed at strengthening the entrepreneurial spirit (Guerrero et al., 2016). The role of universities in this direction is growing. Albanian universities are making efforts to work in this direction, as this is aligned with market needs. HEI should not only offer programs dedicated to entrepreneurship but also motivate students to participate in them and aspire to create a favorable environment through support facilities and services (Bergmann et al., 2018). This is increasingly extended the entrepreneurial spirit within universities, not only in study programs that are historically directly related to entrepreneurship, but also in social sciences and humanities, arts, etc.
- The pandemic has impacted human behavior, and from this point of view it is important to have evidence of the students' attitude and business intentions in the pandemic year. This is important for comparative analyses, but also for the future economic projection.
- Globally, there are several studies related to youth entrepreneurship, therefore in the report of 2020-2021 for the Global Entrepreneurship Monitor, another important project states that the entrepreneurs in their initial entrepreneurship phases are more from 18 - 34 years old; age which coincides with the age of students (Global Entrepreneurship Monitor, 2021) emphasizing the importance of students studying entrepreneurial topic.
- Very fast developments in the field of information technology and digitalization, have made hundreds and thousands of products to be "produced" by young people, some turn into startups which grow rapidly and bring great transformations, and some do not succeed. Turning ideas into entrepreneurship requires competence, but initially requires aiming to set up the enterprise.

This paper aims to evaluate personal factors that motivate Albanian students towards entrepreneurship, based on Planned Behavior Theory by Ajzen (1991).

The objectives of the study are:

- to observe the factors that motivate Albanian students towards entrepreneurship;
- to compare the attitude towards entrepreneurship of Albanian students with GUESSS students, as well as active entrepreneurs and nascent entrepreneurs;
- to observe how students feel about their work as entrepreneurs and which skills they perceive as the most important in entrepreneurship

The research question: Which are the personal factors that motivate Albanian students towards entrepreneurship?

The survey of this research paper is based on the model of GUESSS survey, whose foundation is the Theory of Planned Behavior (Ajzen, 1991). The GUESSS survey was distributed via e-mail and social media through the contact person in each university, the sample has 434 students. In this paper, a special attention is dedicated to the comparison of the entrepreneurial intentions of Albanian students with global students and "nascent entrepreneurs" and "active entrepreneurs".

There are *three limitations* in this research paper:

- on line compilation does not allow the stratification of the sample
- 64 % of the sample female;
- comparison with GUESSS due to the size, number of universities for each country, demographics of the sample.

This paper is important for students, universities and public institutions that have and should strengthen their work in relation to youth entrepreneurship. The findings of the paper serve the actors in society to correctly orient their work and policies as well as to have comparative analyzes with developing and developed countries in relation to youth entrepreneurship.

2. Literature and definition of core concepts

The decision to become an entrepreneur is complex and it is the result of intricate mental processes. Many researches on entrepreneurship and innovation focus on the people's intentions to become entrepreneurs, for these reason it is very important to have a better understanding of the relationship and the implication of this concept with the practice of teaching entrepreneurship (Souitaris et al., 2007) and widely develop and enhance more entrepreneurial culture into our society (Uddin & Bose, 2012). The entrepreneurial research has been conducted following two main lines: the personal characteristics or traits of the entrepreneur; and the influence of contextual factors in entrepreneurship (Robinson et al. 1991).

Ajzen's model explains and predicts how the cultural and social environment affects human behavior. It is based on the individual's intention, which is the result of three determinants (Ajzen 1991): the attitude towards the behavior (personal evaluation), the subjective norms (social pressures) and perceived behavioral control (ability to perform the behavior). The theory of planned behavior by Ajzen (1991, 2002) has been frequently applied to explain the mental process leading to firm creation. (Krueger et al. 2000; Krueger 2007; Fayolle and Gailly 2005; Fayolle and DeGeorge 2006).

Some research define entrepreneurial intentions as the commitment to starting a new business (Uddin & Bose, 2012; Krueger, 1993). Entrepreneurship intentions are important variables to forecast entrepreneurship behavior, but researchers could not give a sole definition. Some literature represents notions related to career orientation (Francis & Banning, 2001) and the nascent entrepreneur (Korunka et al, 2003). Such intentions primarily stem from perceptions of the desirability and feasibility of entrepreneurship as a credible career choice (Krueger 1993). Perceived desirability and feasibility are regarded as necessary and sufficient conditions for intentions (Shapero & Sokol, 1982). Perceived desirability is the degree to which one finds the prospect of becoming an entrepreneur to be attractive; it reflects one's affect toward entrepreneurship (Krueger 1993) and depends on an individual's values, which in turn stem from her or his social and cultural environment (Shapero & Sokol 1982). Perceived feasibility is an individual's perceived ability to execute a target behavior—that is, the perceived self-efficacy or the degree to which an individual feels capable of becoming an entrepreneur (Krueger et al. 2000).

Personal skills may also influence entrepreneurial intention (Chen et al. 1998). There is an obvious connection between skills and perceived behavioral control. Those individuals feeling they have a higher level of certain entrepreneurial skills will more probably feel they can create a firm. Besides, it might be argued that a high self-perception regarding entrepreneurial skills would also be associated with more favorable attitudes and subjective norms.

The theory of planned behavior (Ajzen 1991), another commonly applied theoretical framework in the entrepreneurial intentions' context, also sees desirability and feasibility perceptions as key antecedents to entrepreneurial intentions.

Based on the theory of planned behavior (Ajzen, 2002; Fishbein & Ajzen, 1975), behavior outcomes or objectives are influenced by three main factors:

Attitude toward behavior, which reflects desired perceptions from performing a certain behavior. At the very foundation are the convictions about the possible results of a given behavior (for example, choosing to be the successor in the family business) and the expressed aims or orientations are the expression of a positive or negative evaluation of those results (Armitage & Conner, 2001).

Subjective norms or opinion of others, which represent the expected reaction of others (for example, of family members) when a certain action is performed and evaluated based on those expected reactions.

Perceived behavioral control, which refers to the perception of a person's ease or difficulty of performing a certain behavior (Ajzen, 1991). It also includes the concept of enterprising self-efficacy (self-assurance in entrepreneurship skills) and focus of control (the perception that somebody is in control of his own fate) (Ajzen, 2002).

3. Methodology

The theoretical foundation of our paper is the Theory of Planned Behavior developed by Ajzen (1991, 2002). In Ajzen Model the entrepreneurship intentions are defined as projected orientations, similar to desires, hopes, inspirations that influence their choice in entrepreneurship career choice. Our research is focused on determining the factors that motivate Albanian students towards entrepreneurship; comparing the attitude towards entrepreneurship of Albanian students with GUESSS students, as well as active entrepreneurs and nascent entrepreneurs; the measurement of the perception of the feeling of the Albanian students in their work as an entrepreneur and which skills they perceive as the most important. This paper is based on the data obtained through the GUESSS questionnaire, which is based on the following theoretical scheme (fig.1).

The research question is "What are the personal factors that motivate Albanian students towards entrepreneurship?". A special place of focus in "nascent" and "active entrepreneurs" The method used in this paper is descriptive, qualitative.

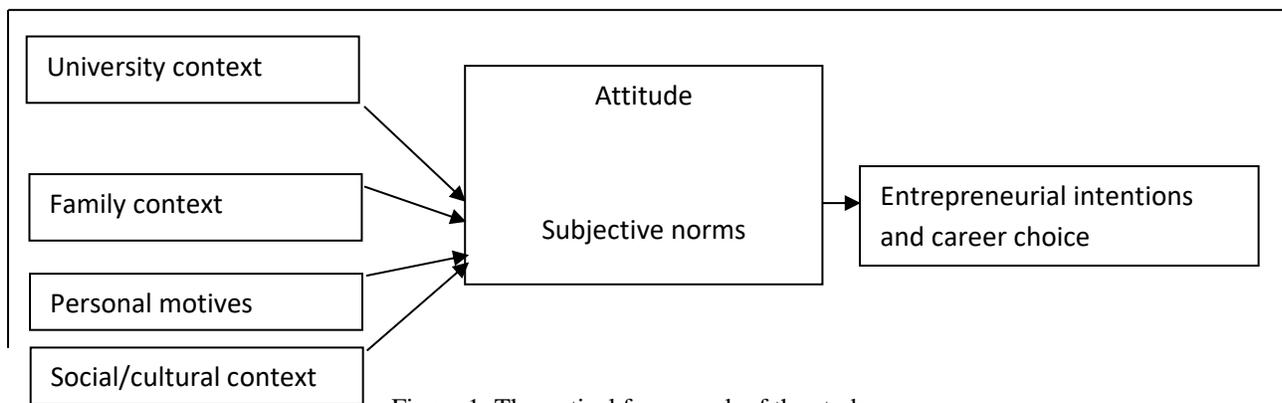


Figure 1: Theoretical framework of the study

Sample of the study and the instrument of research –The instrument of research is the online questionnaire designed by GUESSS organization for Global Report 2021. There are 6 universities participating in the GUESSS project for Albania: European University of Tirana; Tirana University; Polytechnic University of Tirana; “Aleksandër Moisiu” University of Durrës; Agriculture University of Tirana; Mediterranean University of Tirana ; the leading university is the European University of Tirana.

Through the contact person at each university the questionnaire is distributed to via email or through social media to students. The authors of this paper as part of UET have the GUESSS database for Albania. The Albanian sample taken in the study has 434 students.

Student demographics - A closer look at the demographic characteristics of our respondents shows that the majority (64%) of them are female; while the students aged 20-22 years old represent 46% of the sample. The demography of the sample in relation to age is given in figure 2, where it can be seen that 46% are in the age group of 20-22 years. Based at the student characteristics with regard to their actual studies, we note that 60% of all students are undergraduate (Bachelor) students, with 35 % being graduated (Master) students (fig.3). Most of the students in our sample study in the field of Business / Management, Economics / Finance; Engineering / Architecture and Computer science / IT.

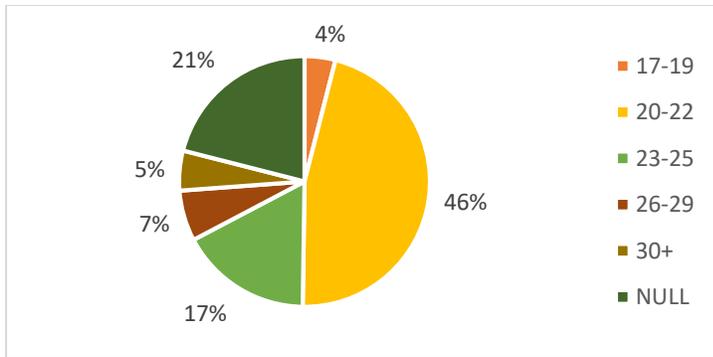


Figure 2: The sample according to the age of the students study

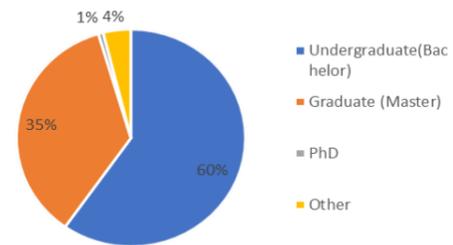


Figure 3: The sample by level of study

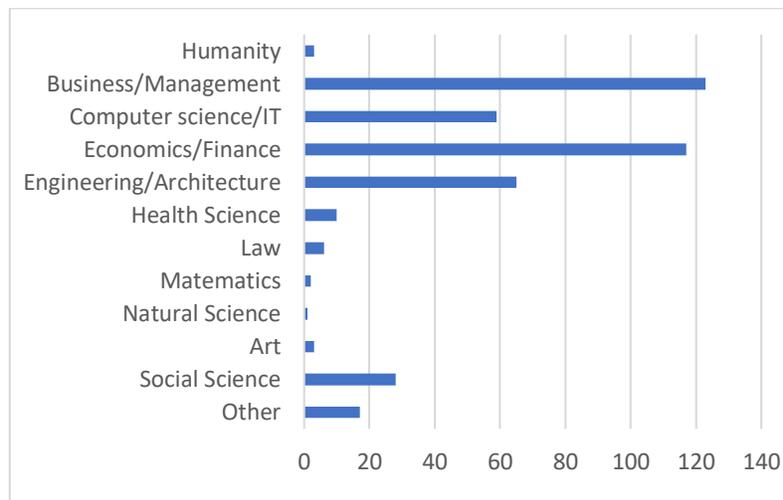


Figure 4: The sample by field of study

The methodology used in this paper has several limitations: first, the completed online questionnaire does not allow for its stratification; secondly, the majority of women in the sample, 64% of the responding students are women; thirdly, the comparison of Albania's results with the average of the GUESSS report has its own shortcomings due to the size, the number of universities for each country, the demographics of the sample, etc.

4. Findings

The most important issue related to the purpose of GUESSS project is the determination of career goals for students at the global level, in the case of the work of Albanian students. The main questions of the GUESSS questionnaire regarding this matter are: What do they want to do directly after finishing their studies, and what is their long-term career plan – 5 years after the study? Students are faced with several alternatives in their career choices, which are presented below: an employee in a small business (1-49 employees); an employee in a medium sized business (50-250 employees); an employee in a large business (> 250 employees); an employee in a nonprofit organization; an employee in academia; an employee in public service; a founder working in my business; successor working in my parent business; a successor working another business; other/do not now yet.

Figure 5 shows the career paths of the Albanian students right after completion of their studies (blue bars) and 5 years later (red bars). Directly after studies, the four most preferred options are “An entrepreneur working in my own company – 27%”, “An employee in a large company- 18%”, “An employee in a medium size company- 15%” and “other/do not know yet- 12%”. 5 years later, the attractiveness toward entrepreneurship increases significantly – 45%.

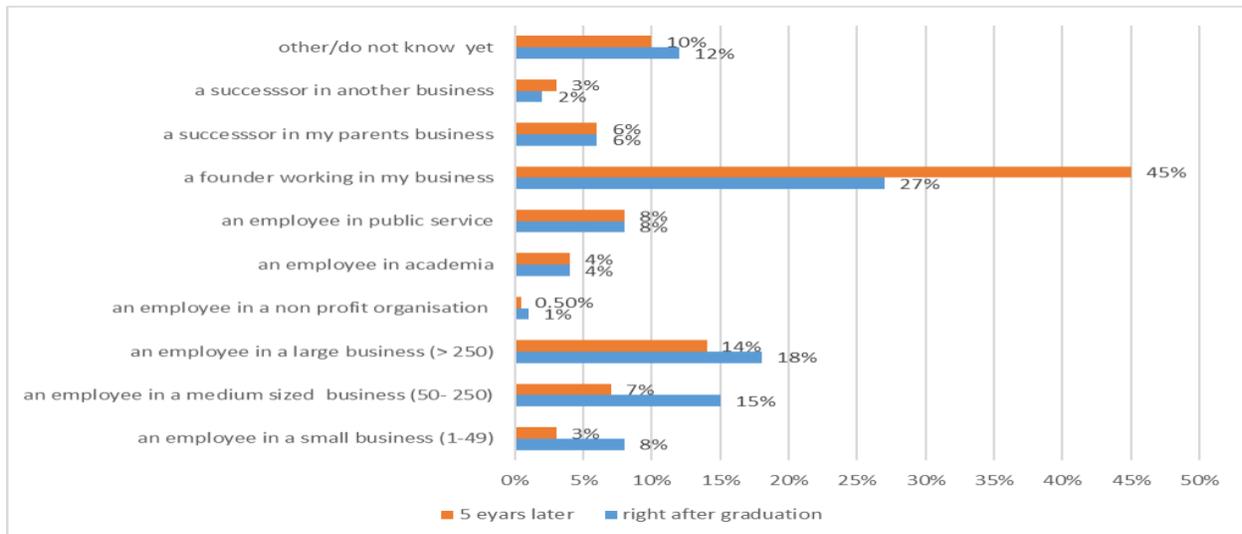


Figure 5: Career choice intentions right after graduation / 5 years later for Albanian students

After we grouped different career options into "Employee", "Founder", and "Successor" and "Other/do not know yet" for Albanian students and received the data for global students from the Global Report 2021 (Sieger, Raemy, Zellweger & Fueglistaller, 2021) in figure 6 the career goals of Albanian and global students "right after graduation" and "5 years later" are compared.

In fig. 6 it is clear that the entrepreneurial intentions of Albanian students are significantly higher than the global average of GUESSS. Albania repeatedly shows the same tendency as other developing countries participating in GUESSS. Although the samples of the 58 countries participating in GUESSS differ in size, number of participating universities for each country, demographics of the student sample, etc.; the percentage of students aiming for entrepreneurship is apparently higher for developing countries than for developed countries. The entrepreneurial intentions of developing countries are usually above the GUESSS average and this is a phenomenon that is repeated in several GUESSS studies (Sieger, Fueglistaller & Zellweger, 2014; Sieger, Fueglistaller & Zellweger, 2016; Sieger et al., 2019).

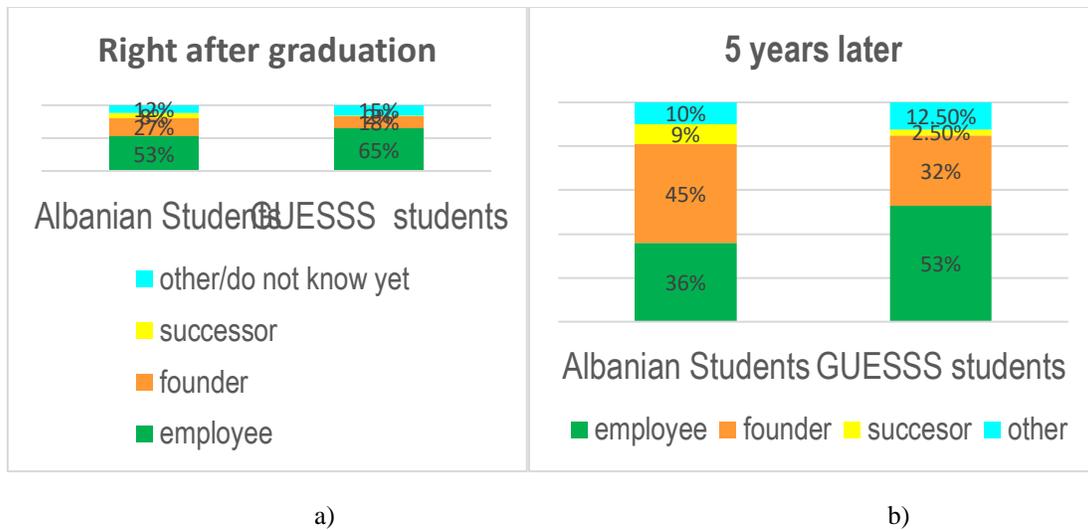


Figure 6. Comparison of different career options between GUESSSS students and Albanian Students

Important concepts of GUESSSS studies are "active entrepreneurs" and "nascent entrepreneurs". Active entrepreneurs means the students already own and run their own business, while nascent entrepreneurs means that students are in the process of creating their own business (Sieger, Raemy, Zellweger, & Fueglistaller, 2021). In fig 7, nascent and active entrepreneurs are presented for the sample of responses of Albanian students. The comparison of the distribution in percentage of "Nascent entrepreneurs" and "Active entrepreneurs" of Albanian students with GUESSSS students shows a tendency very similar to the entrepreneurial intentions of students in developing countries which are high in the ranking, compared to those of the developed countries that stay down. According to GUESSSS Global Report 2021, there are 10.8% active entrepreneurs and 20.4% nascent entrepreneurs

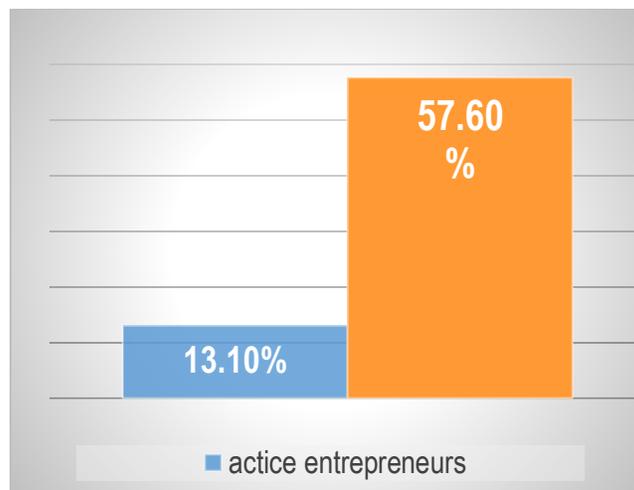


Figure 7. Active and nascent entrepreneurs for Albanian students

Figure 8 shows the number of co-founders of enterprises for Albanian students (a) and global students according to GUESSSS 2021 (b). With a descriptive analysis, we can say that from the point of view of the co-founders, the behavior seems very similar, although the comparison has its limitations due to the size, demographics of the samples, etc.

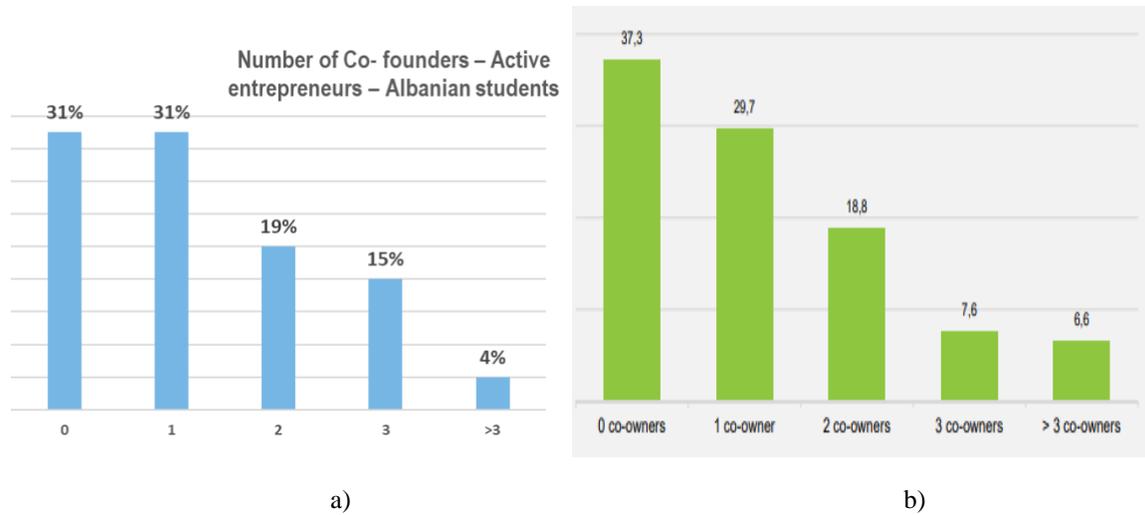
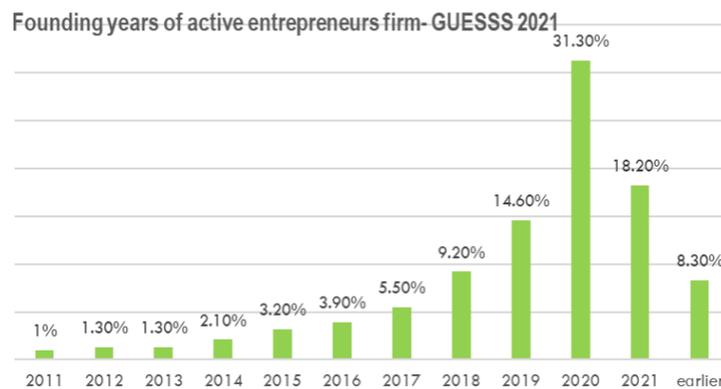
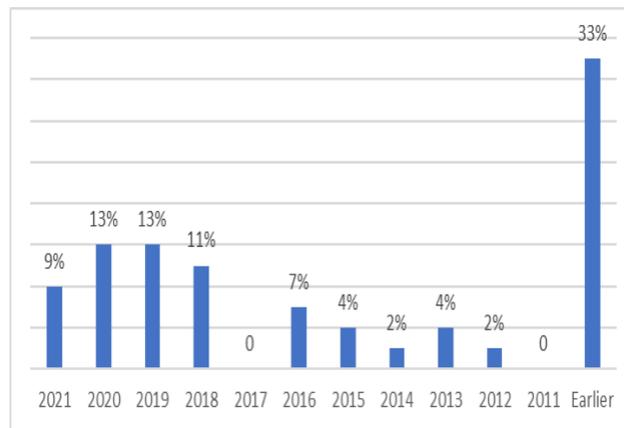


Figure 8: Number of co-founders of the enterprise for "active entrepreneurs" (a) Albanian; b) GUESS)

Figure 9 shows the years of business establishment for Albanian students, active entrepreneurs - (a) and GUESSSS students - (b). For the GUESSSS sample, it seems clear that the year 2020 has a high number of new ventures established, while for Albanian students the percentage remains the same as in 2019. The explanation for GUESSSS can be related to the strong influence of digital ventures and innovation, but still drawing conclusions is a bit difficult, we present only what is evidenced by a first interpretation of the graphs.



a)

b)

Fig. 9. Founding years of active entrepreneurs' firm ((a)- Albania; (b) - GUESSS)

Through the GUESSS methodology, it is aimed to measure the perception of students regarding the risk in choosing a career. Students are asked to indicate how much they agree with the statements below, with a Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree), Fig. 10 against the following alternatives:

1. I am ready to risk when I have to find a job;
2. I prefer a low risk and high security job instead of a high risk and high reward job
3. I see the job risk, as well as a situation where it should be avoided

In figure 10, it can be seen that the students seem to positively perceive the risk in the job search, 48% of them state that they "agree" and "strongly agree". Meanwhile, there seems to be an attitude that basically express a compromise solution in the choice between risk, payment and security (the percentages related to the second expression) and in the third part, it seems that if they could, a good part of them would avoid the risk in workplace.

