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Radek Kratochvíl, Ph.D.

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Youth Participation in the Context of Academic Self-Government

Monika GUBÁŇOVÁ [a*]

[a] *Slovak University of Agriculture, Faculty of European Studies and Regional Development, Institute of European Policies and Public Administration, , Tr. A. Hlinku 2, Nitra, Slovakia, monika.gubanova@uniag.sk*

Abstract

The aim of the article, we focus on the degree of participation of students of the Slovak University of Agriculture in Nitra in the bodies of academic self-government and on the awareness of students about this possibility of participation. Attention is also paid to student school councils, academic self-government and its bodies. We found that most students do not show interest in these activities. Also, the level of awareness among students about this possibility of participation is insufficient. The intention was also to find out what reasons led or not led members to get involved in academic self-government bodies.

Keywords: participation, civic participation, youth participation, academic self-government.

1. INTRODUCTION

1.1. Particitation

At a basic level, participation means involving people in decisions that affect their lives. Through participation, people can identify opportunities and strategies for action and build solidarity to achieve change. Participation challenges oppression and discrimination. Meaningful participation depends on whether people are willing and able to participate and express their voice (What is participation?, 2021)

We can also define civic participation as the active participation of citizens (individuals) in managing public affairs and solving problems, whether it is at the level of a local community, a specific social organization, a national or ethnic community, or a global community. (Gyárfášová, O. – Bútorová, Z. 2010)

Civic participation is also understood as concrete participation in public decision-making, direct impact on the public and, consequently, decision-making with public resources. It is participation in the life of the given community, membership in social organizations, organizing petitions or public meetings, as well as participation in elections. (Paulíniová, Z. 2005)

Civic (social) participation includes not only volunteering and work for the benefit of the local community, which is not monetarily valued, but also friendly relations and socialization. Thus, civic participation represents activities that citizens perform for the benefit of civil society. (Plichtová, J. – Šestáková, A. 2018)

* Corresponding author.

1.2. Participation of youth

For political systems to be representative, all parts of society must be included. When young people are disenfranchised or disengaged from political processes, a significant portion of the population has little or no voice or influence in decisions that affect group members' lives. A key consequence is the undermining of political systems' representativeness.

To make a difference in the longer term, it is essential that young people are engaged in formal political processes and have a say in formulating today's and tomorrow's politics. Inclusive political participation is not only a fundamental political and democratic right but also is crucial to building stable and peaceful societies and developing policies that respond to the specific needs of younger generations. For young people to be adequately represented in political institutions, processes, and decision-making, and in particular in elections, they must know their rights and be given the necessary knowledge and capacity to participate in a meaningful way at all levels. (Ferreyra, A., 2018)

The school provides the youth with the most opportunities to participate in various activities. Through elections, students elect members of the class self-government. In this way, students learn democratic principles at the same time. After the election, the class president is appointed [...]. It is expected that these selected students take up their duties responsibly and thereby contribute to the overall improvement of life in the classroom. In order for pupils to become good citizens in the future, they should know how the state works, whether and how they can express their opinion and position in elections, petitions, and civic assemblies. We consider this knowledge to be key civic competences. And that is why the emphasis should be placed on the teaching of civics in schools. Civics teaches students the principles of democracy and active citizenship. (Macháček, L. 2008)

In terms of Slovak theory (Act No. 131/2002 Coll.), academic self-government is usually understood as a special type of interest-based self-government. On the assumption that self-interested self-government is linked to a certain human activity, then self-interested self-government can be distinguished into professional self-government with mandatory membership of persons from the profession and self-government without mandatory membership, but by states created public corporations, and into academic self-government of universities. In theory, we can also come across opinions that academic self-government can be integrated into the self-government subsystem, alongside interest-based self-government as the so-called special self-government. (Trellová, L. – Balog, B., 2022)

The academic community of the university consists of university teachers and researchers who are employed by the university for a set weekly time, other employees of the university, if so determined by the statute of the university (employee part of the academic community of the university), and students of the university (student part of the university's academic community). Members of the academic community have the right to propose candidates for the election of a candidate for rector.

The bodies of academic self-government of public universities include:

- the academic senate of a public university,
- rector,
- scientific council of a public university, artistic council of a public university or scientific and artistic council of a public university,
- disciplinary committee of the public university for students.

Furthermore, the law defines that the academic senate of a public university consists of elected representatives of the academic community of the public higher university; has at least 15 members, of which at least one third are students. The academic senate of a public higher education institution, which is divided into faculties, is elected in such a way that each faculty is represented by the same number of members.

The bodies of the faculty's academic self-government are:

- academic senate of the faculty,
- dean,
- the scientific council of the faculty, the artistic council of the faculty or the scientific and artistic council of the faculty,

- faculty disciplinary committee for students.

The academic senate of the faculty is its self-governing representative body. It has at least 11 members, of which at least one third are students. (Act No. 131/2002 Coll. on Universities, as amended).

2. AIM AND