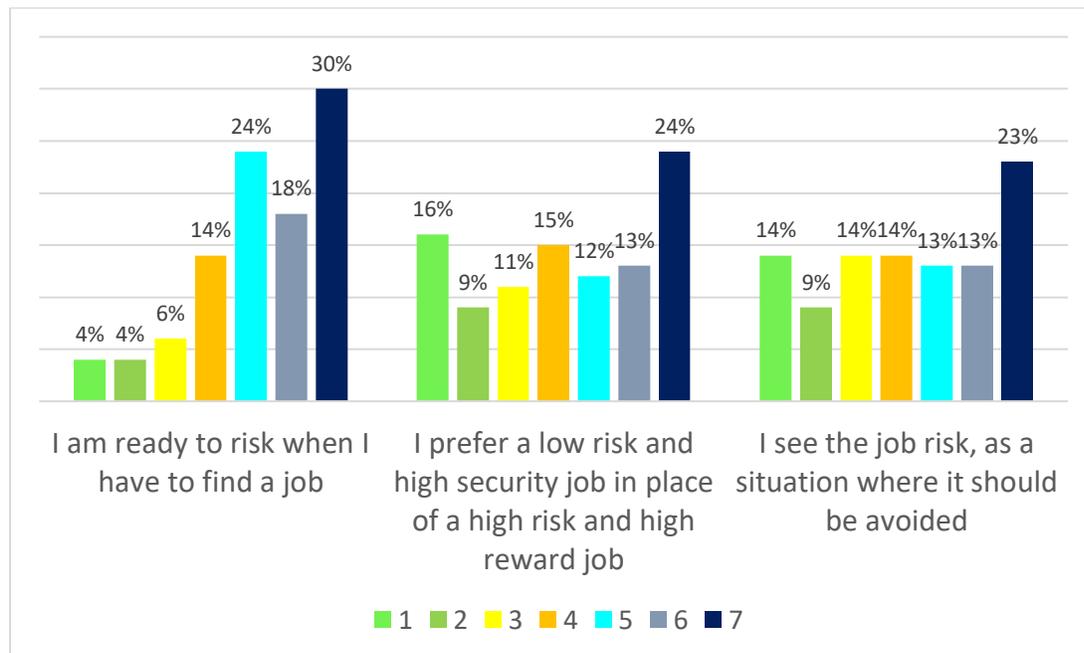


Fig. 10: Risk in choosing a career

Motivation to become an entrepreneur

Based on the Planned Behavior Theory (Ajzen, 1991), one of the factors that determines the career and entrepreneurship goals of students is their personal motivation. For this reason, in the GUESSS questionnaire, a group of questions have to do with the readiness of students to start their own business. The students were asked to indicate the extent to which they agree to the following statements, with a Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree) (fig.11).

1. I have a strong intention to start a business one day
2. I have thought seriously to start a business
3. I will make any effort to start and lead my business
4. My professional goal is to be an entrepreneur
5. I am willing to do everything in order to become an entrepreneur



Fig.11. The willing of students to start an entrepreneurship

From the graph of fig.11, the distribution of percentages shows that the students intend to try to start entrepreneurship, but they seem more reserved to do everything to become an entrepreneur, thus they are more risk adverse. The sample of students who completed this group of questions is that of nascent entrepreneurs, but it must be said that a significant part of them have avoided answering these questions.

The graphs of fig. 12 are as well related to a group of questions that belong to the "personal motivation" factor. The graph shows that from the 5 questions, the students seem to consider the opportunity and provide financial means for the establishment of entrepreneurship more important. This is the alternative that received the highest percentage of answers in "agree" and "strongly agree". Being an entrepreneur was explored through the following questions (with a Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree)):

1. Being an entrepreneur means more advantages than disadvantages
2. A career as an entrepreneur is attractive for me
3. If I would have the opportunities and resources, I would become an entrepreneur
4. Being an entrepreneur would bring great pleasure to me
5. Among different options, I prefer to become an entrepreneur

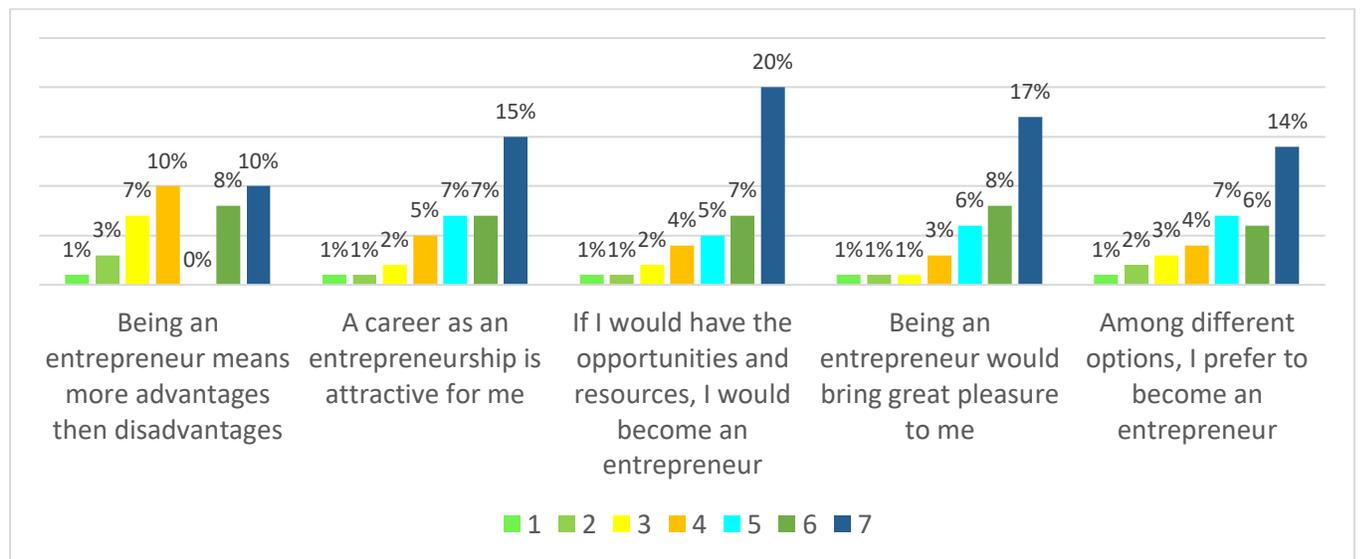


Fig. 12. Students appraising the motivation to be an entrepreneur

In the paper, we were also interested in understanding what students expect from their entrepreneurship, compared to some alternatives. In the graph of fig. 13 it is assumed that we have a distribution of responses from "strong disagree" to "strong agree", the statement started with – My entrepreneurship will:

1. Increase sales
2. Increasing market share
3. Profit growth
4. Job creation
5. Innovation

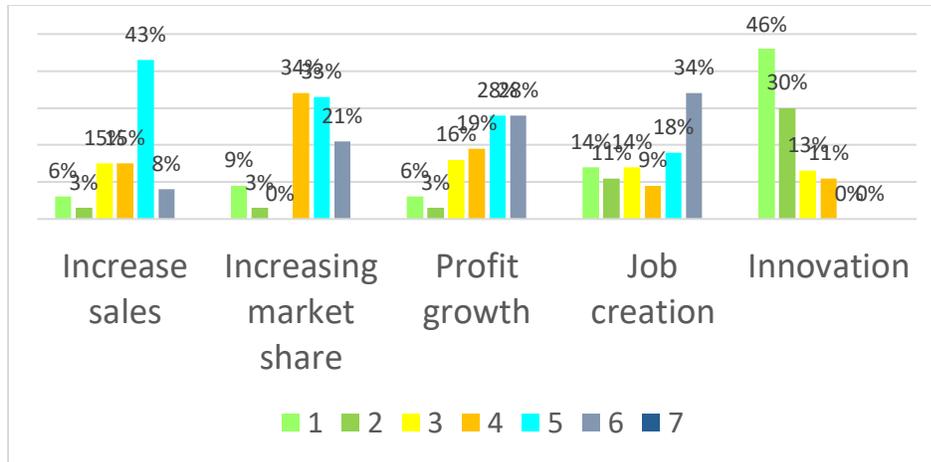


Fig. 13. Expectations of Albanian students from their entrepreneurship

In fig. 13, the distribution of answers in percentages clearly shows that the motivation to become an entrepreneur is mostly related to the increase in profit, the creation of new jobs and much less to innovation. It is interesting that none of the alternatives related to the students' expectations from their company received a "strongly agree" response.

Then, through the GUESSS questionnaire, it is aimed to understand which skills the students value as the most important for entrepreneurship, through the following questions (with a Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree)):

1. Successful management of business
2. Commercialization of an idea or new development
3. Building a professional network
4. Being a leader and a communicator
5. Innovation management inside of business
6. Creating new products and services
7. Identifying new business and opportunities

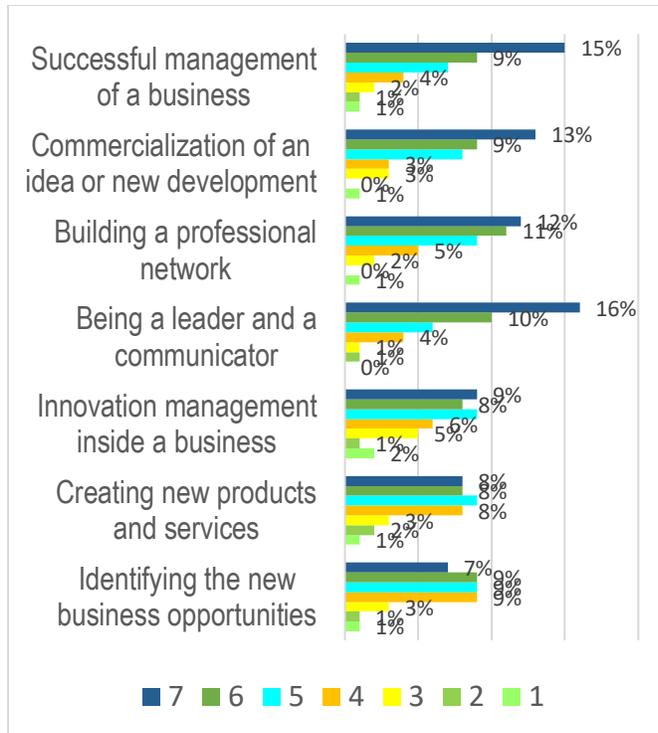


Fig. 14. Skills that the enterprise requires

The graph in fig. 14 shows the percentage distribution of the answers given by the students regarding the skills that the business requires and as we can see, they perceive as more important ("agree" and "strongly agree" answers weigh more): being leader and a communicator; successful management; building a professional network; commercialization of a new idea or new product

How do students feel about their work as an entrepreneur, is a question, the answer of which is obtained by choosing from "strongly disagree" to "strongly agree" of the following attitudes starting with "My work as entrepreneur"

1. It is important for me to work hard even when I do not like what I am doing
2. I often think there is something inside me that pushes me to work hard
3. I feel compelled to work hard, even when it is not pleasant
4. I feel guilty when I take time off work
5. It's hard for me to relax when I'm not working

In the graph of fig. 15 (a), the percentage distributions of the students' answers show that they have a perception that working hard is important for entrepreneurship, the answers of the above alternatives seem to have the greatest weight from neutral to "strongly agree"

The second group of questions is again related to what the students feel in their work as an entrepreneur, through the selection from "strongly disagree" to "strongly agree" of the following attitudes starting with "My work as entrepreneur":

1. I seem to rush and race against time
2. I find myself continuing the work as my co-workers call it quits
3. I stay busy and always engaged
4. I spend more time working than hanging out with friends, pursuing my hobbies, or leisure activities,
5. I find myself doing two or three things at once such as eating lunch and writing a memo while talking on the phone

In the graph of fig. 15 (b), the percentage distributions of the students' answers show that in the students' perception, work is considered important, but also, a moderate relationship between work and the satisfaction it gives.

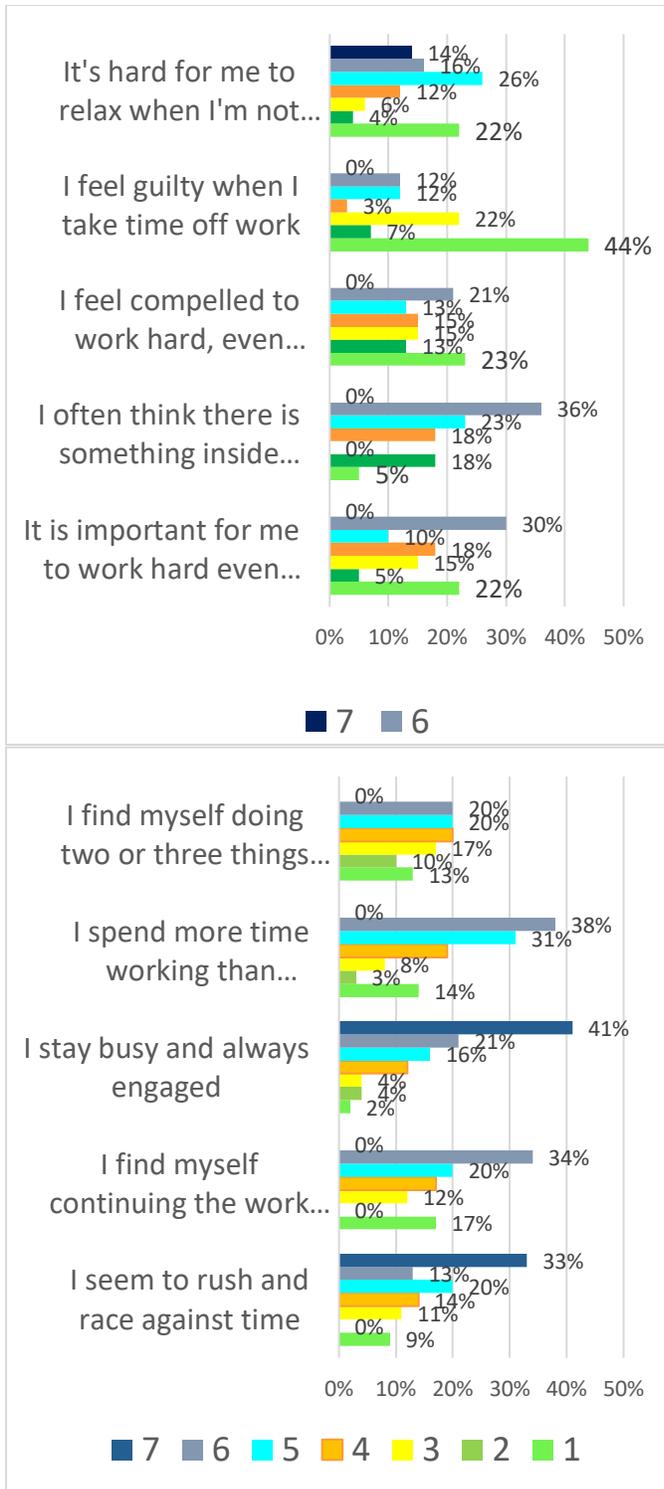


Fig 15.a: How do students feel about their work as entrepreneurs Fig.15.b: How do students feel about their work as entrepreneurs

In the graph of fig. 15. c. In front of the students, starting with the expression "My work as an entrepreneur", the following alternatives are presented:

1. I tend to manipulate others to find my way.
2. I have used deception or lying to find my way.
3. I have used flattery to find my way.
4. I am inclined to exploit others towards my goal.

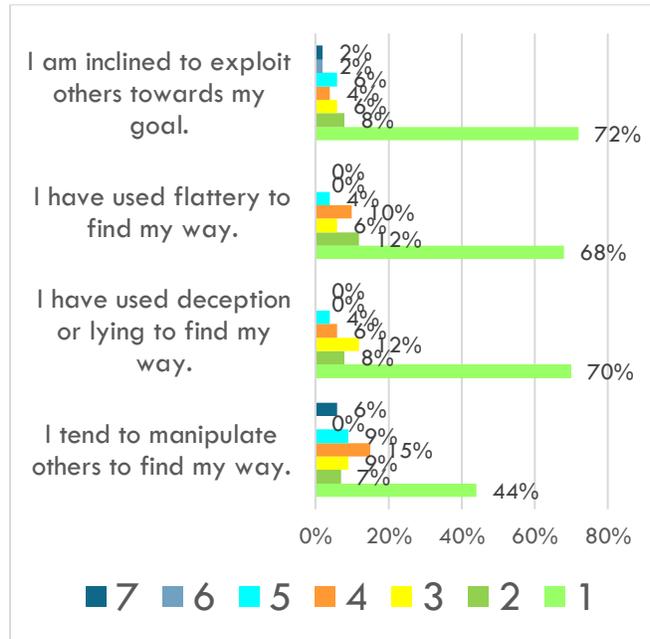


Fig. 15.c: How do students feel about their work as entrepreneurs....

Looking at the distribution of the percentages of students for each alternative, the graph of fig. 15.c observes an ethical attitude of students in relation to manipulation, doing anything to achieve their goals in entrepreneurship. It seems that the answer "strongly disagree" weighs more than the other choices. We find the same ethical attitude of the students in the group of alternatives related to the graph in fig. 15. d.

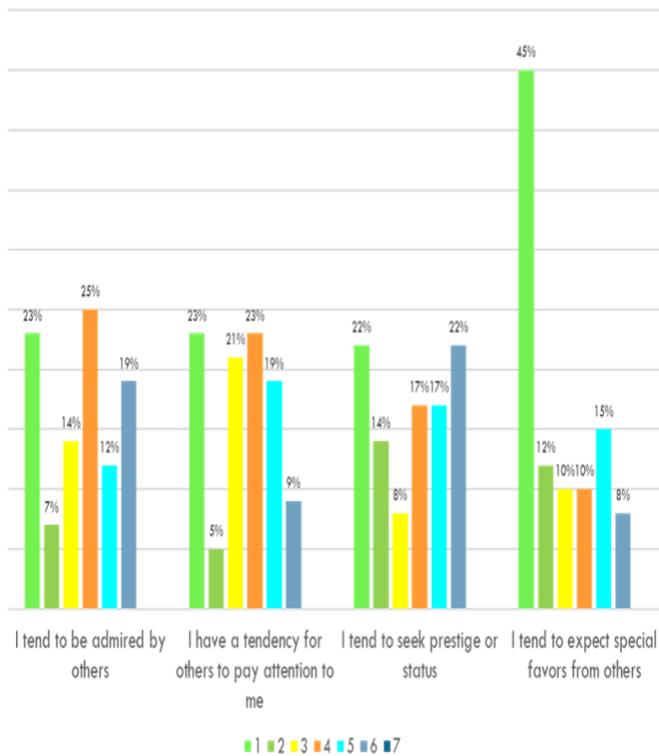
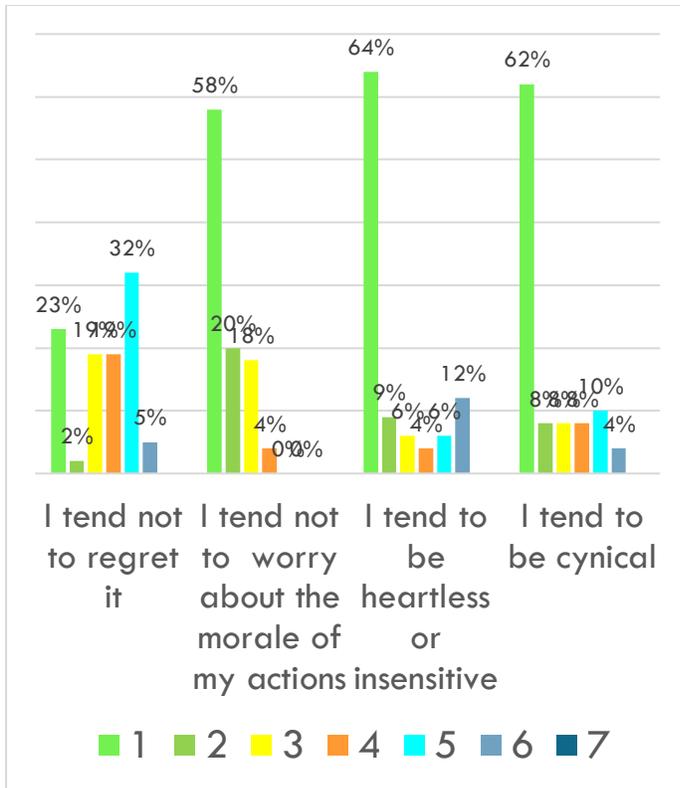


Fig. 15.d: How do students feel about their work as entrepreneurs Fig. 15.e: How do students feel about their work as entrepreneurs

The last set of questions for students begins again with the expression "My work as entrepreneur" and the following alternatives are presented:

1. I tend to be admired by others
2. I have a tendency for others to pay attention to me
3. I tend to seek prestige or status
4. I tend to expect special favors from others

As the distribution of the answers to the alternatives in fig. 15.e. the students have a wide range of attitudes from "strongly disagree" to "strongly agree", moreover, a kind of balance can be seen between ambition for social positioning and social ethics.

5. Conclusions and Recommendations

- The study of entrepreneurship among young people and especially among students, constitutes a field of study of special interest for every country and in global level. This research paper presents and discusses several findings into student's career choices and the role of personal motivations in entrepreneurial intentions. This paper takes into consideration that starting a business is an individual action that is influenced by several factors.

- Ajzen's Theory of Planned Behavior lists the 4 most important factors in career choice and student entrepreneurial goals: Personal motivation; the family context, the economic and social context, and the university context. The GUESSS Project - Global University Entrepreneurial Spirit Students 'Survey is also based on Ajzen's theory. GUESSS is organized and managed through a collaboration of the University of St. Gallen and the University of Bern. The GUESSS 2021 edition was attended by 58 countries, including Albania.

- Student's entrepreneurship has a special importance for students, politicians, universities, and society. Many studies and projects are developed to measure the entrepreneurial intentions of students, because their knowledge is very important for the future plans of the economy.

- Albania repeatedly shows the same tendency as other developing countries, participating in GUESSS (GUESSS - Global Report 2021), in connection with entrepreneurial goals, nascent and active entrepreneurs, where the percentage of students who aim for entrepreneurship is apparently higher for developing countries compared to developed countries. The entrepreneurial intentions of students from developing countries are usually above the GUESSS average and this is a phenomenon that is repeated in several GUESSS studies.

- For the sample of Albanian students taken into consideration, it seems that the pandemic in 2020 and 2021 did not increase the number of businesses established. Although the comparison with GUESSS has its limitations, the year 2020 for global students is characterized by a high percentage of the creation of new ventures by global students.

- Albanian students aim entrepreneurship, they are aware of the efforts that need to be done, but they do not seem willing to do everything to start their own entrepreneurship and this is reinforced both by the compromise they prefer between risk, payment and security, but also by the fact that they consider it more a product of the opportunities presented to them and the financial means.

- The motivation to become an entrepreneur for Albanian students is mainly related to profits and creating new jobs and less to innovation. Also, it is worth noting that entrepreneurship for students does not mean doing everything and their ethics in balance with ambition should be emphasized.

- Students perceive those abilities such as: being leader and a communicator; successful management; building a professional network; commercialization of a new idea or new product are the most important to enter the business.

- It is important for universities and public institutions to support entrepreneurship and encourage innovation. It is very important to create a pro-entrepreneurship atmosphere in the university and promote entrepreneurship ecosystems by public and private actors.

- The awareness of the students for what it means to become an entrepreneur, with all the advantages and disadvantages. Anyone can start a business but making a business successful is another thing entirely.
- For entrepreneurship researchers, the impact of Covid constitutes a field of study that requires new approaches different from the traditional ones, the world is changing, and this change is influencing entrepreneurship and the student's entrepreneurship in particular.

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COMPETENCY-BASED LEARNING, A FEATURE OF THE NEW CURRICULUM, AS WELL AS ITS INFLUENCE AN INNOVATION IN INCREASING THE LEVEL OF LEARNING BY PUPILS/STUDENTS IN THE SUBJECT OF BIOLOGY

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Abstract

Education is the joint responsibility of students, teachers, parents as well as the whole society. It is precisely the immediate duty of all interest groups to design and implement a curriculum of the highest quality, in the interest of students, to advance the rapid development of today's society. The innovation of today's curriculum is competence-based learning. Competency-based learning has the student at the center of learning, while teachers determine the most efficient strategies of the teaching process, with the aim of preparing students to adapt to the rapid changes of society in all aspects, to be successful the future.

Competency-based learning relies on learning based on abilities, skills, performance outcomes and especially standards.

Today, the primary task of biology teachers is to increase the level of students' learning, where learning requires the acquisition of specific knowledge of various fields, especially that of biology. Competency-based learning best achieves this level of learning by pupils/students. It is the immediate task of biology teachers to know and implement the curriculum in a qualitative way, based on learning with competence base. For this, in addition to their dedication, their training is very important in the function of a quality teaching process, in the function of increasing the level of learning of pupils /students in the subject of biology. The competence-based approach focuses on the demonstration of desired learning outcomes from pupils in the learning process. In short, competency-based learning is similar to outcome-based learning. Where the emphasized results are called "competencies". The advantages of competence-based learning lie in the flexibility of teaching, in the management and efficiency of learning, as well as in the increase of the pedagogical and academic precision of teaching and learning, in function of increasing level of pupils/students in the subject of biology.

Purpose: To draw the result of what is the level of knowledge and how much it is applied by teachers today, learning based on competences, as well as from the study, what is the degree of effectiveness of learning by pupils, based on this method of learning. At the same time, what are the methods, techniques, that teachers use and should use, in order to implement learning based on competences.

Methodology: For the realization of this study, we relied on the study of contemporary literature, as well as applied the qualitative method, where 4 high schools of the city of Tirana and two high schools of the suburbs, rural areas were studied in order to make a comparison between them. interviews based on a questionnaire with the biology teachers of these high schools.

The results: In general, they showed that the teachers had the right knowledge in terms of competence-based learning, where with the help of this learning in biology subjects, they reach the pupils with the necessary biological scientific knowledge and skills, creating the opportunity to apply this knowledge in everyday life, which coincides with personal, social, environmental, economic and health problems.

Conclusion: Competency-based learning is an important aspect in the biology curriculum, through which the acquisition of biological scientific competences is achieved, which enable the pupil to use them in everyday life. This approach increases the ability to learn through demonstration of knowledge, skills, values and attitudes. At the same time, dedication and quality training are required from the teachers, to raise their professional level, with the sole purpose of increasing the quality of teaching.

Key words; Competence. Curriculum, learning, approach, strategy, academic.

1. Introduction

The school curriculum is the main pillar of the learning process, which constitutes the means of achieving the goals, to prepare a generation that will adapt to the rapid changes that the world is changing, as well as the rapid developments of today's society. As with any educational strategy, learning based on competences, which is widely used today, is giving many results by qualitatively increasing the effectiveness of learning. This type of learning was designed and is being implemented in public schools, which has given results to students where as future students, have managed to obtain additional knowledge (academic credits), which will serve them in the future for continuing education, an approach that can reduce the costs of education, accelerating their progress towards obtaining a diploma. According to this approach where the center of learning is the student, teachers determine the most efficient strategies during the teaching process, to prepare the students as best as possible, to be successful in it the future. (Colin J. March 2009).

The importance of this study is that through the interviews conducted in some high schools in the city of Tirana and in the rural area, with the biology teachers who teach in these high schools, we got the right information, where we were able to conclude to give opinions and conclusions about some problems related to curriculum, teaching and in particular competency-based learning.

Some of the main problems we managed to identify were:

- What are the innovations brought by the new curriculum?
- How adapted are the teachers to this curriculum?
- How much do they know about competency-based learning, and what strategies do they use to implement this teaching approach?
- What is the level of student achievement in learning, based on this learning approach?

The level of their training, as well as the types of training they have done, in function of this teaching approach. During the data collection study, most of the teachers have shown themselves ready by answering the questions that interviewed. From the study it appears that in general they know this teaching approach, as well as apply it, achieving concrete results in achieving the level of students' learning. For this problem, they have also carried out various trainings organized by educational institutions, such as and training centers.

Methodology: In addition to the study and analysis of the most important and contemporary literature, which deal with curriculum and teaching issues, qualitative methods were used in the realization of the study, making a comparison between the curriculum that was and the current one that is being implemented, as well as the results that is achieved by this learning approach, making a comparison between city and rural schools. At the same time, the research also brought out the importance of teacher training in the teaching process. The entire study is based on teacher interviews.

Population and sample: The population of this study are 4 schools in the city and two in the village.

Data collection and instrument: The instrument is the pre-prepared questionnaire, with the relevant questions, which were related to the topic of the problem. In conducting the interviews, the ethical norms for both the institution and the individual were applied. The interviews were done in writing and orally, creating opportunities for you to express yourself freely, to bring out a reality that was there. Data collection was done by analysis of the answer to each question given in the interview. In this case, comparisons were made of the answers to each question between teachers of the same school, between schools, as well as between city and village schools.

The theoretical part

Competency-based learning is a type of effective teaching according to (Spelit, Luning, Van Boekel and Mulder 2013), CBL (competency-based approach). It is effective, especially in interdisciplinary fields, because it is a student-centered approach that can lead him to be autonomous.

According to (O, Reilly 2014), when students have a higher sense of perceived control of their education, they tend to perform better. According to; (Brumm, Hanneman and Mickelson 2006), to improve student achievement, the desired skill sets are broken down into discrete competencies that build upon each other.

An equally important goal of CBL is to accommodate individual differences in learning pace or style (Evans et al. 2015). In this way, CBL achieves two goals, by instructing learning, providing autonomy, and encouraging students to take responsibility for their own education. Learning or learning by competence is similar to learning by outcome, in this case called "competency". In other approaches to learning, students are exposed to content, whether these are skills or concepts. While in the competency-based approach, students are not allowed to continue until they have mastered the identified competencies (i.e. the desired learning outcomes to be demonstrated). This type of learning is generally seen as an alternative to the traditional educational approach in which students may or may not acquire proficiency in a particular subject before earning course credit for the next grade level or graduating. While high school students earn academic credits by passing another course, suggesting that the credits awarded are based on a spectrum of learning expectations. The goal of competency-based learning is for the student to acquire knowledge and skills that are essential for his future success. While the goal of competency-based learning is for as many students as possible to learn what they need to serve them in the future. Also, this approach manages to provide teachers with more detailed information about student learning progress, which can help them more accurately identify academic strengths that students have not yet mastered.

In the entirety of the teaching process, competency-based learning plays a primary role in the realization of curriculum objectives, realizing many learning components such as:

- Ability to learn throughout life.
- It realizes the teacher-student partnership.
- To create the belief that every student is successful.
- It is possible to better plan the learning objectives.
- Creates the possibility to rely on real situations.
- Creates the possibility for a more efficient use of ICT.
- Increases students' participation in observations and experiments.

Regarding the history of the competency model, it was first addressed by (Hoell 1982), and supplemented by (Pike 1994). According to the level of individuals, they classify them in the following competencies:

Level one: Unconscious incompetence. In this case individuals are unconscious as you lack skill in a certain area.

Second level: Conscious incompetence. In this case, individuals are aware of their lack of skills but try to improve them.

Level Three: Conscious Competence. Individuals get to understand the level of habits and strategies, as well as their commitment to improve by participating in training.

The fourth level; Unconscious competence. In this case, individuals engage unconsciously, in this phase the trainer or teacher plays a positive role.

Fifth level: Unconscious and conscious competence according to (Pike 1994). This level means that the trainer or teacher makes a spontaneous assessment of a normal or dynamic situation, explaining how the individual manages to perform an action. Competency-based learning occupies an important place in the subject of biology, where learning passes to the result. Biology as a scientific subject studies the life and structure of living things, the distribution, the origin of living things, as well as the relationships between them and the environment.

(Abugu 2007) states that biology is a natural science which studies living organisms.

(Iloeje 1981) writes that biology studies the structure of living beings. Being that people live in a romantic world, the need and desire to explore this world arises. The subject of biology is one of the sciences that manage to study this world best. , through observation, experiment, as well as practical and laboratory activities. Unlike other sciences, biology aims to simplify the theoretical content in order to achieve an effective acquisition of the subject.

According to the authors (Di Trapani and Clarke 2012), the subject of biology in its program, in addition to theoretical scientific knowledge, also develops practical and laboratory activities, observations, experiments, all these forms manage to equip the student/student with the ability to develop research projects, as well as the acquisition of skills and knowledge at a high level. Practical works stimulate students' interest in the subject, at the same time when they engage in these activities they manage to stimulate long-term memory, where theory cannot do. In this way, I will I create opportunities for students to acquire qualities and skills such as: classification. designing, experimenting, raising hypotheses, extracting results.

(Eze 1995) points out: Biology as a scientific subject greatly develops the ability of accurate observation, at the same time points out that practice is very necessary in teaching biology.

2.Results and discussion:

The results of this paper are derived from the answers of biology teachers of high schools in the city of Tirana and in rural areas. During the interview, the teachers showed willingness to answer the interview questions, focusing on the main essence of the question, and answering accurately. and free will. The goal was to collect a material as accurate as possible, being as close to reality as possible. Their answers helped us to make a general analysis to draw our conclusions about the topic of the problem. From the answers of received and from the analysis of these answers, we were able to identify some problems such as: the features of the new curriculum. Learning based on competences and the growth it brings. The level of students' learning as well as the problems encountered. The teaching process, methods, strategies used and their effectiveness. The level of implementation of practical and laboratory activities. Evaluation of students and the techniques used for evaluation. Material basis didactic and laboratory, in order to acquire knowledge. From the interview it can be seen that all the teachers have the right information, but those from the city are more informed about the problems posed in the interview.

We are briefly presenting the answers to some of the questions of the questionnaire obtained from the interview.

- Since the new curriculum is completing the implementation cycle, do you have full knowledge of the changes in this curriculum, in content, teaching and assessment?

In general, in their answers, especially those from the city give correct answers. Where from their answers, all the features of the new curriculum were highlighted, as well as its advantages compared to the previous curriculum. But in addition to the advantages that this curriculum presents teachers, especially those from the city, also identify flaws that emerged during the teaching process, both in content, in the level of learning, and the lack of material and laboratory basis.

-The feature of the new curriculum is: Competency-based learning. Do you know this type of learning? Do you implement it and what are its results?

From the answers received, it can be seen that those from the city in their answers are more accurate and more aware of the problem. They state that this type of learning is learning in results. The results from this type of learning are concrete, especially at the level of students' learning, where the implementation of this form of learning has increased the level of knowledge and skills of students. .This form of learning has also changed the methodology and philosophy of teaching, from a teacher-centered teaching to a student-centered one.

- Have you been trained to acquire skills in teaching this curriculum, and in particular in terms of this form of learning?

From the answers, it appears that the teachers of high schools in the village are more trained than in the suburbs, but in general they show interest in this problem. They are trained in training centers. Participation has been individual, problems related to teaching have been addressed, but not specifically specified for competence-based learning. They show a desire and concern for their training in terms of this problem.

-Relying on your biology teaching experience, how much has this learning approach influenced to make the students' learning ability in the subject of biology more understandable, practical and concrete?

In the answers received, their individuality comes to the fore, especially the teachers who are most prepared and motivated for the profession are very accurate in their answers. They say that practice is very necessary and necessary in teaching the subject of biology, and which makes it possible to simplify the theoretical content, increasing the practical learning of the subject. It stimulates the interest of the students, increases the ability of memory, giving many opportunities to the students to acquire many skills of analysis, classification, design, experiment, as well as the formulation of hypotheses and extracting the results. But there are also individuals who in their answers do not support practical and laboratory learning, where they raise as reasons besides the lack of material base, they emphasize that the use of these tools wastes a lot of time.

-How much does the didactic and laboratory material base and technology serve the teaching process, and especially competence-based learning? What is the state of this base in your school?

In general, in their answers, they show remarks about the significant lack of this material base, especially the laboratory one, where the most pronounced lacks appear in schools in rural areas and less so in those of the city. Regarding the role of didactic tools, laboratory and especially that technology, they all state that it is primary in the delivery of the subject of biology, and in particular in the implementation of competence-based learning or learning in the result. Furthermore, in their answers, when the laboratory and technological material base has been considerable, the teaching has been practical, effective and very well acquired by the students.

-Could you give us your opinion on what should be improved in the future regarding this problem?

In their answers, they raise many problems, but the main ones are; Continuous and thematic training of teachers, for teaching problems, and especially specified for competence-based learning; Equipping schools with the didactic and laboratory material base without which the subject of biology cannot be taught within the parameters: The most effective use of ICT.

3. Conclusions

From the final analysis of this paper, the most essential conclusions of the paper will be summarized.

On the part of the teaching staff, more information is needed, both institutionally and individually, regarding this problem, and in particular more training should be carried out in terms of the teaching process and in particular competence-based learning.

To increase the degree of demand from their side to the governing bodies, to equip the laboratories with didactic and laboratory tools, as well as to give priority to teaching with the help of ICT.

The spirit of cooperation between teachers, teacher-students and schools should be increased more.

Biology teachers must insist on developing in students the biological scientific competencies that serve them in personal, social, health and environmental aspects in daily life. During the teaching process, teachers must fulfill the scientific competencies that the student must possess, during throughout life, focusing on integral themes:

Diversity: Cycles; Systems; Interactions. The conviction must be created that the application of contemporary teaching methods and especially the competency-based learning approach will make it possible for scientific knowledge to become more meaningful if it is brought to life in the curriculum and applied in practical situations.

4. Recommendations

- In the entire teaching process, the belief that competence-based learning is very important and effective in the learning process should be created.
- Very important and current is the training of teachers, which should be systematic, simultaneous, with the same techniques and programs

- In order to make this type of learning as efficient as possible, the pedagogical staff and especially the biology teachers should insist on the following directions:
 - Maximum engagement of students in the learning process
 - Transition of teaching from theoretical to practical
 - The connection of technology with biology and vice versa
 - Focusing more on biological scientific competences, for living things, the environment and mutual interaction
 - You pay more attention to laboratory and practical activities in the field, to benefit from experiments and projects in biology
 - I attach more importance to the student's acquisition of skills such as observation, classification, analysis and interpretation of data, skills that serve him for life.
 - Gaining scientific skills for solving problems

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NEUROPHYSIOLOGY PARAMETERS OF PERCEIVED CREDIBILITY AND ATTRACTIVENESS IN TEACHING STUDENTS

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Abstract

In this study, we focused on what a trustworthy and attractive person should look like based on qualitative and quantitative data collection. Research findings show that students ($n=80$, $AM= 22.35$, $SD= 2.6$) tend to trust people who are similar to them, with women appearing more trustworthy than men, and trustworthiness and attractiveness being interrelated. Through the use of neurobiofeedback, a focus group, and also an online survey, we found out that the participants consider a woman aged 35-40 with medium-length brown hair in a pigtail and wearing square glasses to be the most trustworthy and attractive person.

Keywords: Neurophysiology, Credibility, Attractiveness, Students, Teacher.

1. Introduction

There is a considerable body of empirical evidence to suggest that perceived attractiveness is positively related to perceived trustworthiness. Research in psychology has found strong support for a close relationship between perceived facial attractiveness and perceived personal trustworthiness (e.g. Guti´errez-García et al., 2019; Oosterhof & Todorov, 2008; Xu et al., 2012). This has been further supported by evidence from neurophysiological research (e.g. Bzdok et al., 2010; Mende-Siedlecki et al., 2012). Subtle happy expressions, such as smiling, increase the likelihood of a trustworthy judgment (Sofer et al., 2014). People inferred that smiling individuals are extraverted, kind, and open to experience (Halberstadt & Rhodes, 2003). In contrast, subtle anger cues and emotionally neutral faces are perceived as untrustworthy (Sofer et al., 2014).

In addition, since previous research demonstrates that displays of happiness convey high agreeableness and affiliation (Belkin & Kurtzberg, 2013; Harker & Keltner, 2001; Keltner & Haidt, 1999) and increase liking (Kopelman, Rosette, & Thompson, 2006) By contrast, anger expressions signal toughness and dominance (Belkin, Kurtzberg, & Naquin, 2013; Knutson, 1996; Sinaceur & Tiedens, 2006), as well as low agreeableness and coldness (Knutson, 1996; Van Kleef et al., 2004).

Mattarozzi et al. (2015) asked participants to evaluate the trustworthiness of faces and found that female participants' ratings were higher for trustworthy faces than were male participants' ratings. Results suggest that trustworthiness judgments are affected by the gender of the perceiver, although this effect depends on the valence of the face. Personality also affected judgment (Mattarozzi et al. 2015).

Moreover, evidence from online social networking sites suggests that people tend to pay more attention to females' profile photos than those of males (Seidman and Miller, 2013). Such evidence is highly consistent with feminist theory, which argues that physical appearance is more essential for achieving social status for females than for males, as males are more likely to be evaluated on a broader spectrum of traits (Adolphs et al., 2002; Brownmiller, 1984; Kaschak, 1992). It is proven that physically attractive individuals receive more attention from others (Seidman and Miller, 2013). Oosterhof and Todorov (2008) found that trustworthiness judgments are influenced by emotional expressions and by feminine and masculine facial cues.

As such, the face is an important determinant of perceived trustworthiness; as a face becomes more attractive or more unattractive, the trustworthiness decreases. Research shows that findings suggest that face typicality is an important determinant of face evaluation (Sofer et al., 2014).

Jones et al. (2010) agreed that low-pitched female voices were perceived as more dominant compared with high-pitched voices; a finding supported by Borkowska and Pawlowski (2011). Tigue et al. (2012) found that lowpitched candidates were perceived as more trustworthy, whereas Klofstad et al. (2012) found no significant preference in pitch with regard to trustworthiness.

Prior studies document that facial trustworthiness is associated with certain structural facial features (Dotsch and Todorov, 2012; Robinson et al., 2014; Todorov et al., 2008). Enlow and Hans (1996) find that shallow cheeks and low eyebrow ridges tend to be perceived as low trustworthiness. Todorov et al. (2008) suggest that upward-angled inner eyebrow ridges, pronounced cheekbones, a wide chin, and a shallow nose sellion relate to high facial trustworthiness. Dotsch and Todorov (2012) identify a smooth and small face, a smiling mouth, and open eyes as indicators of facial trustworthiness, while a downturned mouth with thick lips, angry-looking eyes, sagging cheeks, and a bald spot on the top of the head indicate facial untrustworthiness. People with round faces are perceived as being more trustworthy and innocent (Livingston and Pearce, 2009; Zebrowitz, 1997).

Posture is also an important indicator and attention should be paid to it. Open posture involves keeping the trunk of the body open and exposed. This type of posture indicates friendliness, openness, and willingness. Closed posture involves hiding the trunk of the body often by hunching forward and keeping the arms and legs crossed. This type of posture can be an indicator of hostility, unfriendliness, and anxiety (Vacharkulksemsuk et al., 2016).

2. Methods

Neurobiofeedback

The unique goal of neuroscientific psychophysiological measurements was the search connections between the physiological response of the autonomic nervous system selected research participant during his exposure to selected photographs of possible variations a trustworthy, attractive and visually appealing person.

By analyzing and capturing the physiological reactivity of the autonomic nervous system to photos of possible ideal teachers we were looking for a link between the balance of sympathetic and the parasympathetic branch of the ANS and the organism's reaction to an emotionally pleasant physiological one response to a perceived photos. To determine the reactivity of the autonomic nervous system, we used the Procomp Infinity instrumentation from Thought Technology. Significant indicators of ANS reactivity were SDRR values, difference between maximum and minimum heart rate, NN50, frequency analysis data such as Power VLF spectral power in the VLF band (ms^2), Power LF spectral power in the LF band (ms^2), Power HF spectral power in the HF band (ms^2), Rel VLF relative power in the VLF band (%), Rel LF relative power in the LF band (%), Rel HF, relative power in the HF band (%) and LF/HF ratio of spectral powers in the LF bands, HF. Other indicators were values reflecting the speed of the respiratory pattern of abdominal and thoracic breathing, the value of the skin-galvanic reaction of the body, the value of the heart rate and numerical information from the electromyograph about muscle tension in the body.

Procedure

The examination procedure was as follows: the participants were examined under standard conditions conditions (standard temperature, minimization of disturbing influences). After establishing the individual sensors (two breathing sensors, BVP, temperature sensor, muscle tension sensor and skin temperature sensor conductivity) values of the physiological reactivity of the ANS at rest in a sitting position were taken. During at the indicated time, the participant was exposed to photographs of various variations of the potential ideal teachers. This was followed by the selection of the most reliable teacher and a survey of the basic ones physiological indicators. At the end, a targeted statistical comparison of the reactivity of the ANS and us was realized monitored indicators, which was correlated with subjective preference in the next phase selection of the research participant. In the end, a targeted statistical comparison of the reactivity of the ANS and the indicators monitored by us was carried out, which was correlated in the next phase with the subjective preference of the research participant.

3. Results

Based on the analyses, we found a strong relationship reflecting significance ($p < 0.05$) between each physiological indicator and individual elements reflecting an attractive teacher, while it was mainly a fulfilling balance between the activation of the sympathetic and parasympathetic branches of the ANS and the emotionally harmonizing physiological reaction to the photo. We found out that the participants consider a woman aged 35-40 with medium-length brown hair in a pigtail and wearing square glasses to be the most trustworthy and attractive person.

4. Conclusions

Participants prefer informal, friendly, natural behavior. More than physical appearance (eye color, hair color), they perceived the overall feeling and overall impression they had of the person. The most important thing was a smile, naturalness and humanity. Exuding good and positive energy, passion for work, joy at work and empathy. The most important things for them were friendly eyes, a pleasant, natural smile and relaxation.

The character traits that a person should radiate are decisiveness, self-confidence, and experience. They prefer a human voice, lower, melodic and memorable. Not too young, inexperienced, or too tall.

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MOTIVES FOR ENTREPRENEURSHIP IN EUROPEAN COUNTRIES

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Abstract

This paper explores the motivation factors of entrepreneurs. The entrepreneurship process begins with the motivation of the potential entrepreneur to actually become an entrepreneur. The decision to become an entrepreneur is always a personal one, so the motives for an entrepreneurial career vary greatly. These motives to become an entrepreneur are influenced by various internal and external factors. Two main groups of motives are divided into pull and push motives. However, there are several other classifications of motives. In this paper, we provide a brief overview of entrepreneurial motivation and analyse the motives of early-stage entrepreneurs. For the purposes of empirical analysis, data from the Global Entrepreneurship Monitor study is used for the latest available data from the Adult Population Survey for European countries. In this study, the motives for entrepreneurship are divided into four groups, namely the motives to earn a living because jobs are scarce, to make a difference in the world, to build great wealth and to continue a family tradition. The results indicate that among the motives for entrepreneurship in European countries, the motive to earn a living because jobs are scarce predominates. This is followed by the motive to build a great wealth and make a difference in the world. At least the early-stage entrepreneurs in European countries are motivated by family tradition.

Keywords: motives, early-stage entrepreneurship, earn a living, make difference, great wealth, family tradition, Europe

1. Introduction

Decisions in an individual's life are influenced by his personality traits and priorities, which also influence decision-making in the early stages of the entrepreneurial process (Santos et al., 2021). The personal motives of entrepreneurs and the type of business opportunity are the key factors that influence both the entrepreneurial decision and the process itself. Motives for exploring a business opportunity vary from individual to individual. Most of them pursue several goals at the same time, which are related to the personality characteristics of individuals and at the same time depend on the environment in which this individual lives. Research shows that entrepreneurs' motives are related to socio-economic characteristics (Block, Wagner, 2010), job satisfaction, economic development (Acs, Varga, 2005; Block, Koellinger, 2009; Kautonen, Palmroos, 2010), entry strategies (Block et al., 2015), unemployment (Deli, 2011), job loss, family hardships and achieving income glass ceiling (Robichaud et al., 2010), market opportunities, social status, profits (Giacomin et al., 2011), innovation, independence, financial success and self-actualization (Carter et al., 2003), independence, learning and roles individuals in society. It is obvious that the motives are very diverse, many of them are also connected and complementary to each other. We can combine them according to various criteria, such as necessity or opportunity, push or pull factors and others.

The main aim of the paper is to explore the different motives of entrepreneurs to start a business in European countries. The paper continues with the literature review, which is followed by the methodology explanation and empirical results.

2. Literature review

The literature on motives for entrepreneurship is quite extensive. However, most of the literature was focused on distinguishing motives mainly by necessity or opportunity. The latest literature is focused on examining different aspects of motivations of entrepreneurs and today the topic is very broad and provides insights from different aspects into this topic.

Entrepreneurs develop and use motives, abilities, and resources to benefit from an environment conducive to entrepreneurship. Peterson (1995) built upon analyses of the Cuban enclave in South Florida to analyse the motives, abilities, and resources that this community's most successful entrepreneurs brought and developed in the U.S. Morandin et al. (2004) investigated the motivation of Italian entrepreneurs to evaluate the validity of distinguishing between opportunity and necessity entrepreneurship. Prasastyoga et al. (2021) found that opportunity-based entrepreneurship, but not necessity-based entrepreneurship, was positively associated with perceived value of entrepreneurial identity. Entrepreneurs, who pursue opportunities, are more likely to be future-oriented and engage in the pursuit of business growth, while those whose entrepreneurship is driven by the need to make a living are not future-oriented, and thus are less likely to engage in the pursuit of business growth. This lends support to the notion that small-business owners' time perspective plays a vital role in explaining why and how opportunity-based small-business owners and necessity-based small-business owners differ in their levels of business growth pursuit. For example, the study of distinguishing between opportunity and necessity entrepreneurship by Williams (2007) investigated the motives of entrepreneurs who conduct some or all their transactions on an off-the-books basis. The motives of such entrepreneurs reveal not only that necessity is by no means their predominant motive, with a similar ratio of necessity-to-opportunity entrepreneurship being identified as amongst entrepreneurs, but also dividing individuals into one side or the other of this dichotomy oversimplifies the motives for entrepreneurship.

Using data from multiple sources Chang et al. (2013) found that young men are more likely to become entrepreneurs compared to women. Alexandre-Leclair (2014) found evidence that diversity positively affects self-employment. Tepavčević (2017) explored the relationship between migration, entrepreneurship, and foreign direct investments by focusing on entrepreneurial activities of post-Soviet (im)migrants in Hungary in periods between 1991 and 2016.

Silva et al. (2010) investigated start-up and growth motives of entrepreneurs who own small and medium scale enterprises. Their results suggest that entrepreneurs who identify themselves with linear or expert career motives have a higher preference for causal decision-making logic (Gabrielsson et al., 2011). Another study by Silva et al., (2011) investigated the dynamism of the motivations of academic entrepreneurs, who are operating in resource constrained environments. The subject of Keles (2016) study was to identify and contrast predictors of Nigerian students' desire to be entrepreneurs by using Entrepreneurial Motives Questionnaire. Ruskin et al. (2016) provided a theoretical platform for future studies in entrepreneurial motivation that addresses the importance of nonfinancial motives and associated rewards for fostering engagement in the sector.

The study by Mitchell (2004) examined the motivation of entrepreneurs in starting a business in the socio-economic milieu of South Africa. More specifically, it aimed to identify similarities and differences in the motive profiles of 101 male and female entrepreneurs. A motivation scale and open-ended interviews were used to assess the reasons for starting a business. Both men and women entrepreneurs were found to be primarily motivated by the need for independence, need for material incentives and the need for achievement. The need to contribute to the community was not an important reason. Male entrepreneurs in comparison to females were more motivated by the need to provide family security and to make a difference in the business. Female entrepreneurs more than males were motivated by the need to keep learning and the need for more money to survive.

The research by Pillania et al. (2010) was a preliminary investigation in which the researchers identified 43 motives for starting business amongst women entrepreneurs. The eight factors were labelled as Independence, Flexibility, Achievement, Money, Opportunity, Escape, Family Support and Recognition from other. The motives were further classified into push and pull elements (Gundry et al., 2002) on which the statistical test revealed that relatively pull motives attract women entrepreneurs more than the push motives for starting business.

The purpose of the study by Hefer et al. (2015) was to determine the factors that motivate and challenge people when starting up their own small business. This paper includes the challenges that entrepreneurs encounter, advantages, and disadvantages of owning one's own business, as well as highlighting the factors that are important to succeed in owning one's own business. The study was quantitative in nature and made use of an online survey questionnaire to collect data from entrepreneurs and potential entrepreneurs in South Africa. The results indicated that the most motivational factors include the desire to pursue a business idea and that they want to be their own boss. The results further highlighted that the main challenges for small business owners are financial in nature as well as support from the government.

Berthold and Neumann (2008) compared the motivation of entrepreneurs with the motivation of employed managers, and uncertainty risk is one of the distinguishing factors of the two types of jobs. Since both have to meet the needs of consumers and both have a general interest in the development of the organization, there are similarities in the tasks. Self-actualization was a motivating factor for job satisfaction in both groups, but the ability to innovate and take responsibility for organizational success was higher among entrepreneurs.

Different studies suggests that opportunity or need is the reason that most individuals start businesses. However, some claim that there's no dichotomy between these motives— other reasons can cause individuals to start new businesses. These reasons can even cause interactions between them. Presented short literature review suggests that the motives for starting an entrepreneurship career is more complex than just the opportunity-necessity decision and that they need to be further developed. Some of studies revealed that deep-seated motives beyond opportunity and need are for example family pressure, frustration with jobs, personal attributes, and labour market availability. Additionally, it's suggested that these underlying motives bypass the binary dilemma of opportunity and necessity. Based on the finding of other studies, the main question of this paper is what are the main motives of early-stage entrepreneurs in Europe? To add some findings to this broad topic, the data from the Global entrepreneurship Monitor study was analysed. In the past, this study also used to divide motives only on opportunity and necessity. However, during the years, they ascertain that this approach is too simple and does not reflect the complexity behind the entrepreneurship reality. Therefore, this study broadens the investigation of motives for entrepreneurship.

3. Methods and empirical results

For the purposes of the paper, used was the data from the of Global Entrepreneurship Monitor survey 2021, which collects data on yearly basis among individuals from all over the world. Each year participate approximately 50 countries, which conduct harmonized survey about different aspects of entrepreneurship among individuals in their country. A set of questions is aimed at exploring the motivations for entrepreneurship. Motives are divided into four groups, with entrepreneurs able to choose one or more of those that guided them in their business establishment:

- To make a difference in the world,
- To build great wealth or very high income,
- To continue a family tradition,
- To earn a living because jobs are scarce.

Generally, globally, the investigated groups of motives for entrepreneurship differ significantly, which depends both on the personal characteristics of individuals and on the wider social environment. The results for the GEM countries are shown in Table 1. The survival motive is most expressed in environments where there are few jobs available that would offer individuals job security, where individuals are forced to embark

on an entrepreneurial path. Among the GEM countries, the motive to earn a living because jobs are scarce was expressed the most in Guatemala (91.7%), and the least in Norway (26.5%). Making a difference in the world is among the GEM countries the most present in South Africa (81.4%), and least in Kazakhstan (0.3%), where it is virtually undetectable. To build great wealth or very high income is the motive for entrepreneurship pursued by the most early-stage entrepreneurs in Iran (92.9%) and the least in Slovakia (22.1%). To continue a family tradition is followed by the most entrepreneurs in India (74.3%), and the least in South Korea (4.1%).

Table 1. Key characteristics of entrepreneurial motives throughout early entrepreneurial activity

	TEA – To continue a family tradition*	TEA – To build great wealth or very high income*	TEA – To make a difference in the world *	TEA – To earn a living because jobs are scarce*
The highest value in the world	India 74.25 %	Iran 92.86 %	South Africa 81.41 %	Guatemala 91.69 %
The lowest value in the world	South Korea 4.11 %	Slovakia 22.05 %	Kazakhstan 0.28 %	Norway 26.50 %

Note: *Proportion of those who agree or strongly agree with the statement, in the total early entrepreneurial activity (% TEA).

Source: Rebernik et al., 2021

Table 2 provides data on the expression of individual motives in European countries. Over 50% of early-stage entrepreneurs follow the motive of survival due to scarce jobs in 16 European countries, increasing wealth in 12 countries and creating change in the world in 8 European countries. Only the family tradition is followed by significantly fewer entrepreneurs in all European countries, with a maximum of 39.7% in Greece.

Table 2. Motives of nascent and new entrepreneurs in European GEM countries

European countries	TEA – To continue a family tradition*	TEA – To build great wealth or very high income*	TEA – To make a difference in the world*	TEA – To earn a living because jobs are scarce*
Belorussia	15.07	76.18	25.49	71.54
Cyprus	13.72	81.28	32.24	72.77
Finland	24.26	33.43	40.11	47.87
France	22.91	39.35	25.84	51.21
Greece	39.73	50.36	29.87	63.16
Croatia	28.47	51.31	38.67	65.68
Ireland	29.03	59.04	57.75	56.03
Italy	22.82	53.43	21.53	61.35
Latvia	24.21	37.07	36.92	65.31
Luxembourg	27.67	38.63	56.88	32.88
Hungary	20.97	32.48	61.73	66.76
Germany	24.24	43.65	39.36	40.90
Netherlands	24.52	41.84	52.68	44.12
Norway	22.95	37.44	39.21	26.50
Poland	12.51	62.47	16.03	53.43

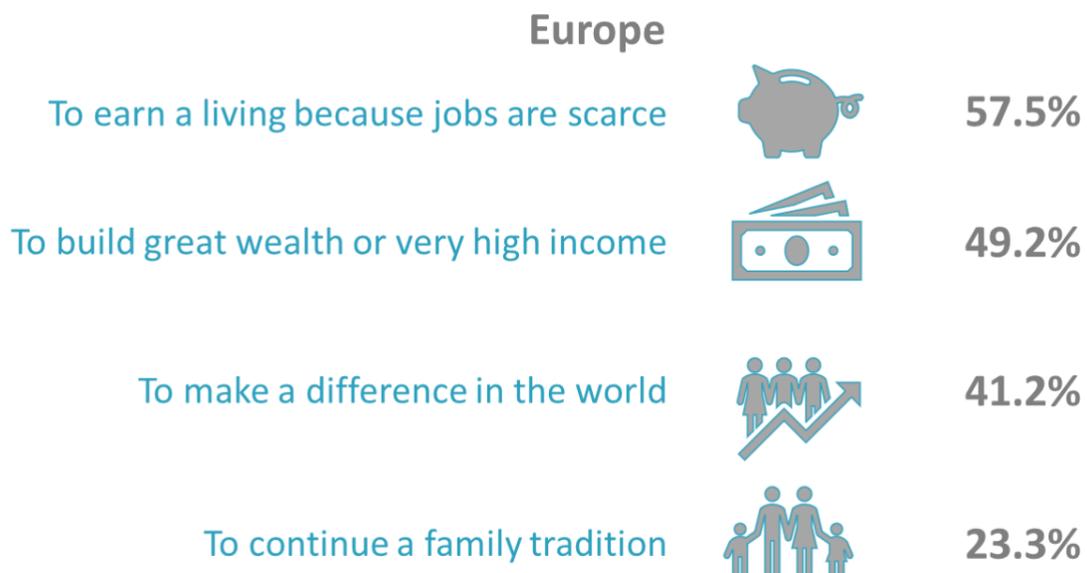
Romania	31.09	64.91	65.86	75.02
Russia	20.78	65.29	27.63	68.86
Slovakia	25.81	22.05	18.66	89.78
Slovenia	27.38	42.59	61.84	63.80
Spain	19.68	38.01	43.22	72.35
Sweden	20.60	54.95	45.34	28.00
Swiss	14.11	51.52	57.90	46.76
Great Britain	21.65	55.22	52.99	63.84

Note: *Proportion of those who agree or strongly agree with the statement, in the total early entrepreneurial activity (% TEA).

Source: Rebernik et al., 2021

Figure 1 shows the motivation of early entrepreneurs in Europe on average according to the groups of motives studied in the GEM study.

Figure 1. Motivation for entrepreneurship in European countries



Source: Rebernik et al., 2021

In Europe, entrepreneurs most often cited survival as a motive, because suitable jobs are rare (57.7%). In the past years, economic growth in European countries has led to an increased demand for labour force, and as a result, the number of unemployed persons has decreased, while structural unemployment has worsened significantly. This represents a mismatch between supply and demand on the labour market, which causes individuals not to find suitable employment and therefore decide on an entrepreneurial path.

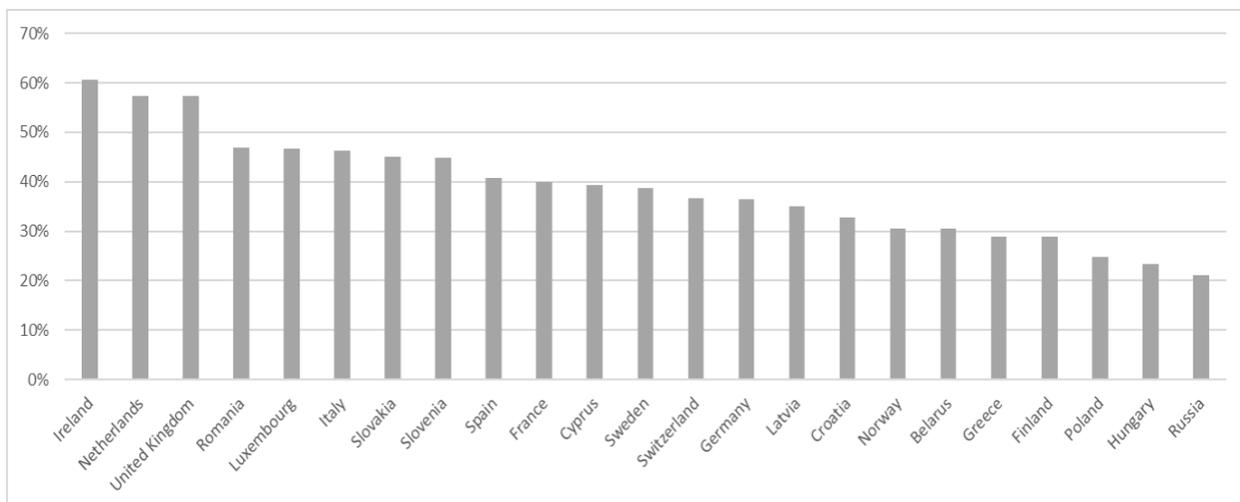
The motive of the desire to create wealth or a higher income is followed by 49.2% of early entrepreneurs in Europe. This is followed by the motive of creating changes in the world, which motivated 41.2% of early entrepreneurs in Europe. These motives are therefore of a more altruistic nature, with which entrepreneurs try to contribute positive effects in terms of social or environmental benefits. In Europe, on average, most entrepreneurs follow the creation of wealth, followed by the desire to create change in the world. Since in

this case we are dealing with socio-cultural norms accepted in the wider social environment, they are also reflected in the motives of individuals.

The fewest early entrepreneurs in Europe cited family tradition as a motive for developing a business (23.3%). This means that just under a quarter of individuals started entrepreneurship because they had an entrepreneurial example in their family, because someone was involved in entrepreneurship and attracted them to entrepreneurship.

Mere motivation for entrepreneurship is not enough, it is also important to discover or create a business opportunity. For the last two years, the world has been facing a crisis caused by the covid-19 epidemic, mainly rapid and extreme changes in the market. Many entrepreneurs have faced difficulties in doing business due to restrictions and closures of the economy, which is especially true for the service sector of the economy. Nevertheless, the crisis also revealed new business opportunities to some entrepreneurs. In Europe, as many as 38.8% of early-stage entrepreneurs on average recognized new business opportunities due to covid-19 (Figure 2). The most early-stage entrepreneurs recognized opportunities during the crisis in Ireland (60.5%) and the Netherlands (57.4%), and the least in Russia (21.0%) and Hungary (23.4%).

Figure 2. Early-stage entrepreneurs who saw new opportunities in the covid-19 crisis in European GEM countries



Source: Rebernik et al., 2021

4. Conclusions

The paper provides brief insight into the motives of early-stage entrepreneurs in European countries based on the data from Global Entrepreneurship Monitor study from the year 2021. The previous studies have provided evidence on different aspects of motives that drive individuals to become entrepreneurs. Most of studies divided motives for entrepreneurship into two groups, namely opportunity and necessity. However, this grouping is too general, and it does not provide in-depth evidence of motives. Consequently, many studies examined data on more broad aspects of motives and found that there is a mix of different motives that push or pull individuals into entrepreneurship. We found that many of the motives impact the individual decision to become an entrepreneur. The present paper examined four different types of motives, where entrepreneurs chose all that applied to them, and simple analysis showed that there are important differences among European countries. However, this brief insight into the study of motives of entrepreneurs provides opportunities for further research. Based on the differences, further research could

investigate how many motives follow each entrepreneur, whether there are differenced in demographic data of entrepreneurs and motives or link them to developmental stage of country in which they operate.

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PECULIARITIES OF RENDERING LATIN PLANT NAMES INTO GEORGIAN

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Abstract

In the 18th century, Swedish scientist Carl Linnaeus introduced binomial nomenclature, according to which each species of plant would be defined by two Latin names: the generic name and the specific epithet. The goal of this work is to present the difficulties that arise when applying the binomial principle to Georgian botanical terminology, as well as the specifics of translating plants' Latin names to Georgian. As a result of linguistic-philological analysis, we have worked out a number of methods to use when importing Latin phytonyms into Georgian. In this work, we will cover some of these practices, namely: 1. Epithets comprised of two words were fused into one word by suppressing the hyphen, thus merging the two words and abiding by the norms of Georgian scientific language; 2. When importing generic and specific names, we have taken into account the phonetic rules and specific pronunciation of the language of origin, the translation practices from these languages to Georgian, as well as the etymology of the phytonyms; 3. The existing literature has shown us that when importing a toponym used as an epithet, the main form that should be used in Georgian is the genitive case (or in other words, a possessive form), though some epithets are formed by using the **-ur/ul** suffixes, which denote an origin. We put forward the idea that implementing these practices would help avoid the creation and establishment of disorderly and ill-matched phytonyms in the Georgian language.

Keywords: Phytonyms, Translation, Epithets, Norms.

1. Introduction

It is common knowledge that Ancient Greek and Latin make up a foundation based on which new botanical terms are coined and already established. In accordance with the present-day codes of the botanical nomenclature, international scientific names all of the systematic groups of plants should be spelt in the Roman alphabet and comply with the rules of Latin grammar.

It was in the 18th century when the great scholar Carl Linnaeus introduced a principle of binomial nomenclature, based on which each species was referred to as two Latin names: a generic name and a specifying epithet¹

Georgian translation of Latin nomenclatural names of plants and their systematic arrangement began in the 19th century; however, there is still a lot to be explored in the history of coinage of Georgian botanical terms.

¹ International Code of Nomenclature for algae, fungi, and plants, 11-th International Mycological Congress, San Juan, Puerto Rico, 2018.

Present-day Georgian botanical nomenclatural names are most completely represented in „Botanical Glossary“² compiled by the botanist Alexandre Maqashvili (1896-1962). The publication appeared as a collection of the rich lexical data from the Kartvelian languages, from Georgian dialects. It appeared to be particularly interesting for linguists. Meanwhile, the glossary finally introduced some order in the Georgian nomenclature of plants.

With the availability of tangible new lexical data and sources, it was necessary to publish an updated and elaborated glossary of the Georgian plant names. Such is “A Cumulative Glossary of Plant Names “ (by N. Khocholava-Machavariani and D. Chelidze)³, compiled at Arnold Chikobava Institute of Linguistics, Tbilisi State University, and to appear soon. It is based on Botanical Glossary A. Maqashvili, being elaborated with data from various sources (dictionaries of Old Georgian, dialect dictionaries, word of mouth, etc.). Alongside a number of innovations, the glossary provides corrected spellings of scientific names of plants in accordance with the norms of Contemporary Standard Georgian.

As it is known, new Latin terms for plant names are coined annually. In most cases, their Georgian equivalents do not exist. The urgency of the problem drove us to compiling “A Latin-Georgian Botanical Glossary”⁴, providing timely systematization of new Latin phytonyms, a collection of Latin phytonyms and their Georgian equivalents, translations of names which had no Georgian equivalents turning them into scientific phytonyms. In order to update the data and normalize spellings of Georgian translations, it was necessary to develop its new version (“A Latin-Georgian Glossary of Plant Names (Georgia’s Flora”, 2022; by L. Chotalishvili, D. Chelidze, N. Khocholava-Machavariani)⁵ which was with updated versions of Georgian phytonyms.

In order to properly render Latin plant names into Georgian and to establish their correct spellings, it is necessary to introduce corrections in spellings of some phytonyms and sometimes even develop new rules.

With respect to changes, we consider the following:

1. Generally developed international rules;
2. Norms of Contemporary Standard Georgian.

The paper is aimed at demonstrating the hardships having occurred in transplanting the binomial principle onto Georgian botanical terms and peculiarities of rendering Latin plant names into Georgian.

As a result of linguistic analyses, we developed certain rules for translation of Latin phytonyms into Georgian.

2. Certain rules for translation of Latin phytonyms into Georgian

1. *Binomial principle.*

Its two basic requirements are: a) each species should be referred to by two Latin names, b) initially a generic name, to be followed by a specifying epithet⁶.

The binomial principle was successfully implemented in the Georgian botanical nomenclature; however, the Latin order ‘a generic name - a specifying epithet’ contradicts the norms of Contemporary Standard Georgian; the order is reverse: ‘a specifying epithet - a generic name.’ The arrangement is essential for present-day Georgian; it is correct in terms of the language norms and need not to be revised (*Betula ermanii* - ‘*ermanis arghki*’, *Cytinus rubra* - ‘*tshitheli tsitinusi*’).

2. *Translation and spelling of a generic name and a specifying epithet.*

In accordance with the International Code of Botanical Nomenclature, a generic name should consist of a single word. Irrespective of the successful implementation of this rule in Georgian, there still are exceptions which should be corrected. They are:

- a) Sometimes a Georgian generic name consists not of a single word but of two independent units:

² Maghkishvili A., Botanical Dictionary (Plant names), Tbilisi, 1961.

³ Khocholava-Machavariani N., Chelidze D., Cumulative Glossary of Plant Names, Tbilisi, 2022.

⁴ Chotalishvili L., Latin-Georgian Botanical Glossary, Logos, Tbilisi, 2012.

⁵ Chotalishvili L., Chelidze D., Khocholava-Machavariani N., Latin-Georgian Glossary of Plant Names (Flora of Georgia), Tbilisi, 2022.

⁶ International Code of Nomenclature for algae, fungi, and plants, 11-th International Mycological Congress, San Juan, Puerto Rico, 2018.

Helichrysum graveolens – ‘surnelovani mthis nego’;

b) in a Latin phytonym name consists of a single word, while its Georgian counterpart is a hyphenated compound: Hieracium laetevirens – ‘khaskhasa mtsvane kharnughka.

Hence, in Georgian translations of Latin plant names, the hyphenation rule is not unified; Meanwhile, the hyphenation rule has been clearly established for Georgian.

We formed Georgian scientific names, rendered from Latin, and introduced changes in some Georgian items with already established spellings.

Changes concerned both generic names and specifying epithets. Wherever any of them were hyphenated, we merged them - turning them into a single word; e.g.

a) Generic name: Helichrysum graveolens - ‘surnelovani mthis nego’ > surnelovani mthisnego’.

Specifying epithet: if a Latin specifying epithet is hyphenated, in the Georgian translation, the hyphen is dropped and the epithet occurs as a unitary word: Dryopteris filix-mas – ‘mamalgvimra ifkhli’;

b) if latter component of a resulting compound is a consonant-final substantive, it will take on the suffix of possession –a which has a phytonymizing function in Georgian.⁷

Potentilla anserina – ‘batis martsghkva-balakhi’ > ‘batis martsghkvabalakha’

Prangos arcis-romanae - ‘romaulthagha prangosi’.

Human names in Latin phytonyms: well-known personalities represent various countries, and, hence, their names sound differently in their native tongues. Therefore, while rendering such names, we took into consideration the following:

1) Phonetic rules and pronunciation in individual languages (if they are read in Latin, they would sound totally differently) and rules of their transliteration into Georgian; e.g., Campanula beauverdiana – ‘boveris kampanula’ (Gustave Beauverd - a Swiss botanist).

2) Extant tradition in rendering some proper nouns into Georgian: Hieracium elisabethae – ‘elisabedis kharnughka’.

3) History of the origin of phytonyms. E.g.: The name Maria/Mariam occurs in Latin phytonyms variously: mariae, mariamae, marianum. In the former two cases, the epithet is a proper noun in genitive marked by the *-ae* encoding possession and translated into Georgian in the following way: Inula mariae – ‘marias inula’, Polygala mariamae – ‘mariamis tsitstinauri’.

A study of the origin of the phytonym demonstrated that the epithet marianum has been associated with the Mother of God. According to a legend, white dots appeared on the plant’s leaves owing to the milk of the Mother of God when she was feeding Infant Jesus; hence, Silybum marianum is translated as ‘mariamis silibumi’.

Geographical names in Latin phytonyms.

In Latin phytonyms, a specifying epithet is frequently derived from a geographical name of a location where a plant grows or where it originates from. Such toponyms, used as epithets.

Latin specifying epithets, derived from toponyms, are formed variously: 1) by means of suffixation: -an; -ēns, -ic (Argemone mexic-an-a, Argusia sibir-ic-a, Astragalus bachmar-ens-is); 2) infrequently a toponym is in genitive, that is, encodes possession (Astragalus kazbeki-i).⁸

⁷ Khocholava-Matchavariani N., Plant names with the suffix -a in Georgian, almanac “Besarion Jorbenadze”, Tbilisi, 2003, p. 160.

⁸ Chotalishvili L., Latin for biologists, Tbilisi, 2011.

When rendering such Latin names into Georgian, one and the same epithet may be translated differently, e.g.: germanicus > ‘germaniis’, ‘germanuli’;

In order to avoid diversity, we should consider the following when rendering Latin names into Georgian:

1) original linguistic pertinence of geographical names used as epithets and rules of borrowing into Georgian from that language; e.g.: Avena persica – ‘sparsuli shvria’.

2) for Georgian, it is essential to mark words of the following kind in the genitive case: cardinal points, continents, countries, states, cities, villages, islands...

Cardinal point: Celtis australis L.- ‘samkhrethis akaki’

Continent: Cuscuta europaea L. – ‘evropis abreshuma’

Country, province: Cirsium anatolicum (Petra) Grossh. – ‘anatoliis nari’

State: Tradescantia virginiana L. – ‘virjiniis tchortana’

City: Polygonum tiflisiense Kom. – ‘thbilisis poligonumi’

Village: Centaurea bagadensis Woronow – ‘bagadis ghighilo’

Island, peninsula: Pteris cretica L. – ‘kretis pterisi’

Sea: Nonea capsica (Willd.) G. Don – ‘kaspiis nonea’

River: Onobrychis cyri Grossh. – ‘mtkvriss espartseti’

Mountain: Poa araratica Trautv. – ‘araratis thivasqara’

Gorge, valley: Primula darialica Rupr. – ‘darialis furisula’

Lake: Pyrethrum sevanense Sosn. – ‘sevanis gvirila’

A province of Georgia: Kemulariella abchasica (Kem.-Nath.) Tamamsch. – ‘afkhazethis kemulariela’

Some nouns take on the suffix of provenance -ur/-ul; they are:

Historical toponyms: Ruscus aculeatus L. subsp. Ponticus – ‘pontouri ruskusi’

Natural area: Poa alpina L. – ‘alpuri thivasqara’

Ethnonym: Parietaria judaica L.- ‘ebrauli parietaria’

We consider some traditions established in Georgian scholarly literature and lexicography, e.g., ‘berdznuli’ (Greek) and not as ‘saberdznethis’ ‘binomial pri’ ‘of Greece’ (the Latin adjective graecus **is derived from the Greek ethnonym** Γραικοί and not from the name of the country; therefore, the specifying epithet graecus was rendered as ‘berdznuli’ (Greek) and not as ‘saberdznethis’ (of Greece): Sorbus graeca - ‘berdznuli sorbusi’;

‘qarthuli’ and not as ‘saqarthvelos’: Rubus georgicus - ‘qarthuli maghkvali’;

Some peculiarities of Latin names

Sometimes both a generic name and a specifying element of a Latin phytonym are in the nominative case, whereby an epithet is represented not by an ordinary modifier but rather a genus of a certain plant. We rendered such epithets in genitive taking on the suffix -ebr, or a stem takes on the suffix -a; Calamintha nepeta– ‘katapitna-s-ibr-i kalaminta’, Punica granatum – ‘brotseul-a punika’.

Considering some peculiarities of Georgian vocabulary

The Latin specifying epithet noli-tangere is translated into Georgian as ‘ar shemekho’ (Don’t touch me). Since the semantics can be conveyed in Georgian by means of a single word ‘ukareba’, we chose it to for the phytonym: Impatiens noli-tangere – ‘ukareba impatiensi’.

3. Conclusions

When rendering the Latin nomenclature of plants into Georgian, we rely on the internationally recognized “binomial principle,” introduced by Carl Linnaeus, and norms of Contemporary Standard Georgian.

Our recommendations will be beneficial in a number of ways: 1. They will shed light on diversity attested in Georgian; 2. They will make a barrier to block incorrect forms; 3. They will help professionals and other interested individuals in translating new phytonyms.

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PAX MINOICA AS A NEW PARADIGM FOR HUMAN DEVELOPMENT

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Abstract

Most contemporary events in Ukraine and blatant Russian Military aggression accompanied with significant signs of the global catastrophe. This last conflict on European continent has shown us that the COLD WAR ORDER DÉTENTE is not working anymore. The world has become more multi-lateral and at the same time, new global powers have emerged. One of the main identifiers of the new developments after the dissolution of the Soviet Empire has shown us that the basic human need for Identity and Freedom, as **Burton and Galtung** have identified them has proved that large numbers of people are ready to revolt and risk their livelihoods for the idea of INDEPENDENCE. These ontological basic human needs are also coupled with the need for security that big powers also possess and their anxiety that their enemies are going to attack them if they do not preemptively act has led us to number of invasions, most notably extremely flagrant Russian aggression against an independent state of Ukraine. MISPERCEPTIONS ON SECURITY are leading big powers to attack – even in some cases unprovoked their real or imagined adversaries.

Introduction

Most contemporary events in Ukraine and blatant Russian Military aggression accompanied with significant signs of the global catastrophe. This last conflict on European continent has shown us that the COLD WAR ORDER DÉTENTE is not working anymore. The world has become more multi-lateral and at the same time, new global powers have emerged. One of the main identifiers of the new developments after the dissolution of the Soviet Empire has shown us that the basic human need for Identity and Freedom, as **Burton and Galtung** have identified them has proved that large numbers of people are ready to revolt and risk their livelihoods for the idea of INDEPENDENCE. These ontological basic human needs are also coupled with the need for security that big powers also possess and their anxiety that their enemies are going to attack them if they do not preemptively act has led us to number of invasions, most notably extremely flagrant Russian aggression against an independent state of Ukraine. MISPERCEPTIONS ON SECURITY are leading big powers to attack – even in some cases unprovoked their real or imagined adversaries. When **Christopher Mitchell** talks about the Structure of International Conflict he describes the role of misperception very well and how it happens that based on wrong fears and insecurities leads to the large-scale invasions and occupations of whole countries. This factor became even more important after the end of so called Cold War Détente – where the traditional ‘Spheres of Influence’ doctrine was crushed by new independence movements. The large movements of decolonization spread through the world after **Mohandas Karamchand Gandhi** has shown a very good example of NONVIOLENT STRUGGLE FOR INDEPENDENCE. This became a greatest example to follow in the last 75 years of human history, where many nations have identified with Gandhian notion and waged successful liberation struggles from different empires of the world. **Dennis Sandole** already in 1993 has identified the need for a major PARADIGM SHIFT in the structure of international relations, since right after the breakup of the Soviet Empire it was became obvious that the old order of detente was not working since the start of Nagorno Karabakh, Abkhazia, Pre-Dniester, South Ossetia conflicts. Ukraine was not on the radar during the 1990s, but it was already easy to see that the new emerging countries as well as established empires were not going to stop fighting for the territorial expansion. **Hannah Arendt** describes this process very well in her basic work on Origins of Totalitarianism, where she connects the conflicts in Europe between two world wars in 20th century with the rise of nationalism. Through last 30+years entire world community is observing that the traditional notions of NATIONALISM AND IMPERIALISM – both have proved extremely dangerous for the fate of humanity. Now we are facing the realistic threat of the World War 3 – if there is no NEW PARADIGM FOR PEACEFUL DEVELOPMENT – where small nations and big ones can coexist on this small planet not just TOLERATING EACH OTHER BUT BUILDING POSITIVE PEACE as **Galtung** has suggested some time ago. Many sceptics have asked if and where and when there

is an example of peaceful development in contemporary world. Of course, we have some small or bigger examples of this. We need to mention the example of Costa Rica – Democratic Country with Non-Militaristic Development policies. President **Oscar Arias** was able to prove that the STATE CAN ABSOLUTELY EXIST WITHOUT DEPENDING ON MILITARY. However, of course, the question remains if there are some larger international actors who are willing to enact these policies. Here we are again dealing with the question of perceptions around the basic ontological human needs on security, identity and freedom. President **Zviad K. Gamsakhurdia** in his well-known lecture in 1990 has implied that there were many examples of NONVIOLENT CIVILIZATIONS in Pre-Hellenic times around the world. They were present in India, South East Asia, Oceania, South and Central America, Africa and of course, the well-known MINOAN CIVILIZATION around the island of Crete that has lasted for about 500 years and it was eventually destroyed not by the war, but by the natural disaster.

Therefore, we are shortly going to discuss what are the main points of achieving this NEW PARADIGM FOR PEACEFUL DEVELOPMENT.

1. Perceptions on the threat to Ontological Basic Human need of Security. As we have seen that Russian President **Vladimir Putin** has consistently appealed to the threat from enlarging North Atlantic Treaty Organization as a direct threat to the existence of Russian State let alone the Empire. Many experts consider this perception of the threat being blown out of proportion and obviously misrepresenting reality. NATO Chair has emphasized consistently that it is not true that NATO has plans to attack Russia. But the counter argument of authoritarian regime is that North Atlantic Treaty Organization is created to counter then Soviet and now Russian expansion – but on the contrary through last 30 years we have seen the expansion of NATO to the very borders of Russia. On empirical level, it is hard to deny that this has happened. NATO has expanded and now is bordering with the territory of Russian Federation in multiple locations.
2. On the other hand the newly independent countries that consider themselves the victims of Russian Imperialism through last 200-300 years make a point that they have no defense against superior military capabilities of Russia and they are looking for some sort of a shield to protect their needs for freedom, identity and security. President **Volodimir Zelenski** of Ukraine has implied that his country needs to have capacity to defend itself against imperialist aggression. This point also proves to be a ‘self-fulfilling prophecy’ in today’s situation. It is ow very difficult to deny that Ukrainian President did not have a valid point, since he is facing a very real threat and invasion from Russian occupying forces. Ukraine is now suffering one of the most bloody invasions through last 75 years since the end of the second world war.
3. International Community and the United Nations Organization is still paralyzed to act to defend small and lesser powerful countries against the invasions by bigger powers. THE BASIC PERCEPTION THAT THE STRONG WILL ALWAYS DOMINATE THE WEAK IS STILL OBVIOUSLY THE PARADIGM. However, this paradigm has failed significantly in the last 30 years and many international organizations acknowledge that ‘détente order’ is not working anymore. As a result, the probability of armed confrontation between NATO AND RUSSIA INCREASES EVERY MINUTE. If the humanity is not going to rethink the path of its MILITARY INDUSTRIAL DEVELOPMENT AND ZERO-SUM THINKING THIS WILL EVENTUALLY – SOONER OR LATER – LEAD TO A DEVASTATING WORLD WAR THAT WOULD LEAVE NO WINNERS OR LOSERS. Whole humanity will suffer as a result of a big misperception if there is no way to find new solution to the age old problem that feeds imperialism and nationalism – how to deal with the misperception of insecurity?

Burtonian analysis of perceptions by the conflicting parties leads us to a good place, but is not holistic enough to deal with the contemporary problems at the world stage. Perception is just a small part of human mind-set that is integrating intellectual and emotional aspects of our nature. In his work on “Mind-Set Theory” well-known Georgian Psychologist **Dimitri Uznadze** talks about different aspects of this phenomenon. In his works on this subject, he believes that the CHANGE OF HOLISTIC MINDSET IS POSSIBLE AND IT HAS BEEN PROVEN ON MANY EXPERIMENTAL LEVELS. **Uznadze** also mentions the phenomenon of short-term as well as perseverant will that participates in the long-term formation of MIND-SET. It is extremely important to consider this point before, during and after military confrontations, where adversaries often rely the TRADITIONAL POWER POLITICS APPROACH AS PART OF THEIR MINDSET. Now we as a humanity face a global threat of nuclear, biological, chemical war and our annihilation.

As the need for PARADIGM SHIFT IN INTERNATIONAL RELATIONS AND GLOBAL SECURITY ARCHITECTURE IS APPERENT – we need to consider holistic approach to changing a MIND-SET of track 1

representatives. As **Dimitri Uznadze** said SHOCK MIGHT BE A BEST FACTOR TO CHANGING A MIND-SET. Threat of global nuclear conflict is very obvious in the military confrontation between the West and Russia in Ukraine.

In their book on “Zones of Peace’ **Landon E. Hancock** and **Christopher Mitchell** suggest some particular examples of these zones. There are more or less successful examples of creating Zones of Peace. UN enforced Peace Zones and Sanctuaries were more or less effective in Bosnia after the Balkan war. **Jennifer Langdon** and **Mery Rodrigues** talk about the Peruvian experience of *rondas campesinas*. **Johan Galtung** was personally involved in the establishment of Zones of Peace between Peru and Ecuador. **Catalina Rojas** talks about the *Peace Communities in Columbia*. **Krista Rigalo** and **Nancy Morrison** discuss the experience of *Operation Lifeline Sudan*. There are already different examples of creating nonviolent sanctuaries. Now we are dealing with bigger challenge – this is a bigger territory and bigger stakes for different participants. The entire international community needs to figure out the way to avoid nuclear catastrophe by changing our MIND-SET. From military industrial frame of mind, we need to switch to the paradigm of NONVIOLENT ECONOMY. **Shri Rajagopal PV** has suggested this kind of structure of building integrating and global world order.

In contemporary conditions, there is an urgent need to abandon force-oriented and coercion-oriented approaches through Gandhian lenses. There is totally unacceptable to solve international relations problems today by means of force not only in moral sense, but also in pragmatic sense. It is perfectly well known what kind of consequences humanity is facing with this kind of approach. SO SWITCHING OUR INTELLECTUAL AND EMOTIONAL MIND-SET FROM TRADITIONAL POWER POLITICS TO GANDHIAN NONVIOLENCE HAS BECOME A NEW CATEGORICAL IMPERATIVE FOR ENTIRE HUMANITY. This is the most pragmatic choice in today’s world.

It is absolutely possible and doable to implement in vision for NONVIOLENT LANDS AND PEACE ZONES. However, this should be by multi-national community – not just by one big country pushing other smaller countries to demilitarize. Russia and NATO both need to talk together with smaller recently de-colonized countries to jointly create these kind of Zones of Peace. Forced and coercive solutions do not work. According to **Galtungian** term there should be no RANK-DISIQUILIBRIUM in this new arrangement by the United Nations Organization. This is the time when the new global organizations will take a joint responsibility for peace and security guarantees to the weak countries of the world. This is the very purpose of the UN and now is the time to implement it jointly. The whole country of Ukraine and the whole region of South Caucasus are latest victims of military-industrial mindset among the political elites. Now it is the time to change it.

Humanity cannot wait for months and years. This kind of decision needs to be taken very swiftly. OUR PERSEVERANT WILL NEEDS TO CHANGE THE PARADIGM OF OUR THINKING TO NONVIOLENT AHIMSA – BECAUSE WE HAVE WITNESSED A TOTAL FAILURE OF MILITARY INDUSTRIAL WAY OF LIFE.

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RETURN MIGRATION IN ALBANIA: A LITERATURE REVIEW

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Abstract

This article aims to present an overview of the literature on return migration in Albania and related issues. First, are presented the main theoretic perspectives that describe and explain the phenomenon of return migration. Then studies and findings in the field of reintegration and identity of returnees in Albania are presented as well. Articles, reports and other studies findings were the sources of the overviewed literature on return migration in Albania. Finally, some conclusions are brought about the specificity of the return migration in Albania and what the Albanian case tell in relation of the theoretic explanation. It seems that the prevalent type of the Albanian returnee is the "return of failure", although the "failure" is more related to structural factor (such as the economic crisis in the migration countries, mostly Italy and Greece) than to personal difficulties of integration. Also, the diffuse intentions to re-emigrate among Albanian returnee, is an indication of a low level of preparedness do to major events which interrupted their migration experiences and of reintegration social, economic and cultural difficulties encountered in the home country.

Keywords: return migration, returnee, reintegration, re-emigration, Albania.

1. Introduction

Albania is the country with the highest rate of external migration, relative to the populations, in Central and Eastern Europe. According to United Nations Department of Economic and Social Affairs estimates, from 1990 to 2019, more than 1.8 million of Albanians have emigrate (UN, 2019). With the collapse of communist regime, Albania has experienced continues flows of migration, mostly to the European Union countries. The first flow of migration, portrait as "protest migration", occurred in July 1990. The second flow occurred after the fall of the regime, during 1991 and 1992, when the economic crisis and political instability caused an uncontrolled flow of emigration. In this period of time, is estimated about 30000 Albanians reached Italy and Greece. During the years 1993 – 1996 the number of migrants was more contained. A third migratory flow took place in 1997, after the collapse of pyramidal savings schemes. Another migratory flow, called the "unseen Albanian emigration", occurred during 1998 and 1999 with the Kosovo refugee's crisis. Hundreds of Albanians (especially from the north) adopt fake Kosovar identities and seek asylum. The destinations were United Kingdom and Northern European countries. (Barjaba and King, 2005; IOM, 2008; Vullnetari, 2012). After 2000 the flow of migration continued but in a diminished rate. Also the type of migration transited from irregular to regular do to legal measures implemented by the host countries (King et al., 2011) and do to the increased access to legal channels of migration. With the visa liberalization in 2010 with EU countries, a new form of migration – applying for asylum, without apparent reasons – is also utilized by some Albanian citizens (GoA, 2017).

While the external migration has been from the beginning of the democratic changes in Albania a phenomenon of interest, it is only recently that the discussion on "return migration" has take place among policy makers and social scientists. The phenomenon started to be registered in Albanian official statistics in 2001. Reports on "Return and readmission to Albania" appeared with the coming into force of the European Community/Albania Readmission Agreement on May 2006 (IOM, 2006). The economic crisis in EU zone (especially Greece and Italy) augmented significantly the flows of returnees in Albania. In this frame, the Government of Albania developed a policy framework on return migration and reintegration "Reintegration Strategy for Returning Albanian Citizens (2010 – 2015)" that was approved in 2010. Other official reports, journal articles and papers emerged in these years (mostly after 2008).

This paper aims to present an overview of the literature on return migration in Albania and the related issues. First, are presented the main theoretic perspectives that describe and explain the phenomenon of return migration. Then studies and findings in the field of reintegration and the profile of returnees in Albania are presented as well. Official

reports, articles and book chapters were the sources of the overviewed literature on return migration in Albania. Finally, some conclusions are brought about the specificity of the return migration in Albania and what the Albanian case tell in relation of the theoretic explanations.

2. Theories and models in the study of return migration

Return migration is described as the movement of a person returning to his/her country of origin or habitual residence usually after spending at least one year in another country. This return may be or may not be voluntary, may be permanent or temporary. It may be independently decided by the migrant or forced by unfavorable circumstances (IOM, 2011).

It was in the 1980s that scientific debate among scholars took place on the return migration phenomenon and its impact on origin countries. Despite it has been studied by a variety of social disciplines, it is still an under theorized field (Cassarino, 2004).

A systematic review regarding the theories and the models in the study of the phenomenon is provides by Cassarino (2004) who distinguishes five theories in the study of return migration: neoclassical economics, the new economics of labor migration, structural approach, transnationalism, and social network theory.

The Neoclassical Economics and New Economics of Labor Migration (NELM) approaches have contrasting interpretations regarding return migration. Neoclassical Economics views migrants as individuals who want to maximize their earnings and, in this frame, the return migration is seen as the outcome of a failed migration experience. Returnees are exclusively seen as labor migrants who did not successfully maximize their expected earnings (Todaro, 1969). The NELM views migrants as individuals who maximize their earnings and also the duration of their stay in the host country to achieve permanent settlement and family reunification.

In opposition to Neoclassical Economics, NELM sees return migration as the result of a successful experience abroad during which migrants met the goals of increasing the incomes and accumulating savings (Stark 1991). Despite their contrasting interpretations, both approaches relate the motivations for return only with financial and economic factors. Also both theories make no reference to the contextual social, economic, and political factors at home country (Cassarino 2004).

The contextual factors are brought in focus by the Structural approach to return migration. This approach analyze the return not only in reference to the individual experiences of the migrants, but also in reference to the institutional factors in countries of origin. Success or failure is analyzed by confronting the expectations of the returnee with the “reality” of the home economy and society. In an attempt to show the necessity of contextual factors in home countries to be taken into account to determine whether a return experience is a success or a failure, Cerase (1974) identifies four different types of returnee: 1) “Return of failure” – returnees who could not integrate in their host countries; 2) “Return of conservatism” – migrants who before emigrating had planned to return home with enough money; 3) “Return of retirement” – migrants who decide to return in their old age; 4) “Return of innovation” – actors who intend to make use of all the means and new skills they have acquired during their migratory experiences. Although the Structural approach take into account the situational factors, Cassarino (2004) criticize it for not considering the continuum between the returnees’ migration experiences in their former receiving countries and their situation in their origin countries.

The Transnationalism approach is an attempt to formulate a theoretical framework that better understand the strong social and economic links between migrants’ host and origin countries. (Cassarino, 2004). Transnational activities are implemented by regular and sustained social contacts over time across national borders (Portes et al. 1999). Transnationalism main fields of investigation are “transnational identities” and “transnational mobility”. Transnational identities result from the combination of migrants’ origins with the identity acquire in the host countries, which leads to the development of “double identities” more than to conflicting identities. When returning home, transnationalists recognize the migrants face a process of adaptation and also social and reintegration difficulties. However, the regular contacts they maintain with their origin countries, allow the return to be better prepared and organized (Portes et al. 1999).

Social network theory views returnees as migrants who maintain strong linkages with their former places of settlement in other countries. The networks are composed by a multiplicity of social structures and the configuration of linkages is of paramount importance to examine the fundamentals that define and maintain the cross-border linkages in which return migrants are involved. Networks are selectively organized and their maintenance require long – standing interpersonal relationships. (Eccles and Nohria, 1992). Cross-border social and economic networks differ from transnational relationships. The exchange relations are viewed as being based on the commonality of interests, and not on ethnicity.

Cassarino (2004), in his revision of the conceptual approach to return migration argue there exist various degrees of return preparation that differ in terms of *resource mobilization* and *preparedness*. Resource mobilization pertains to tangible and intangible resources that have been mobilized during the migration experience abroad, while the returnee's preparedness refers to a voluntary act that must be supported by the gathering of sufficient resources and information about post-return conditions at home. He identifies three levels of preparedness: 1) Returnees whose high level of preparedness allows them to organize their own return autonomously while mobilizing the resources needed to secure their return; 2) Returnees having a low level of preparedness – whose length of stay abroad was too short, owing to major events which abruptly interrupted their migration experiences; 3) Returnees with non-existent level of preparedness – whose circumstances in host countries prompted them to leave.

In conclusion, return refers to a preparation process that can be optimized if it takes place autonomously and if the migration experience is long enough to foster resource mobilization.

3. Return migration studies: Albanian case

The return of Albanian emigrants, as an aspect of their migration, has been overlooked. The literature has treated largely the factors of emigration and also the remittances impact in Albanian economic development. The return phenomenon started to be registered by the Albanian Institution of Statistics (INSTAT) in 2001. Returns have been on the rise every year. But it is in particular after 2008, with the European debt crisis, that their number significantly increased. They returned mostly from Greece, followed by those coming back from Italy, two countries with biggest numbers of Albanian migrants and from most affected from the EU crisis (INSTAT, 2011). This flow of returnees drew the interest of the national agencies and international migration organisations but also of the social researchers. However, interesting findings on Albanian return migration date also before 2008.

One of these is Labrianidis and Hatziprokopioum “Albanian return migration: migrants tend to return to their country of origin after all” (2005). The authors aimed to explore the trajectories of Albanians who emigrated and later returned: from their situation immediately prior to migration to the conditions they faced in the host country and then to their experiences upon return. Their study is a primary research of data collected with a questionnaire from a snowball sample of 324 Albanian former emigrants in Greece and in Italy. They find the main reason for return was positive economic factors. Additional reasons were family obligations, psychological reasons, or simply the desire to be home. While about 70 per cent of interviewed declared that they had returned for good, 56 per cent would consider emigrating again if that was necessary. Another finding was that no problems seemed to exist regarding the process of labor market integration after return. Important increases had taken place in entrepreneurship, self-employment, and professionals. Regarding the social reintegration, more than 90 per cent of the respondents did socialize with either old friends, or relatives, or both. But the authors note that the closeness may reduce the inclination to permanent return, at least in the short term; the accessibility of the country of origin makes contacts easier, thus eliminating the immediate psychological/family motives for return as long as economic and life prospects are better in the host countries.

The 2008 study “Identification of the areas most affected by emigration and return migration in Albania: profiling of returning migrants” conducted by IOM had, among others, the objective to identify the push and pull factors for emigrating and for returning home and profiling the return migration, return reasons and the issues of reintegration. Data were gathered with a national survey of 1400 families (2417 migrants or return migrants).

With interest are the findings for the return migration. From a subsample of 797 returnees, only 30.5% considered the return as permanent, while 42.2% considered temporary the stay in Albania, and 26.7% were undecided about their stay. Regarding the difficulties of reintegration in their home county, for 60% of the interviewed returnees the reintegration was difficult, while 24% of them declared they had not faced difficulties (IOM, 2008).

The 2013 study of Gemi, “Albanian irregular migration to Greece: a new typology of crisis” had as object the return migration flows seen from the irregularity point of view.

Reporting data from Hellenic Ministry of Interior, around 130,000 to 140,000 Albanian migrant workers lost their permission of stay in Greece because of the financial crisis, as they were not able to secure the required number of social security stamps. But the author states that it is extremely difficult to assess whether all of them settled in Albania, eventually returned again to Greece or migrated to other countries with more robust economies.

The 2014 “Return Migration and Reintegration in Albania” (INSTAT and IOM) represent the wider inquiry on the phenomenon. This report, based in a national survey provides an overview of return migration in Albania as of 2013 and the dynamic of reintegration. The survey was conducted through a structured questionnaire. The sample of 2000 persons was selected through a stratified design at national level (across each of the 12 Albania regions).

The Findings showed that, related to the type of return, the vast majority of the respondents (94.3%) declared their return had been voluntary. They returned mainly from Greece (70%) and Italy (23.7), while from other countries of emigration (UK, Germany, USA, others) only a small part of returnees (5.5%).

Among a list of reasons for returning home, being formatted the question as a multi-tick response, it is difficult to say what the first most important reason was for returning home. Nevertheless, the “forcing” reasons to return (loss of job, family problems, end of contract work / non removable permit, health concern, problems of integration) seem to prevail in confront of a willingly well prepared return home (plans for investment / management own business, better job opportunities) and “nostalgia”.

Between the problems encountered after return in Albania, “insufficient incomes” was the most mentioned by the respondents, followed by “lack of adequate services”, and “inadequate health system”. “Bureaucracy”, “instability in the country” were among other problems, and also the “socio – economic reintegration difficulties”.

Regarding the re-emigration, 32.6% of returnees declared their clear intention to re-emigrate, while the second most frequent answer was “perhaps”. The fact that less than 2/3 of returnees had preferred to give an answer this question, illustrate the uncertainties about the stay in home country. Seems that the intention to re-emigrate was an interweaving of “pull”: “know the immigration country and want to stay longer”, “renew the documents”, “new employment opportunities abroad”; and “push” motivations: “not find a job”, “not have future in my country” and “not fit in my country”.

The article of Garcia Pereiro and Biscione “Return migration in Albania: the profiles of returnees” (2016), present the findings of a secondary research that analyses further the data of 2014 INSTAT and IOM’s report. The authors use multinomial logistic regressions to predict one’s type of returnee. They report the relative risk ratios representing the odds of having return to Albania for family problems versus employment loss, and feeling nostalgia versus employment loss.

The results of their analysis show the odds ratio for those who sent goods frequently to Albania versus those who did not is 2.3 times higher for returning for family problems and 2 times higher for returning for nostalgia, relative to returning for having lost the job. The odds ratio for those who maintained frequent contacts with the country of origin compared to those who did not is 1.5 times higher for returning for family problems, and 2.5 higher for nostalgia, relative to having lost the job. Also, those who frequently visited Albania have 20% higher chances for returning for nostalgia and family problems relative to have lost the job. The authors conclude that transnational ties and maintenance of relations with the origin country are among the most important determinants of return decisions in Albania (Garcia Pereiro and Biscione, 2016).

Cena and Heim, in their study “A Regretful Journey Home: Albanian Return Migration in the Wake of the Global Financial Crisis of 2008” (2022), utilize in-depth interviews and family case studies with purposively recruited Albanian return migrants who had lived in Greece and Italy pre-crisis.

They found the experiences of return migrant families reflected the challenges posed by the 2008 economic crisis and the undesired return. For many respondents, returning to the homeland resulted in concomitant unemployment and economic difficulties.

In consistence with Cassarino (2004) which emphasises the dialectic interplay between preparedness and local conditions encountered upon return in shaping the lives of return migrants, they conclude that returning under exceptional circumstances interrupts migrant family plans and impedes individuals’ ability to navigate challenges successfully upon returning. Those who were better prepared were also more capable of transferring human capital to the country of origin and better able to engage in transnational mobility with the destination country. However, such transnational practices were constrained by return migrants to migrate to other EU destinations (Cena and Heim, 2022).

4. Conclusions

The phenomenon of return migration in Albania is only recently studied. Official statistics about the returnee began to be registered in 2001. Number of returnees was restrained until 2008, but has increased with the Eurozone crisis, the majority of returns taking place from Greece and Italy. The main sources of literature in the return migration in Albania are reports from national and international institutions (INSTAT, IOM), book chapters, and journal articles. Before 2008, the return phenomenon was seen under “optimistic” lenses, as “return of conservatism” and/or of “innovation”.

The increased numbers of returns to Albania after the European Debt Crisis of 2008 have been of a voluntary nature and have taken place from Greece and Italy due to the migrants losing their jobs in these countries. Although it is inappropriate to categorize this flow as “return of failure”, being this “failure” related to structural factor in the destination countries (such as the economic crisis in Greece and Italy) more than to migrant’s personal difficulties of integration. Other aspects of “after 2008 return” are the low level of preparedness and of resource mobilization. In relation to the lack or low level of preparedness, are the returnees’ reintegration social, economic and cultural difficulties. A considerable percentage of returnees intend to re-emigrate because of such difficulties.

The findings presented in this paper show that the proximity with home (in reference of Albanian migration in Greece and Italy), the transnational ties and the maintenance of relations with the origin country but also the previous host country determine the migratory journey.

Regarding the theoretical explanations, seems the transnational theory and Cassarino elaborations offer a conceptual framework to better understand the return phenomenon, at least in the Albanian case.

However, to better understand the phenomenon, new quantitative data and further qualitative analysis on return migration in Albania are needed.

Nomenclature

UN	United Nations
IOM	International Organization for Migration
EU	European Union
GoA	Government of Albania
NELM	New Economics of Labor Migration
INSTAT	Institute of Statistics (Albania)

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CAPACITY BUILDING FOR THINK TANKS (CASE OF GEORGIA)

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Abstract

Policy research organizations, broadly referred to as Think Tanks, represent the non-profit bodies that work to deliver high-quality research, knowledge, and ideas to the policymakers, international development communities, private sector, and general public. The role of this kind of organization is indisputable. These organizations are the capacity builders themselves for other civil society organizations, governments, and people.

In the 1950s, international donor communities introduced capacity building to avoid development aid and technical assistance deficiencies. Therefore, this study attempts to describe the role and importance of organizational capacity building for Georgian think tanks, based on the experience of the two important biggest players on the market which operate in two different areas. The study assesses the existing capacities of these organizations; their involvement in the capacity building activities and their needs for future capacity development and explores the funding ecosystem for the capacity development of the policy research organizations.

Keywords: Think Tank, Non-profit, Capacity, Capacity Building, funding ecosystem, policy research, engagement organizations

JEL Classification: M2; M14; M16.

Introduction

Policy Research, Analysis, and Engagement Organizations, broadly addressed as Think Tanks, play a critical role in political and policy areas. McGann claims, that “their function is unique, as they provide public policy research, analysis and advice, are non-profit, and operate independently from governments and political parties” (McGann, 2005). Their principal role is to support governments make informed choices about the issues at internal and international levels.

The role of Think Tanks in a nation’s capacity development is unarguable, through creating national development plans and to foster sustainable development. Their primary purpose is to develop and market the ideas to policymakers and the general public. Their work in this field has a long-term effect, as they work to change people’s view of looking at issues, develop new ideas for public policy and build new areas of knowledge that needs years, if not decades, to realize the actual impact (Selee, 2013).

According to the 2018 data, there are 8,248 Think Tanks, officially registered worldwide, half of which operate in North America and Europe (McGann, 2019). The world’s leading research institutions, like Brookings Institution (ranked as the top think tank in the world, Global Go To Think Rank Index, McGann 2019), the CATO Institute, the Economic Policy Institute (EPI), Bruegel, and others, all emphasize that they work to increase the understanding of public policies, improve quality of the policy and provide research, analysis, and debate (www.brookings.edu; www.loc.gov; www.epi.org; www.bruegel.org).

Officially, there are thirty-five Think Tanks registered in Georgia. However, it is argued that the definition of think tank’s is relatively ambiguous, and not all research institutions can refer to themselves as such. Georgian policy research organizations assist the government with the support of international development communities in policymaking through their research.

These organizations work to develop the capacities of governments, other civil society organizations, business support organizations, and the general public. Hence, research institutions must strengthen their internal capacities to serve their mission and provide quality services and products to their “customers.”

1.1.1 2. *Research Questions and Methodology*

The study attempts to answer the following research questions:

- How well developed are core leadership and management capacities in the Georgian research institutions (Think Tanks)?
- Do Georgian research institutions get sufficient funds to direct them for organizational capacity development?
- Are Georgian policy research institutions (think tanks) involved in organizational capacity building activities?
- Does organizational capacity development directly impact the services and products developed by the research institutions in Georgia?

Based on the research questions stated above, this research confirmed or reject the following hypothesis:

- High leadership and management capacities increase the research institutions' effectiveness and helps them perform their functions to provide quality products and services.
- Low availability of funding creates the burden for the research institutions to direct the funds to the organizational capacity development.

The TCC Group's Four Core Capacities Model is used for assessing the core capacities of the organizations under research and answer the research questions. The tool is widely accepted by international organizations and provides an in-depth analysis of the organizational capacities.

The TCC group's organizational capacity assessment tool, named Core Capacities Assessment Tool (CCAT) measures organizational capacities through four levels, considering the sub-capacities under each capacity and the organizational culture, which has significant importance for organizational capacity development.

3. **Conceptual Clarification**

1.2 **What is a Think Tank?**

Policy Research Organizations, broadly referred to as Think Tanks, are the organizations that develop, repackage, and market ideas to policymakers and the public (Selee, 2013). James McGann defines think tanks as “public-policy research analysis and engagement organizations that generate policy-oriented research, analysis and advice on domestic and international issues, thereby enabling policymakers and the public to make informed decisions about public policy” (McGann, 2019).

According to Andrew Rich, think tanks are “independent, non-interest-based, non-profit organizations that produce and principally rely on expertise and ideas to obtain and support and to influence the policymaking process” (Rich, 2005).

The think tanks “act as a bridge between the academic and policymaking communities and between states and civil society, serving in the public interest as an independent voice that translates applied and basic research into a language that is understandable, reliable and accessible for policymakers and the public” (McGann, 2019).

Think Tanks play an active role in the political and policy arenas on the national and international levels, with the unique function of providing the governments and political parties with policy research, analysis, and advice. The think tanks' primary functions are to support the government in understanding domestic and international importance issues and make informed choices on important matters. The policy research organizations' fundamental role is to create high-quality research and analysis and outreaching the government officials and the general public. The policy research organizations' main activities include addressing policy issues, conducting research, publishing books, media outputs, and articles, evaluating government programs, and disseminating their research findings through different outreach activities: media appearances, speeches, workshops, seminars.

McGann (McGann, 2005) breaks down the critical roles of the think tanks into the following:

- The role of mediator between the government and public, building trust and confidence in public officials.
- The role of the informed and independent voice in the policy debates
- Identification, articulation, and evaluation role of the ongoing policy issues, proposals, and programs
- The role of converting the ideas and problems into the policy issues
- Raising the awareness of the public in domestic and international policy issues through interpreting issues, events, and policies and disseminating them via media sources
- Supporting the exchange of ideas and information between the key stakeholders of the policy formulation process
- To challenge standard procedures and the business of the government officials and policymakers

Policy research organizations may be affiliated or independent organizations. With their structure, they are permanent bodies rather than ad-hoc commissions. Think tanks are mostly university-based and affiliated with academic institutions. The policy research organizations not affiliated with academic institutions or political parties are called "freestanding" or "independent think tanks" (McGann, 2005). Most policy research organizations are non-profit and work independently from political parties or governments. According to Andrew Rich (Rich 2005), Think tanks are politically aggressive organizations, aggressively disseminating their research and ideas to influence policymaking. Besides, think tanks strive to increase their credibility and remain independent.

1.2.1 Think tanks worldwide and Global statistics of think tanks

The majority of the policy research institutions are in the United States. However, after the collapse of the Soviet Union, a wide range of think tanks was founded in Eastern Europe and expended worldwide, mostly between 1991 and 2000 (Stuyk, 2015). A more significant number of policy research organizations are based in the United States, and the available literature is generally describing the United States think tanks. Although some think tanks are avoiding labeling themselves as think tanks, it is hard to determine the exact number of think tank organizations.

The term "think tank" originated after World War two to describe military research and development organizations (Rich, 2005). Lately, it emerged to describe the organizations that tried to bring knowledge

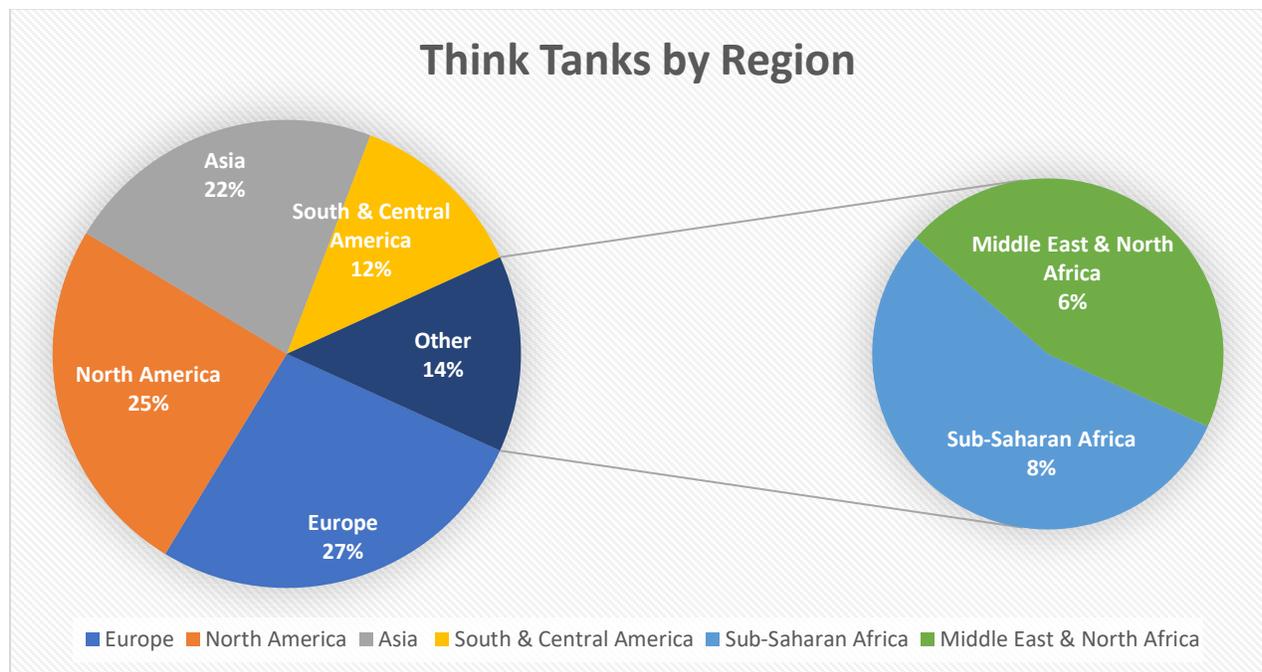
to the policymakers and increase their trust in the private sector and promote the dialogue between policymakers and private sector, and “help government think” (McGann, 2005)

The increase of policy research organizations has started in the 1970s and 1980s in the United States and worldwide. Although,

According to McGann, U.S.-based policy research institutions represent one of the four types of organizations: academic, contract research, advocacy, policy enterprise, and Hybrid (containing the features of the first three types). The think tanks affiliated to the political parties, governments, or congress do not exist in the United States, while this kind of think tanks dominate Europe.

As of 2018 – 2019, there were 8,248 think tanks officially registered (“Global Go to Think Tank Index” report). 51 % of the policy research organizations are in the United States and Europe.

Figure 1. Think Tank percentage distribution by Region



1.2.2 Think Tanks in Georgia

According to the 2019 data of the “Global Go to Think Tank Index,” thirty-five think tanks are registered in Georgia. Although, only twelve of the registered Think Tanks appear in the global rankings, prepared by the “Global Go to Think Tank Index” of 2018 – 2019, designed by James McGann for the University of Pennsylvania and the Lauder Institute. Conversely, On Think tanks (www.onthinktank.org) has created an open think tank directory containing information about worldwide policy research organizations. According to the Open Think Tank directory, there are 20 think tanks registered in Georgia. Therefore, we can assume that no exact data covers the total number of think tanks registered in Georgia, considering that the think tank definition is ambiguous and not all research organizations can label themselves as think tanks.

1.2.3 Funding Environment for The Think Tanks in Georgia

Most think tanks in the Asia, Latin America, Africa, and the Middle East continue to be dependent on government funding, gifts, grants and contracts from international public and private donors. (McGann, 2020). In contrast, the primary sources of income for the Georgian Policy Research Institutions (Think-

tanks) are international donors. The chart below shows the distribution of the donors by their type for the both organizations, that have participated in the indicated research

Figure 2. Funding by donor type for Organization #1

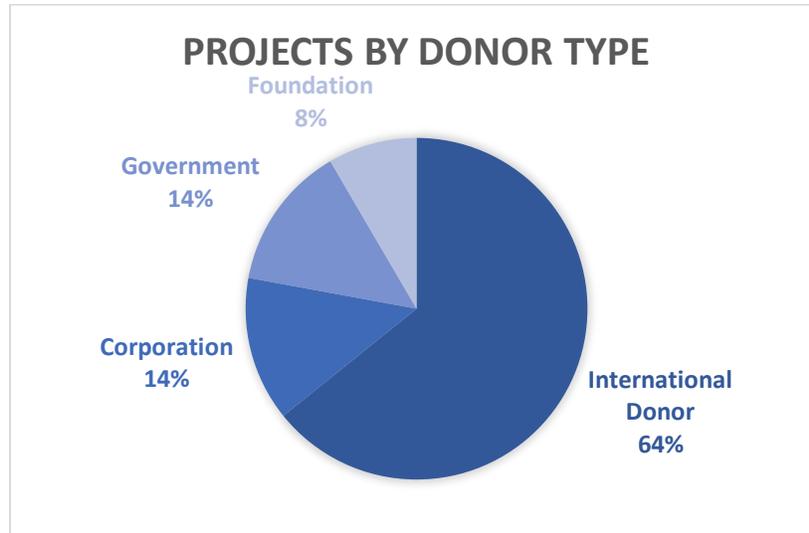
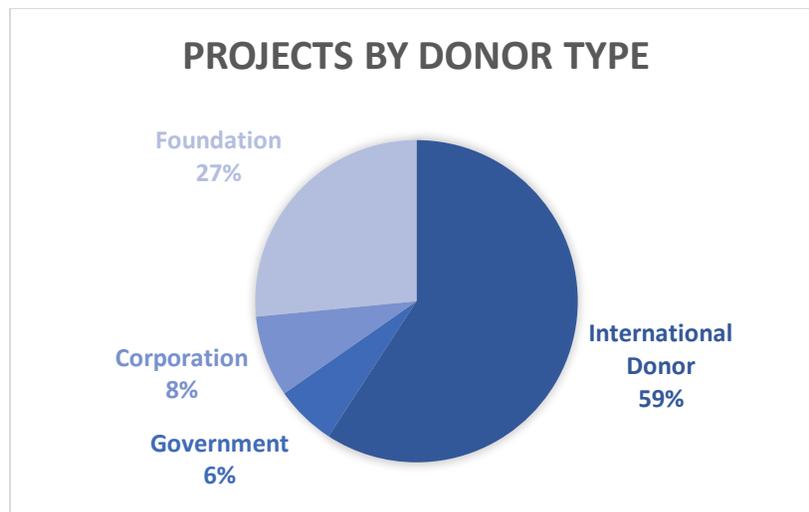


Figure 3. Funding by donor type for Organization #2



Overall, only 14 % (for organization #1) and 8 % (for organization #2) of the funding derives from the government agencies, while one of the primary missions of the think-tanks is to “generate policy-oriented research, analysis, and advice on domestic and international issues, thereby enabling policymakers and the public to make informed decisions about public policy” (McGann, 2019). On the other hand, the international donors (namely: UN Agencies, USAID, EC, and others) are the main funders of the policy research institutions. The share of the donor funds for the organizations selected for this study represents 64% and 59 %, respectively.

However, the most significant share of the donor funding for these organizations represents the funding for particular projects and services, which they are eager to receive. Accordingly, however highly involved in

the capacity development activities, these organizations still consider the costs as the main barrier to capacity building, next to the staff time.

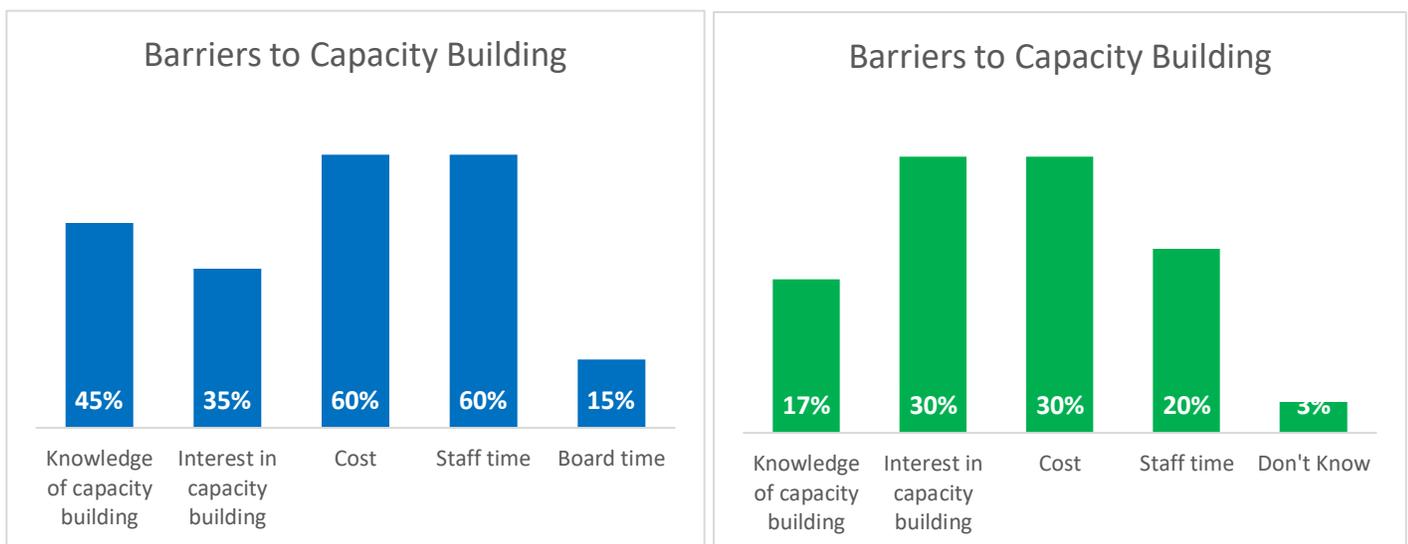
4. Survey Results and Data Analysis

The study demonstrates that the organizations are working towards capacity development and are involved in related activities. However, the surveyed employees perceive that the barriers towards capacity development still exist.

For the Organization #1 surveyed, the biggest challenge hindering the capacity development process is cost and staff time (60 %), followed by knowledge (45 %) and Interest in capacity development (35 %). Board time is the least perceived barrier (15 %).

In the case of the Organization #2 the biggest challenge hindering the capacity development process is again cost and staff time (30 %), followed by Interest in capacity development (30 %).

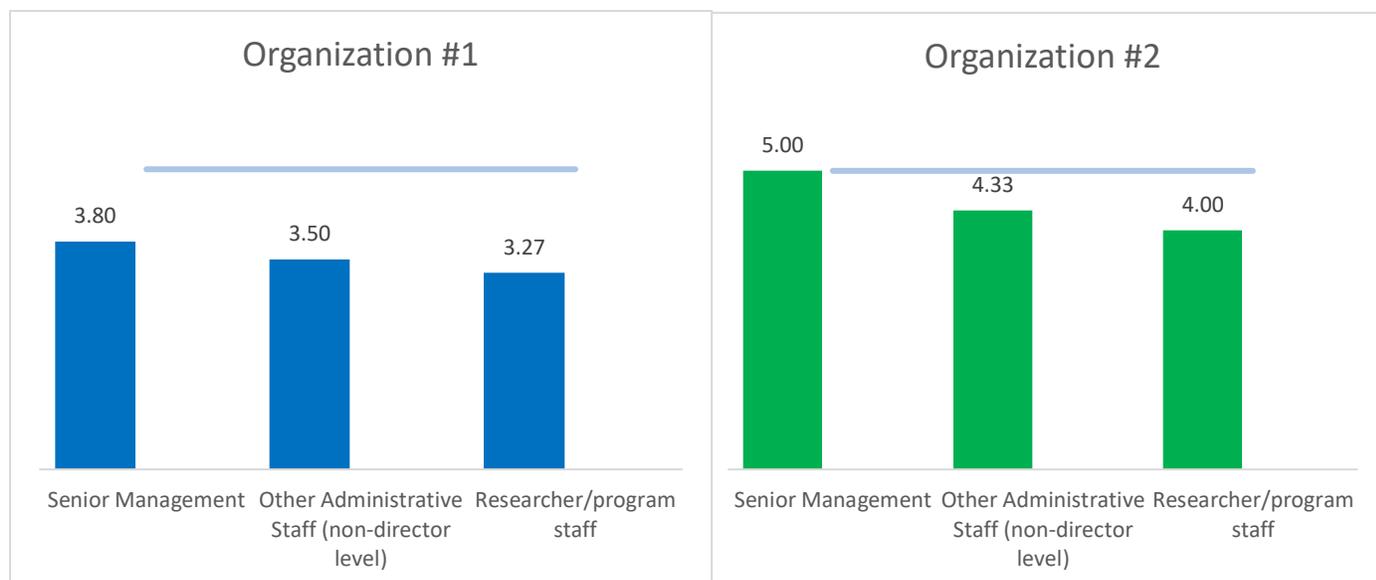
Figure 4. Barriers for Capacity Building (Organization #1 & Organization #2)



Leadership Capacities

Leadership capacity is a vital capacity of all non-profits, as it is a primary indicator that the organizational leaders are capable of and effective in making strategic decisions. It is crucial to understand to what extent the employees on each level have clear information about the corporate leaders and their work and how the leadership delivers the messages to the staff at any level. As one of the key elements of the organizational capacity assessment, leadership capacities are perceived differently at different levels.

Figure 5. Programs and Projects of the Organizations serve their mission (Organization #1 & Organization #2)



The survey evaluated how well the employees are aware of the mission and vision of their organization and accordingly, how they perceive their programs and projects serve the mission of the organization. The majority of the survey participants strongly believe, that their projects serve the mission (50 % in the Organization #1 and 53 % in the case of Organization #2).

Capacity Development Activities

To evaluate the involvement of the organizations in the capacity development activities, the study assessed whether the organizations have conducted the following capacity building activities during last two years:

- Assess organizational strengths and weaknesses
- Develop new board committee structures, advisory groups
- Develop and implement a strategic plan
- Develop or improve systems for financial planning, monitoring and managing financial performance
- Better assess necessary staff functions, assign functions to staff members, or create new positions
- Help staff develop professionally
- Develop or improve ability to solicit grants from foundations, government, or corporations
- Enhance communications and outreach strategies
- Enhance our evaluation capacity
- Improve information technology systems

The answers of the employees from the organization #1 clearly demonstrate that they were actively involved in the capacity development activities, using internal and external resources:

Table 1. Capacity Building Activities of organization #1

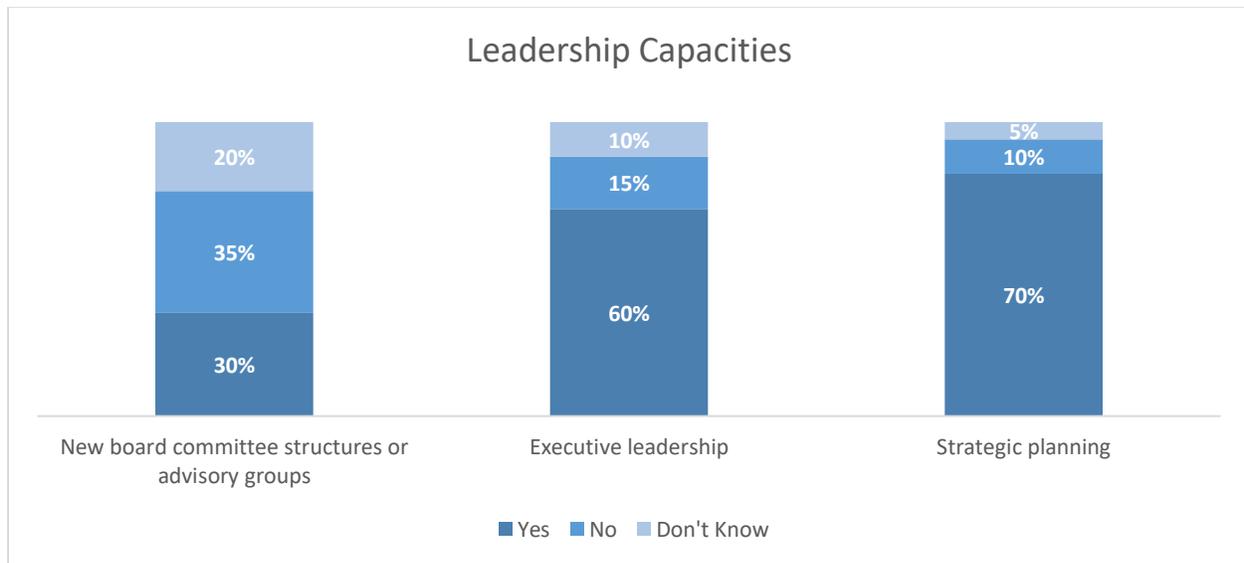
Capacity Building Activities (during past two years)	No	Yes, with internal resources	Yes, with the help of externally hired expert(s)	Don't know
Assess organizational strengths and weaknesses	-	11%	58%	32%

Develop new board committee structures, advisory groups	41%	12%	47%	-
Develop and implement a strategic plan	5%	14%	67%	14%
Develop or improve systems for financial planning, monitoring and managing financial performance	-	38%	43%	19%
Better assess necessary staff functions, assign functions to staff members, or create new positions	16%	53%	-	32%
Help staff develop professionally	26%	17%	43%	13%
Develop or improve ability to solicit grants from foundations, government, or corporations	39%	17%	17%	28%
Enhance communications and outreach strategies	9%	23%	64%	5%
Enhance our evaluation capacity	33%	11%	11%	44%
Improve information technology systems	16%	42%	16%	26%

Considering that the organization has implemented several capacity development activities, most survey participants advise that many capacities still need to develop. The survey reveals that the organization has gaps in expanding its leadership, management, and technical abilities (three out of four main capacities).

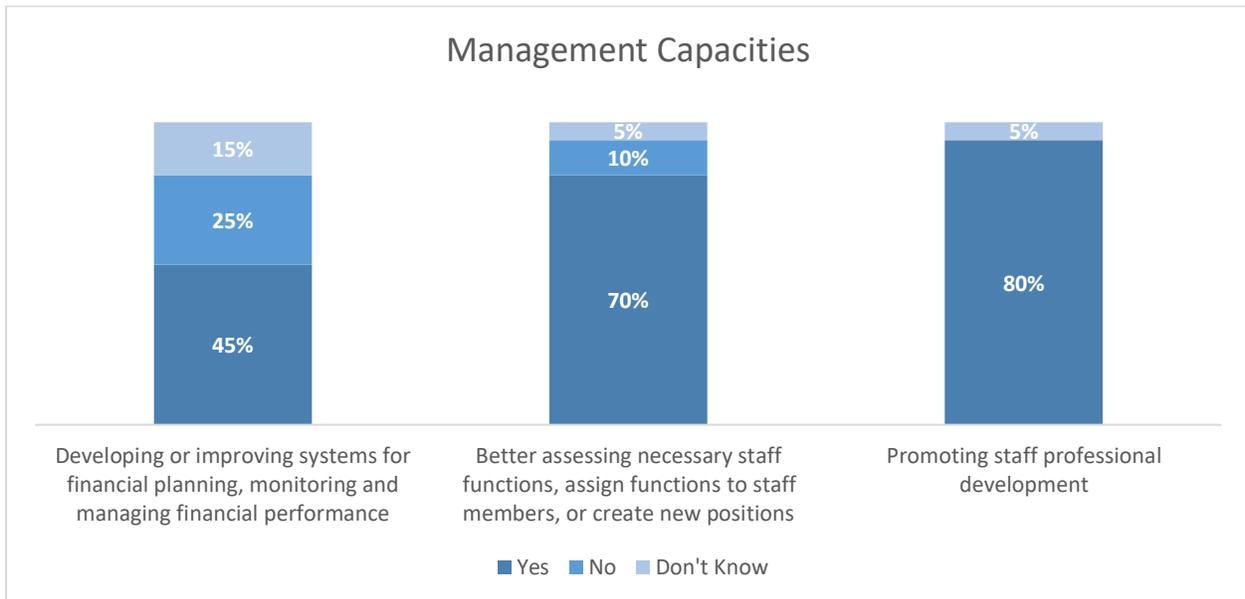
- **Leadership capacities:** The majority of the survey participants from the organization #1 agree that the organization needs to develop the organization's executive leadership and 70 % of them think that they need to improve strategic planning.

Figure 6. Leadership capacities



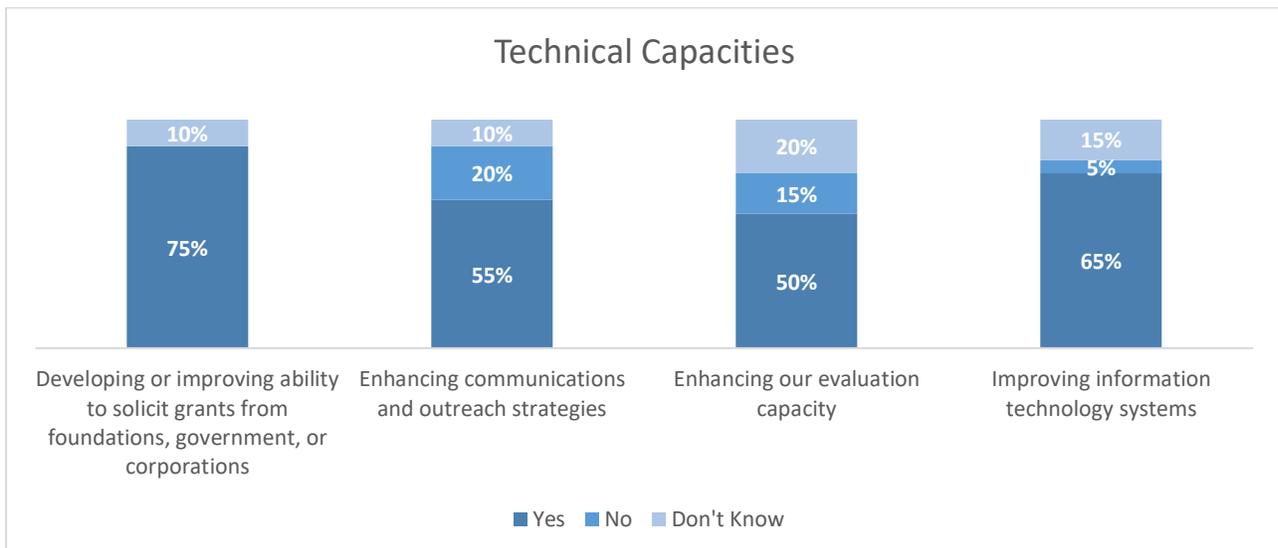
- **Management Capacities:** The majority of the survey participants advise that the organization needs to assess necessary staff functions better, assign new tasks to the staff, and create new positions and promote staff professional development.

Figure 7. Management capacities



- **Technical Capacities:** The survey participants offer that the organization should further develop and improve its fundraising abilities. Besides that, they think that the organization should enhance the organization's communications and outreach strategies and evaluation capacities. Although the organization is improving the Information Technology systems with internal resources, the majority of the surveyed employees think that the organization should improve its information technology systems.

Figure 8. Technical capacities



The organization #2 has also conducted several capacity development activities throughout the last two years:

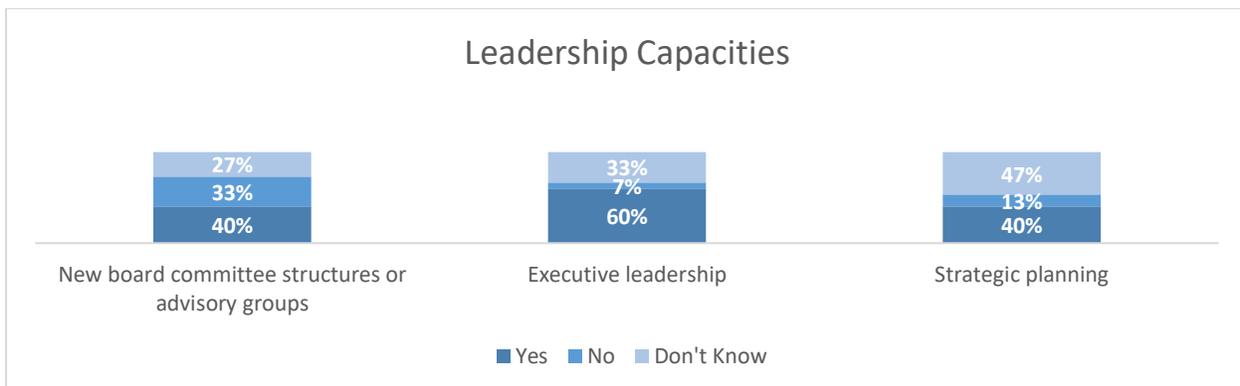
Table 9. Capacity Building Activities at organization #2

Capacity Building Activities (during past two years)	No	Yes, with internal resources	Yes, with the help of an externally hired expert(s)	Don't know
Assess organizational strengths and weaknesses	33%	-	47%	20%
Develop new board committee structures, advisory groups	47%	-	7%	47%
Develop and implement a strategic plan	13%	67%	7%	13%
Develop or improve systems for financial planning, monitoring, and managing financial performance	-	7%	53%	40%
Better assess necessary staff functions, assign functions to staff members, or create new positions	20%	47%	13%	20%
Help staff develop professionally	13%	20%	20%	47%
Develop or improve the ability to solicit grants from foundations, government, or corporations	-	60%	13%	27%
Enhance communications and outreach strategies	-	53%	20%	27%
Enhance our evaluation capacity	27%	33%	20%	20%
Improve information technology systems	-	67%	13%	20%

Considering that the organization has implemented several capacity development activities, most survey participants advise that many capacities still need to develop. The survey reveals that the organization has gaps in expanding its leadership, management, and technical abilities (three out of four main capacities).

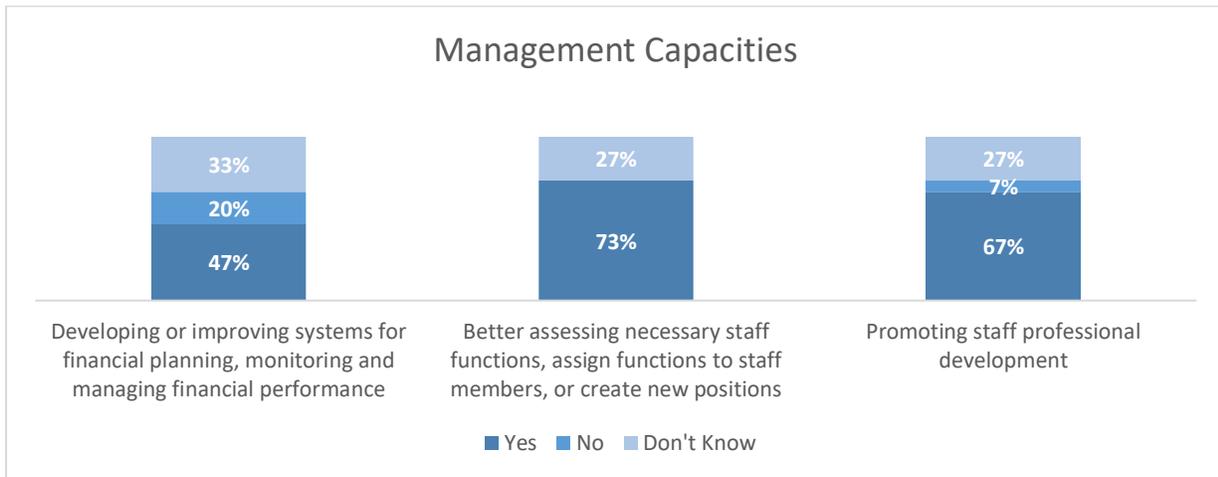
- **Leadership capacities:** Most of the survey participants agree that the organization needs to develop the organization's executive leadership, and claim that new board committee structures need to be developed. Besides that, they think they need to improve strategic planning.

Figure 10. Leadership capacities of organization #2



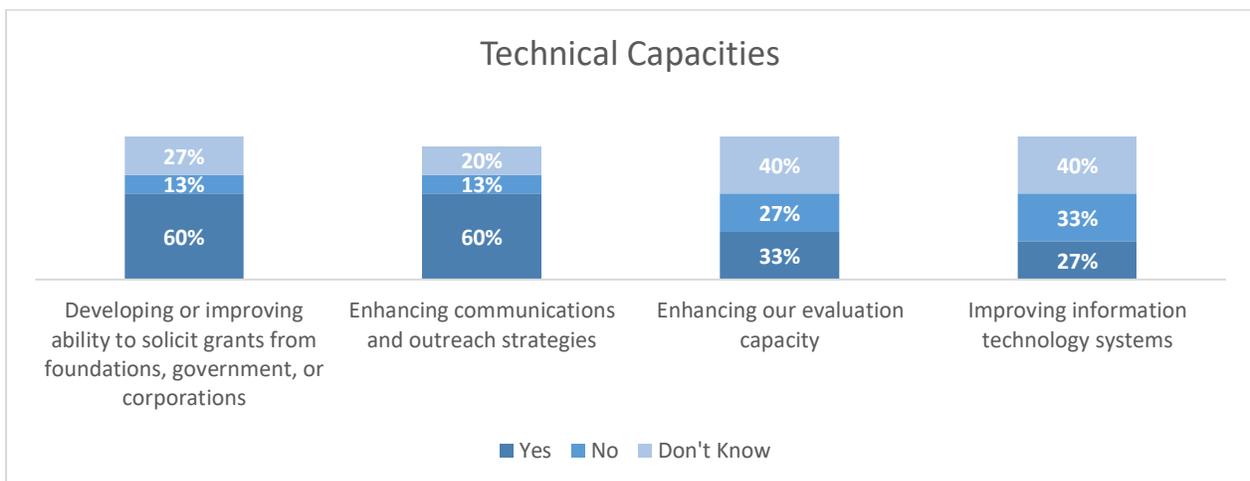
- **Management Capacities:** The majority of the survey participants advise that the organization assess necessary staff functions better, assign new tasks to the staff, and create new positions. Most survey participant suggest that the organization should promote staff professional development.

Figure 11. Management capacities of organization #2



- **Technical Capacities:** The survey participants offer that the organization should further develop and improve its fundraising abilities and also enhance the organization's communications and outreach strategies and evaluation capacities.

Figure 12. Technical capacities of organization #2



CONCLUSION and RECOMMENDATIONS

The research has studied Management and Leadership Capacities of two think tanks, operating in Georgia., through TCC group's model for organizational capacity assessment. Alongside, with the capacity's assessment, the research addressed the previous experience and the current needs for the capacity development, as well as availability of funding for the organizational capacity development activities.

Both organizations studied, represent the respectful and important players on the market. As think tanks, their primary mission is to build the capacities of the policy makers, public sector and the general public. Although, the donor communities finance only particular activities to support the organizations in their overall mission, although neglecting the necessity of financing the development of these organizations itself.

According to the current study, the availability of funds is not sufficient for the capacity development of the policy research institutions. However, both organizations under research still lack number of sub-capacities that require financial, as well as non-financial resources.

Georgian research institutions are involved in capacity development activities, both, with internal resources and with the assistance of externally hired experts. Although, they still have gaps in several capacities, that require sufficient assessment, planning, implementation and evaluation of the capacity development activities.

The organizational capacity development does not necessarily have an impact on the services and the products they develop. The organizations studied for this research, have substantial portfolio of the projects, that confirm, that they are demanded on the market.

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BASALT FIBER IN WIND ENERGETICS

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Abstract

The presented work refers to the technology of wind rotor manufacturing from produced in Georgia basalt fiber polymer composite material as they successfully meet the high-strength and lightweight requirements. Using such rotors it is possible to manufacture wind generators with improved service life. We are working on the technology of so-called household, small wind generators. The cost of electricity generated by manufacture such power plants on the basis of domestic raw materials would be lowered.

Keywords: Basalt fiber, Polymer, Wind rotor, Composite material.

1. Introduction

The urgency of wind energetics permanently is growing worldwide. There are existing as well as manufacturing a variety of installations of all sizes and structure, in range from micro and small power generators up to large power plants. The main unit of all of them is the wind energy receiver or rotor. Generally, wind energy has been used by people since time immemorial. The most clear example are windmills. The material has always been crucial in the manufacture of rotors. The main condition, in this regard, was and still is the lightweight requirement of the material and at the same time the sufficient strength is required. In windmills for manufacture of blades were used a lightweight wooden frames with a bull skin stretched on them. The application of wind generators began in the first half of the twentieth century. The rotors were also made from leather, plywood or light metals. The second half of the twentieth century turned out to be special for wind energetics, when polymer composite materials were applied to manufacture rotors. In these materials, compared to all other materials, is possible to achieve the desired ratio of mass and strength parameters. Simultaneously in the XXI century, are made prospects for the development of high-output wind power plants. Several megawatt wind farms are currently under construction with rotors up to 100 m in diameter.

2. Body of Manuscript

For manufacturing of wind rotors are used so-called reinforced polymer composite materials consisting from two main parts [1]. This is a matrix or filler and fibers of woven reinforcement layers. Polyester resin is mainly used as a matrix, while materials made from glass, aramid, Kevlar, carbon, asbestos or other fibers are used as reinforcement materials. One of the most advanced and relatively new applied in hem fibers are basalt fiber. It is closer to glass fiber in terms of properties and at the same time exceeds its properties by some indicators (strength, heat resistance). Basalt fiber is produced in Georgia. The enterprise Ltd "Basalt Fibers" operates in Rustavi city that uses basalt stone as a raw material from Marneuli region. 10-12 cm in dimensions basalt stones are melted in a special furnace. At the bed of the furnace is arranged a platinum-rhodium filler with many holes. The bundle of ends equal to the diameter of the hair from the filler is gathered and twisted into a thread. The products of the enterprise are presented as thread, as well as woven from it.

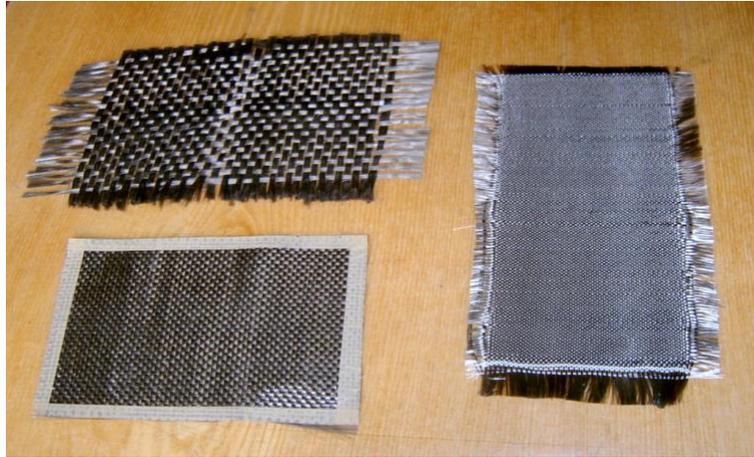


Figure 1. Samples of woven from basalt thread material

To manufacture the rotor blades, we apply a fabrics woven withfrom basalt fiber (Fig. 1). The enterprise produces fabrics for different structures using different Tex yarns (Tex – is weight of one kilometer yarn in gr.). On the Fig. 1 is presented fabrics obtained from yarns of 1200, 600, and 300 Tex.

The technology of blade manufacturing is as follows. A special mold is manufactured that is covered with many layers of basalt fiber fabric, each of that is covered with polyester resin. Naturally, one of the main stages of the technology is the polymerization process, during that the reinforced and impregnated by polyester resin product is solidified. Polymerization would be accomplished by using an initiator (ethyl methyl ketone peroxide) and an activator (cobalt naphthenate), or by exposure to the initiator and temperature [2]. In the first case the mold would be made from wood, while in the second case it is logically to make a metal mold that will be equipped with heaters. This time we focus on small generators thatwith a rotor up to 2-4 m in diameter, for the production of that first method of polymerization (without heating) is advisable. Therefore we manufacture the mold from wood. We preliminary manufacture a form milling cutter, through that the blade mold was machined on a horizontal milling machine (Fig. 2.a). A 4 m diameter wind rotor was made using the given shape (Fig. 2.b).



a)



b)

Figure 2. a) mould manufacturing. b) wind rotor.

At manufacturing of blade the number of layers of woven reinforced with fiber yarn are embedded in the mold depends on its required strength. Naturally due to the lightweight and cost requirements of the blade it would be better to have as possible less layers. However, it is essential that blade has a sufficient strength. For all of this is necessary to determine the output performance of a wind generator.

It should generally be mentioned that wind is a high level stochastic system, i.e. systematically, the values of its characteristics change over a large range. Accordingly it is necessary to arrange the characteristic parameters into the system. Based on the studies conducted in the aerodynamic pipe [3,5], the aerodynamic parameters of the wind power installations were formed determined. These are the relative torque, the wind energy utilization coefficient, and the rotor velocity coefficient. The latter is defined by the formula:

$$Z = \frac{\omega R}{V}, \quad (1)$$

where: V – is the wind speed, m/s;

R – is the radius of rotor, m;

ω – is the rotational speed of the rotor, rad/sec.

Commonly are applied two-blade, three-blade, multi-blade rotors. The above mentioned aerodynamic characteristics for all types of rotors have different values and arrangement. Three-blade rotors are considered to be the most optimal in terms of energy outoup [4]. On the Fig. 3 are presented the values of aerodynamic characteristics for three-bladed rotors [5].

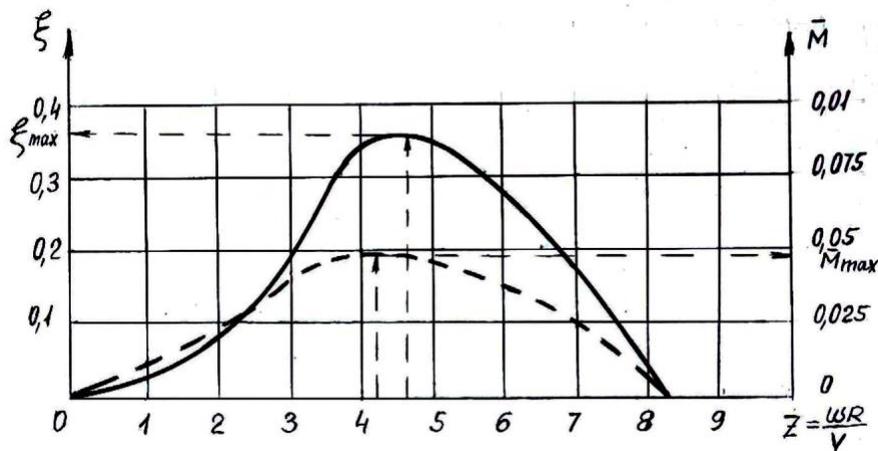


Figure 3. Aerodynamic characteristics of a three-bladed rotor

The following expressions is proposed to calculate the power generated by wind energy:

$$N = \frac{\rho \Phi V^3}{2} \text{ kgm/sec}, \quad (2)$$

where: ρ - is the air density, kg/m³;

Φ - is the wind impact area, m².

If we introduce the energy consumption coefficient in the stated formula and express the inscribed area by the diameter of the rotor, we obtain the real expressions for the power calculation:

$$N = \frac{\rho \pi D^2 V^3 \xi}{8}. \quad (3)$$

Let's determine the power developed by our rotor ($D = 4$ m) with respect of wind speed. The density of air varies with temperature. Its mean value is equal to $\rho = 1.3$ kg / m³. Let us obtain the energy consumption coefficient $\xi = 0.35$ (see Fig. 3). Let's calculate the values of power for wind 3 m/s, 5 m/s, 8 m/s, 12 m/s by Formula 3.

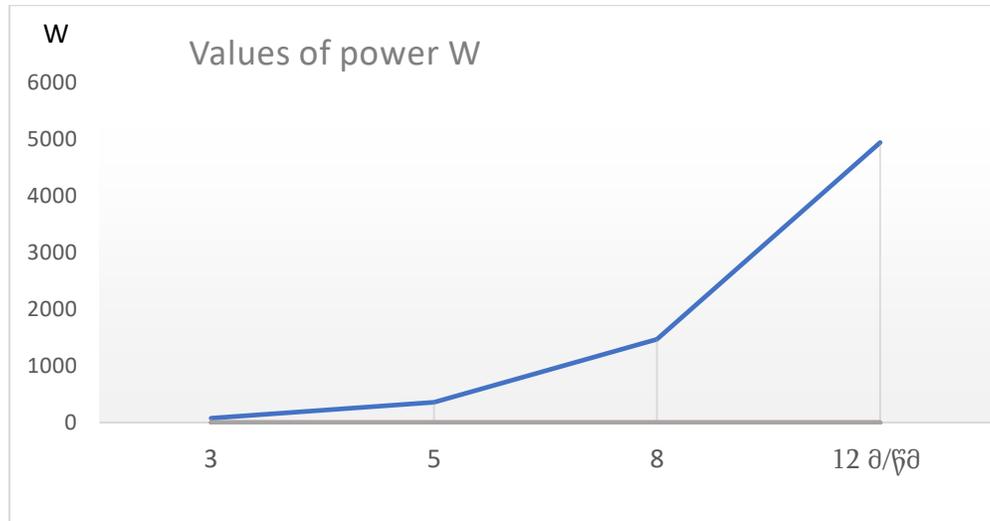


Fig. 4. Power change depending on wind speed for rotor $D = 4$ m in diameter

Let's construct a graph accordingly of computations results (Fig. 4). It is obvious that power values vary over a large range depending on wind speed. This computation first of all determines the power values. Precise determination of power is usually done for each specific natural condition.

3. Conclusions

We are working to produce environmentally friendly electric power. Using wind energy is one of the most efficient ways in this regard. The main unit as it is mentioned above is the wind rotor for the wind turbine. We have made molds with following 4 m, 6 m. And 8 m diameter rotors, due that wind generators with following nominal power would be manufactured: 3 kW, 5 kW and 10 kW. We have developed a project of the whole installation that is literally a mechanical device and its production is not so complex. Such installations would be effectively used for individual use by the population.

Appendix

Acknowledgment. This paper is funded by Shota Rustaveli National Science Foundation of Georgia # **AR-18-613**

Manufacture of pilot samples of wind small power plants with application of basalt fibers, installation, test, determination of operational parameters.

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In silico analysis of deleterious SNPs in BCR-ABL1 gene in chronic myeloid leukemia

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Abstract

Chronic myeloid leukemia (CML) has been identified as a blood cancer caused by the BCRABL1 gene in human cells, with the ability to cause leukemia by biological, intrinsic or acquired characteristics. These changes have led to an irregular tyrosine kinase activity of the cell, leading to abnormal expansion of the leukemia clone. Left untreated or absence of an effective treatment has led to uncontrolled proliferation, loss of differentiation, inability to respond to normal biological stimuli and acquired mechanisms of defense against anti-cancer drugs. In this study, sequence homology based genetic analysis of coding SNPs were undertaken which helped identify 18 non-synonymous nucleotide polymorphisms (nsSNPs) as damaging/deleterious using five different algorithms. Based on further analysis of protein stability, cell toxicity, conservation of amino acids residue, solvent accessibility analysis and post translational modifications, a function-structure relationship for these SNPs was able to be established. Further in silico analysis and modeling results showed dissimilarities between the wild type amino acids and mutant amino acids such as hydrophobicity, charge, size and biological interactions. Four highly damaging mutations affecting the BCRABL1 gene were identified, E355G, F359I, K378R and T315I, all of which modify the structure, function and stability of the corresponding protein. These results provide us with a novel approach to explore and identify deleterious SNPs and their uncharacterized effects and their role in drug resistance in patients affected by CML.

Keywords: CML, SNPs, protein, in silico, analysis.

1. Introduction

Myeloproliferative neoplasms are disorders induced by aberrant hematopoietic stem cells (HSCs). Chronic myeloid leukemia (CML) is a myeloproliferative neoplasm affecting 1-2 individuals per 100.000 adults. This disease accounts for 15% of all newly diagnosed leukemia cases in the adult population (American Cancer Society, 2019). CML is characterized by an increased proliferation of abnormal myeloid cells (granulocytes), leading to abnormal expansion of the leukemia clone, loss of differentiation of the cells and irregular tyrosine kinase (TK) activity (Boni and Sorio, 2021). Mutated HSCs in CML involve the fusion of the genetic material between chromosome 9 (t(9;22)) and 22 (q34;q11), giving rise to a new chimeric chromosome, the Philadelphia chromosome (BCR-ABL) (Daley et al, 1990). In order for a patient to be diagnosed with CML, he/she must be Philadelphia chromosome positive and have more than 10-15% blasts. The ABL family's tyrosine activity is dependent on the tyrosine residues found on its structure and at the same time lacking the auto-inhibitory sites (Dorey et al, 2001). The fused BCR-ABL gene gives the BCR domain the ability to enhance the phosphorylation of the ABL kinases, thus leading to an increased biological activity and constitutive expressed defective TK (McWhirter et al, 1993). These mutations have a genetic base, more specifically in single nucleotide polymorphisms (SNPs). SNPs are the most common type of genetic variation, in a single position in a DNA sequence, in the human population. SNPs are found in both the coding and non-coding regions of the genome and are responsible for changes in the amino acid residues leading to possible mutations by affecting the signal transduction of internal and external stimuli (Thomas et al, 1999). In this study, sequence homology based genetic analysis of coding SNPs were undertaken which helped identify non-synonymous nucleotide

polymorphisms (nsSNPs) that affect the BCR-ABL gene and effects in the structure, stability and function of the corresponding proteins.

2. Material and methods

The National Center for Biotechnology Information (NCBI) (<https://www.ncbi.nlm.nih.gov/gene>) database was used to obtain information for the ABL human gene. In concordance, the variant SNPs that we analyzed were taken from NCBI Variation Viewer (<https://www.ncbi.nlm.nih.gov/variation/view/>), whereas the sequences in FASTA format of the ABL1 protein were obtained from UniProt, which is considered the leading database for the high quality and free accessible protein sequences and functional information (<https://www.uniprot.org/>) (The UniProt Consortium, 2021). In order to analyze the nature of the SNPs and their possible deleterious effects we used several computational algorithms:

- 1) PolyPhen-2 (Polymorphism Phenotyping v2) is a predicting tool which verifies the possible effect of an amino acid exchange on both the function and structure of the protein (Adzhubei et al, 2010).
- 2) Sorting Intolerant from Tolerant (SIFT) predicts the effects on the protein function by an amino acid exchange based on the physical characteristics and sequence homology of amino acids. If values are ≤ 0.05 , the SNP is considered deleterious (PC Ng, 2003).
- 3) Screening for nonacceptable polymorphisms (SNAP) is a neural network based method that distinguishes SNPs effects by means of evolutionary data and examination of functional impact (Hect M et al, 2015).
- 4) Functional Analysis through Hidden Markov Models (FATHMM) is used to predict the effects on the function of proteins based on missense variations (Shihab et al, 2013).
- 5) Protein Variation Effect Analyzer (PROVEAN) is a predicting tool to analyze the effects on protein function by means of amino acid substitution, deletion or insertion via homology of sequence. If values are ≤ 0.05 , the SNP is considered damaging to the protein (Choi and Chan, 2015).

After the analysis of the possible deleterious/damaging effects of the SNPs on the protein function, we tried to assess the stability of the protein. This is a key characteristic for the normal function of the cell. To continue with this assessment we used a predicting tool, iStable, which is based on support vector machines in order to verify the changes that are happening on the protein stability because of mutations on the amino acids residue (Chi-Wei Chen et al, 2013). SNP substitution is related to changes in the secondary structure or surface accessibility. Another factor to be taken into consideration are the differences of the phi/psi dihedral angles of the amino acids in a homologous sequence. All the changes are predicted by the NetSurfP tool (Klaussen et al, 2019). Structural changes and stability are only one integral part of the normal protein function. Another aspect which symbolizes this normal function is also the conservation analysis. If we have amino acids exchange in the protein, the result is loss or malfunction of normal biological and metabolic functions. For this purpose, we used ConSurf to predict the evolutionary conservation of amino acids in the ABL1 protein. (Ashkenazy et al, 2016).

Downstream signaling of the abnormal BCR-ABL gene also leads to aberrant signals to the other interacting proteins. These interactions help to understand and verify the functional characteristics of the proteins inside the cell. Analysis of these interactions between BCR-ABL and other proteins was done by using Search Tool for the Retrieval of Interacting Genes databases (STRING) (Szklarczyk et al, 2019).

The last factor we analyzed for this gene was its toxicity. It is widely known that cancer patients have an increased proliferation of these mutant cancer cells leading to a higher production of metabolites. In normal instances, the produced metabolites are destroyed by proteasomal degradation, but in the cancer cells where and the amount of metabolites excreted is higher, toxicity in the microenvironment can occur. To assess if the ABL1 protein was toxic, we used ToxinPred (Gupta et al, 2013).

3. Results and Discussion

To demonstrate the important role the BCR-ABL1 gene we used the STRING tool to predict the interactions between the known proteins (ABL1 and BCR) and other proteins in the cell. As shown in figure 1a and 1b, the ABL1 and BCR proteins create a complex network with other proteins, such as CRK, ABL2, MDM2, Jak2, SOS1, GRB2 and other proteins, all integral components for the normal function and signaling of the cell.

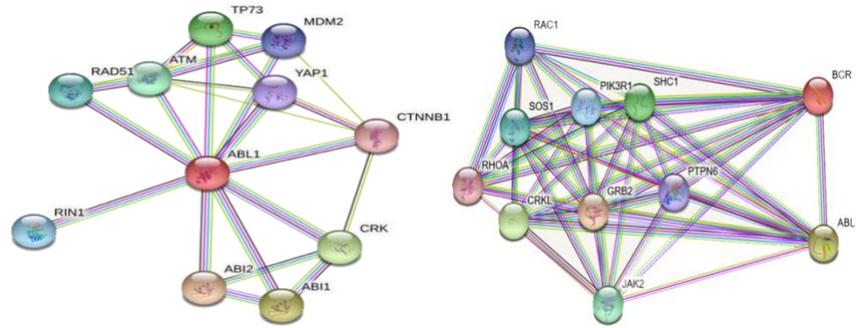


Figure 1: Interaction network of proteins a) ABL1; b) BCR

This complicated interaction network of the ABL1 and BCR proteins raises the issue of the mutations that can occur and their potential effects in both the protein and its downstream signal. To evaluate these effects we used 5 different algorithms and the results are shown in table 1.

Table 2: Potential effects of mutation analyzed by 5 different algorithms

Mutation	Provean		Sift		Poly		Fathmm		Snap	
	P	V	P	V	P	V	P	V	P	V
A399T	D	-3.432	T	0.06	B	0.282	T	0.04	D	59
E255K	D	-3.61	T	0.05	D	1	D	-1.61	D	54
E279K	N	-2.025	D	0.04	D	0.834	D	-1.65	N	-15
E355G	D	-6.801	D	0.01	D	1	T	0.03	D	66
E462K	N	-1.918	D	0.04	B	0.121	D	-1.67	N	-10
F317L	D	-5.383	T	0.22	D	0.927	T	0.13	D	40
F359I	D	-5.637	D	0	D	0.989	T	0.47	D	58
F359V	D	-6.513	T	0.06	D	0.994	T	0.25	D	53
G250E	D	-7.679	T	0.2	D	0.993	T	-1.45	D	58
H396R	D	-7.239	T	0.12	B	0.013	D	-1.52	D	62
K262R	D	-2.774	T	0.1	B	0.308	T	1.74	N	-70
K378R	D	-2.765	D	0	D	1	T	-0.65	D	83
L364I	N	-1.843	D	0.03	D	0.992	T	-0.41	D	28
M244V	D	-3.838	D	0.01	D	0.907	T	1.84	D	18
M351T	D	-5.829	D	0	D	1	T	-0.12	D	69
T315I	D	-5.762	D	0.02	D	0.999	T	-0.02	D	60
V280A	D	-2.976	T	0.08	B	0.36	D	-1.54	D	15
Y253F	D	-3.839	T	0.69	D	1	T	-0.81	D	63

The first algorithm, SIFT predicts that out of the 18 mutations taken into consideration, 9 of them (50%) were shown to be deleterious and the other half were shown to be tolerated. Sift uses a tolerance index of ≥ 0.05 . Every score above this value is predicted to be tolerated and everything under it is treated as deleterious. To get a better understanding of the potential effect that these mutations might have, we compared them with another tool. PolyPhen showed that 13 of the analyzed 18 mutations are deleterious in nature. The remaining 5 were showed to be benign (B). The next evaluation was done with PROVEAN, which showed that 15 of the mutations proved to be damaging with high score. We used the default cut off value (-2.5) to predict the possible effects of the mutations and apart from the K262R and

K378R mutations which were relatively close to the cut off, all the other values were very high. The F359V mutation showed the highest probability to be damaging according to PROVEAN. After PROVEAN, the mutations were further examined with SNAP, which gave us the same results as PROVEAN, except two mutations. K262R was considered damaging by PROVEAN, but neutral by SNAP, even though as previously mentioned the K262R mutation was highly regarded as deleterious by PROVEAN. The other mutation that differed between the two algorithms was L364I, considered neutral by PROVEAN, but damaging by SNAP. The last predictor used was FATHMM, which showed only 5 mutations as being deleterious, contrary to the numbers showed by the other programs. This could be related to the fact that FATHMM also takes into consideration if the mutation will turn into a cancer or become a passenger mutation. Unless it becomes a cancer the probability of the mutation being treated as deleterious is low. All these results showed a lack of unity, which lead to the comparison of all the mutations. None of the mutations were considered damaging by all the algorithms, but 7 mutations were considered as such by 4 of the 5 tools used (E255K, E355G, F359I, K378R, M244V, M351T and T315I). Eight mutations were shown to be damaging by three algorithms and the remaining five were treated as damaging by only two predicting tools.

Even though the presence of discrepancies in the aforementioned SNP results, nonetheless we get a clearer picture of the potential hazardous effects they might show in the functional and structural integrity of the ABL1 gene.

Cancer cells, unlike normal cells, are characterized by constant physiological stress such as cellular hypoxia, genome instability or oncogenic stress (Fernald and Kurokawa, 2013). All these factors could lead to a destabilization of the protein, which is often accompanied by an increase in protein and proteasome degradation because of the high protein synthesis and energy demand of the cancer cells. Another factor to be taken into account is the presence of the chaperone proteins, specifically the Myeloid Leukemia Factor (MLF). MLFs are a family of proteins that are involved in the process of hematopoiesis and transcription leading to the production of proteins. Endogenous MLFs found in high levels have been observed in myeloid malignancies leading to a poor prognosis and high mortality rates (Matsumoto et al, 2000; Morris et al, 1994). To verify this hypothesis we analyzed the stability of the protein by using iStable.

Table 3: Protein stability analysis by iStable

Mutation	Stability	Confidence Score
A399T	Decrease	0.813794
E255K	Decrease	0.793961
E279K	Decrease	0.859846
E355G	Decrease	0.893962
E462K	Increase	0.5
F317L	Decrease	0.785956
F359I	Decrease	0.763903
F359V	Decrease	0.83136
G250E	Increase	0.528441
H396R	Decrease	0.622185
K262R	Decrease	0.821193
K378R	Increase	0.534797
L364I	Decrease	0.641037
M244V	Increase	0.5
M351T	Decrease	0.812109
T315I	Decrease	0.671463
V280A	Decrease	0.832958
Y253F	Increase	0.713695

As shown in table 2, only 5 mutations exhibit an increase in protein stability. Even though they have an elevated stability, the confidence score for these mutations is relatively low, ranging in the mid-tier levels of 0.5-0.55. The rest show a destabilization in the structure of the protein.

Phylogenetic conservation of gene is an integral part in regards to normal biological activities of the protein. Substitution of amino acids position in the protein could lead to aberrant structure and function of the protein. Table 3 shows the results from the analysis done with ConSurf to evaluate the conservation of the protein. At the same time prediction of the solvent accessibility for the amino acids was done with NetSurfP. NetSurf P shows if the solvent accessibility of the amino acids is buried or exposed. These results in tandem with the conservation prediction solves the question as to the role of the residues in the protein. ConSurf evaluation showed that only three of these substitutions are highly conserved (Conservation Score of 7-9). ConSurf in cooperation with NetSurf P showed that these three highly conserved substitutions (H396R, L364I and M351T) are also in a buried position, meaning that these are significant structural residues.

Table 4: Role evaluation of amino acids

Mutation	ConSurf	Sec. Structure
A399T	exposed	Spiral
E255K	buried	Filament
E279K	buried	Spiral
E355G	exposed	Helix
E462K	exposed	Spiral
F317L	exposed	Spiral
F359I/V	buried	Spiral
G250E	buried	Filament
H396R	buried, highly conserved	Spiral
K262R	buried	Spiral
K378R	buried	Filament
L364I	buried, highly conserved	Spiral
M244V	buried	Filament
M351T	buried, highly conserved	Helix
T315I	exposed	Filament
V280A	buried	Helix
Y253F	exposed	Spiral

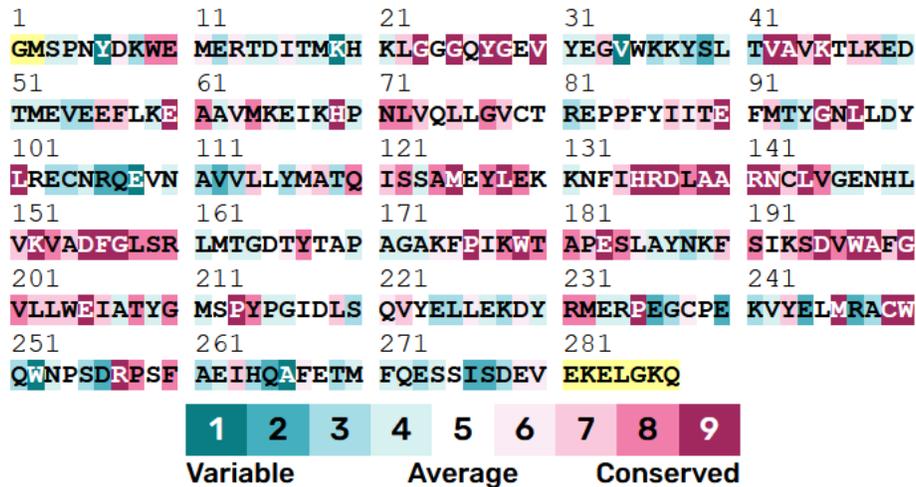


Figure 2: Analysis of conservation of amino acids of ABL1 by ConSurf

The BCR-ABL gene has been of interest for a long time because of its role in CML. This has led to a lot of studies being conducted, especially in finding a treatment for this disease, or at least finding ways to bypass the mechanisms of resistance that CML shows to therapeutic drugs. Our analysis tries to shed light on a number of SNP mutations that may increase the accuracy of experiments done in the lab. This in silico approach could save time and resources by limiting the number of mutations that need to be examined, or otherwise increase the number of variants analyzed by introducing new information that was not previously being taken into consideration. In this preliminary study we analyzed 18 different variants with a number of predicting tools to assess and evaluate their effects on the protein. Even though some of the results had differences between each other, this could be interpreted as a need for a more extensive combined analysis for these mutations. Nonetheless, the tools used to evaluate these point mutations have shown to have a high accuracy (Li et al, 2018). Another aspect to highlight is the examination of the conservation of the amino acid residues. On an evolutionary scale, the conserved amino acids are treated as more important than the variable ones, because of their structural and functional significance in the protein (Soltani et al, 2021).

4. Conclusions

Our study focuses on the analysis and investigation of the potential role and effects of 18 SNPs of the BCR-ABL protein. The fundamental structural and functional changes that these possible deleterious mutations might induce in the protein and the gene have given rise to the need to further examine and accurately assess their risk. 7 of these mutations were considered as highly deleterious, increasing the chance for pathogenic disease. Three mutations (H396R, L364I and M351T) were predicted to have a high impact in the structural changes affecting the ABL1 protein, leading to modifications its biological activity. Even though this study shows a potential risk assessment of a specific number of mutations, conclusive laboratory experiments should be undertaken to give conclusive evidence.

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PERSPECTIVES ON TEACHING CHILDREN'S LITERATURE

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Abstract

Teaching Literature for, in the era of various global challenges that bring and are great in terms of generational education. This paper comes as a result of the reflection of some situations that appeared during the pandemic period and on, which have affected learning, reading, seeing, learning in literary classes, the things for which they are better than what they are roads and strategies, to face the challenges that can identify us, etc. The study aims to investigate some perspectives in improving the teaching of children's literature, the role and values of this literature, why they should be prepared in the form of aesthetic and moral culture, encouraging critical, creative and scientific thinking through reading interactive. The methodology of the study is based on observations, conversations, group discussions during lecture hours in the analysis of literary works, the involvement of students during studies in activities such as: seminars, trainings, workshops, which prove that they understand that they need to be trained, to research for a greater purpose in life and to leave university as a better human being. In conclusion, but no less important, we can say that more attention should be paid to the education of the generations, since education has the power to transform and generate layers of human knowledge towards the civilization of the people.

Keywords: perspectives, education, knowledge, teaching, children's literature.

Introduction

The most technologically fruitful machine ever invented by man is the book! *Reading a book does not mean leaving the world, but entering the world through another door! Who does not read, when he reaches the age of 70, he has lived a single life, his own! Who has read has lived 5 thousand years: Reading has great value, it helps us to better understand ourselves and the times - yesterday, today, and the future.* [1]

Throughout the years of readings, studies and qualifications, the journey in the stream of magical books always accompanied me with a wonderful feeling, because children's literature is unique in the way it is conceived, you have to love and understand the children's world. It is enough to mention the Grimm Brothers' Tales, H.K. Andersen's Tales, The Adventures of Tom Sawyer, The Adventures of Nils Holgerson, Gulliver's Travels, Pippi Longstocking, Robinson Crusoe, Mary Poppins, etc. etc., it makes you reflect on the role, the weight and the importance it conveys literature for children and young people, for all people and for all times; yesterday, today and the future. By reading, we can meet characters in whom we find something of ourselves as well as we can discover new ways of knowing and perceiving the world and human life and that it, among other things, is also an inexhaustible alternative source of knowledge.

Objectives of the work

Our work aims to provide descriptively and analytically the importance of children's literature in the development of general literary values, explore some perspectives in improving the teaching of children's literature, as well as prepare

students in the formation of aesthetic, moral culture , encouraging critical, creative and scientific thinking through interactive reading.

Researcher and children's writer Giuseppe Fanciulli emphasizes: *Literature for young people is a necessary introduction to general and popular education in the democratic sense of the word; it is an instrument of human formation; it is a reflection and expression of a certain childhood to form the society of tomorrow. And, first of all, a sure tool for achieving understanding and peace between peoples.* [2]

While Luigi Santucci calls children's literature the literature of magic and the literature of miracles. Such is what makes this literature *"the language, the way of conception, elaboration and expression, the clarity and simplicity of the messages; the game that is present and that is woven through a natural humor and with a multiple function, precisely these components awaken in children curiosity, pleasure, nobility and spiritual enrichment"* .[3]

Even in our country, in Albania, the development of children's literature has created a colorful, multifaceted, multidimensional mosaic in the political, social, economic and cultural life of our people. Naturally, this rich creativity was characterized by notable achievements, creating creative profiles and individualities, which became expressive of aspirations for the spread of knowledge and culture. Naim Frashëri, founder of Albanian children's literature, emphasizes that: *knowledge is one of the first, fundamental conditions for the moral upliftment of a person. Knowledge for him is the most precious wealth of man, which never leaves him in poverty.*

Nowadays, starting from the name IBBY (International Board on Books for Young People), which is translated to us as "International Book Organization for Children and Young People", another term is being used: children's literature Young. With the concept of "youth" here is meant the childish adult age, late childhood, early youth, adolescence. And the term includes both literature that is written for the younger age (early age, toddlers) and that which is addressed to the upper childhood age. This organization supports the opinion that books transmit to children and young people extensive knowledge from other countries, from foreign culture and traditions and thus can help in understanding between nations. So books are considered stones for peace. That's why we, like many other universities around the world, have been studying children's literature as a separate subject from our adult literature for years. Children's Literature is studied as a subject at the University of Vlora and aims to acquaint the students of the Primary and Preschool Education branch with the flows and trends of the chronological development of this literature as a specific field of literature with special values and importance, as and with authors and works that make its culminating values. Acquainting themselves with selected works of prominent Albanian authors of children's literature, students will expand the scope of critical thinking by discussing literary texts for young readers, the selection of literary pieces according to age groups, further deepening the knowledge of literary genres. for children, applying methodologies, strategies, principles, criteria, techniques and forms of work related to work with children of preschool and school age, but also with the literature teacher at school. [4]

Norwegian writer and researcher Jostein Gaarder thinks *that in our postmodern world, more and more children will need a source of warmth, which, in their haste, many parents can no longer provide. Books are such a source of warmth, they are supposed to be a much better parental substitute than the computer or TV screen.* [5]

It is important to emphasize that a rich education in the subject of literature and culture for children would nurture the development of not only creative and critical thinking skills, questioning and research, but we must emphasize efforts for aesthetic education, stimulation of imagination, imagination, fantasy, the cultivation of scholarly, encyclopedic fragments. Through characters, characters, models, teachers and writers should be careful to appreciate intercultural awareness, character development, because only the power of education enriches, educates generations towards knowledge and secure future.

The purpose of this research is to highlight aspects such as:

- Why students should study children's literature and how reading books affects their profession and what role does the teacher have in the selection of books according to age groups;
- To reflect some perspectives in teaching children's literature in the development of general literary values;
- To acquaint the students of the Primary and Preschool Education branch with selected works of prominent Albanian and foreign authors of children's literature, to expand the spaces of critical thinking by discussing literary texts for young readers, the selection of parts literature according to age groups, further deepening the knowledge about literary types for children, applying methodologies, strategies, principles, criteria,

techniques and forms of work related to the work and children of preschool and school age, but also with the literature teacher at school.

In the pedagogical process, literature as an art form accepts two sides of the learning objective:

- ❖ *As the art of the written word*, it affects the consciousness of students, in the emotional and imaginative sphere;
- ❖ *as a part of science*, it addresses the logical side, the reason of creation.

In literature, reading a literary work, analyzing, commenting, reasoning and debating various problems related to the writer and the work, clarify the elements of the content, increase the emotional impact by naturally stimulating the understanding of beauty in art and society.

This enables the formation of the student, the expansion of his cultural horizon, the recognition and application of some basic knowledge for the independent judge of literary works and literary processes. So stories, events, stories have the power to foster emotional and moral development. This means that children's literature encourages students to think more deeply about their feelings, stimulates creativity, expands the inner imagination.

➤ **Why students should study children's literature, how reading books affects their profession and what role does the teacher have in the selection of books according to age groups.**

Children's literature has its peculiarities. Its specific features are thought to be independent of its subject matter. Makarenko emphasized: *The qualities that distinguish literature for children from that for adults do not derive from the fact of what we tell children about, but from the fact of how we tell them.* [6] We think it is very important to recognize the ease for children in the mission that the teacher and literature have. Knowing children's literature helps you to know the children's world as well, because as Bedri Dedja reasoned - *"since you are dealing with the little reader, creativity, as work, becomes very difficult, you are forced to go through the material that you develop in the work through two "filters": on the one hand, the baggage of your childhood memories and, on the other hand, the deep impressions and impressions for today's children. Both of these assets are essential for the children's writer, but the most important is the knowledge of today's children.* [7]

First, all those who deal with children - parents, educators, teachers, as well as students who are preparing to become teachers, should know children's literature well, because by knowing it, they will have more help in working with children. In children's works, the writer sheds light on the secrets of the children's world. He knows many children and creates a character from them. In the introduction to the novel "The Adventures of Tom Sawyer" the well-known author Mark Tuetin explains: *... Huck Finn, for example, is exactly as he was in life, Tom Sawyer too, only that I had to join and knit for him in one, the features of the three boys I have known, make up, so to speak, the summary literary type".* [8] So, through the children's book, the teacher makes a concentrated knowledge of the children's world.

Secondly, while working with children, teachers will face various problems during communication as well as in terms of their moral and civic education. The great Italian writer Xhani Rodari (1920-1980) highly valued the consideration of the child reader as a subject. *"Our culture must be freed from anachronistic prejudices against children".* [9] He placed great importance on humor in his creations for children. Knowing well the psychological nature of children, he was more frightened by the position of the teacher. Rodari did not like the strict and pedantic teacher. He thought that the teacher during the lesson should be a friend of the children's age. Therefore, in their literature, the author uses entertainment as the main tool. We also see this in Albanian children's literature, where the teacher, in some unpleasant situations that may arise with children, can knock on the doors of literature. A beautiful poem, a funny fable, a pleasant tale, can do what dozens of moralizing conversations cannot. This happens, for example, with children who are in preschool or first grade, who always forget their handkerchiefs at home and, at certain moments, during a sneeze, they are left in a difficult position, the pleasant poem *"Nose and Handkerchief"* by read by the teacher, is better medicine than the moral that can be done in the eyes of the class. *When we were little/ A friend of mine/ in the morning for breakfast/ He forgot his handkerchief/ Every time he coughed/ or sneezed/ He used his jacket sleeve/ to wipe the cups/ One day in class/ The teacher saw him/ and smiled/ calmly said/ What 'after doing this/ More good boy/ You left the scarf/ you took your nose. / Did you forget again/ to take a handkerchief/ You also plucked your nose/ Leave it at home? From that day/ A miracle happened/ And why did you have a nose/ It took two handkerchiefs".* (Tasim Gjokutaj "Where can I find the grandfather's drum", Toena, 1995).

Thirdly, reading books, getting to know them should turn into a passion, because this valuable passion is passed on to students. Even, knowing children's literature well, he is able to guide them on what they should read. Students should read books appropriate for their age, that is, they should read children's literature.

➤ **What is the relationship between literature and pedagogy**

Children's literature is subject to the educational and teaching goals of the school as well as the education of the new generation. So, the children's writer in his work is not only presented as an artist, but also as a teacher. *The notion of writer, especially when it comes to creators of children's literature, judges Prof. Agim Deva, cannot be separated from the notions of educator, teacher, guide, friend, lecturer, etc. This shows that the writer has a social, educational and educational mission.* [10]

From the above examples we can say that children's literature has an early connection with pedagogy. Children's literature is aimed at young ages. Pedagogy also has the same direction. Prof. Mark Krasniqi, academic, says: *"The child still cannot critically judge what he reads. Therefore, those who write for children, in addition to literary skills, must also have a lot of understanding and pedagogical skills"*. [11] On the other hand, the researcher Anton Nikë Berisha clarifies: *The fact that children's literature gives the opportunity to be examined, analyzed and used for other purposes, such as educational, moral and pedagogical, does not limit and does not it changes its essence, but only proves its wealth, breadth and importance as art.* [12] It is known that literature is art. For object it has the word beautiful, beautiful as an aesthetic category. While pedagogy is a science, the science of education. The object of treatment is the rules of etiquette that the child must apply in daily life in relation to others, social norms and codes. So, we have a connection, a relationship, between two different fields: art and science. Otherwise, children's literature is a symbiosis of art and science. But what we want to emphasize and recommend to students is that pedagogy should be considered only as an instrument in the hands of children's literature and not the other way around. Literary creation should have morality, but not moralization at all, where the light pedagogical element is spiritualized, digested and embodied in the literary work. Therefore, the children's writer must also be a good teacher, to know the science of pedagogy, with which children's literature is related.

➤ **How literature affects emotional intelligence, creativity and personality development.**

We think that literature lessons and book readings play an important role in educating children and young people with healthy taste in the formation of aesthetic and moral culture by promoting artistic, critical and scientific thinking; in the transmission of knowledge about cultural heritage from one generation to another; developing emotional intelligence and creativity; growth and development of personality, social and cognitive skills for sustainable education and development. This literary wealth has created its foundations and has served as an inspiration in the works of Albanian authors, we mention here the writer Luan Rama, who appreciates the importance of children's familiarity with our historical figures. He emphasizes that *the History of a nation is created and built through figures, characters, historical contributions, which are often painful but devoted to the people and history.* [13] He is a writer with a rich experience over the years, he has written cartoon scripts, adaptations of old fairy tales, children's stories, science stories. This experience has allowed the writer to specifically convey the treatment of historical figures as well as some other selected figures in biographical form.

In a letter, M. Gorky addressed the famous French writer Romain Roland: *I am asking you to write a biography of Beethoven adapted for children... I would like to create a series of books with the help of the best writers of the time for the little ones, which contain the biographies of the greatest people in the world.* [14]

The author has intended to tell children the story with a simple and understandable language, individual fluid style, conveying cognitive and educational values in his works, and of course this enriches and completes the mosaic of magic, miracle, as it is children's literature. A historical or scientific, cultural character in a story or novel becomes more perceptible and likable to children than the books that students develop in class, perhaps even annoying for them. Children and young people like to talk to them about robots, flying cars, spaceships, about nature and the world, they are curious and constantly ask about the things they want to know and learn. An attentive writer should deal with such themes that awaken children's curiosity, encourage them to discover their interests for the subsequent selection of

professions based on their inclinations. It impresses you how the writer Mimoza Hafizi, although she has not written for children, makes her love for children and passion for science write in the genre of the novel. Her artistic finding is interesting, that with her knowledge as a physics teacher, she seeks to convey the latest in science in the simplest way possible, in the science-fiction novel "*Rose drop*" (2020). The author has selected in this novel characters who work in the most advanced centers of the earth today. This has been helped by the recognition that they have and the endless emotion that they give day after day in space and terrestrial discoveries, which show such a great ability of human intelligence in the universe. [15] The author Hafizi seems to have had a simple way of narrating, conceptualizing the relationship of being with the universe, exploring the world beyond our universe, conveying genuine scientific values or the latest trends in search of other universes. The author's message is clear and obvious to researchers, young discoverers that science is beautiful and the scientific world is very welcoming for anyone to become a part of it. A special attention in the scientific education of children and generations as well as in thematic enrichment reflects and reflects with his creations the writer Flamur Topi. Passion for medicine and love for children has led the author to convey stories suitable for children, let's mention the novel "*The Fight for Life*", it seems relevant even for the time we live in; done so beautifully, simply and skillfully. Children learn how to take care of hygiene, of themselves and their bodies, but also to understand the care of the foods they choose, the information about how our body is built, how we should take care of external factors. So stories, events, stories have the power to foster emotional and moral development. This means that children's literature encourages students to think more deeply about their feelings, stimulates creativity, expands the inner imagination. Children and young people are very impressionable during their formative years and children's literature can help them develop into caring, intelligent and friendly people.

Conclusion

Through the knowledge of literary works, children's literature enables students to:

- ✓ To evaluate and analyze the literature;
- ✓ Summarize and hypothesize about different topics or issues to encourage creativity and to reflect on the development of society;
- ✓ Strengthens cognitive function, critical and creative thinking skills to be able to express through language and reflect on the role that children's literature has in the development of general literary values.

Albanian children's literature with its linguistic wealth, the magic of creations, entertainment and humor that forgives, has served as a compass for writers, critics, researchers to carefully discover the endless ocean of children's desires and fantasies, a necessary requirement, necessary for time, generations, to preserve clean, language, writing, tradition, culture of a people.

Recommendation

We can say that more care should be taken:

- Selection of literary works according to age groups, better recognition of authors who write for children;
- The importance of educating generations from early childhood and beyond, education, qualification and training of students through research and scientific projects, workshops, intensive practices to have successful teachers in relation to the challenges and demands of the time and digital era;
- Creativity; demand of the time, to reflect on the development of society, future generations, encouraging critical and creative thinking skills, questions and research, project-based learning, creating posters through exploration, collaboration, interaction of students during lessons.
- We believe that: The noble mission of the teacher, who prepares generations, the future, is rooted in the goal and intention that human knowledge is the path to human development and civilization, the endless journey of open inquiry and lifelong learning.

The book is a must read! For a book to become popular, you have to promote it, if you want to introduce it to children, make it part of their digital world (R.A)

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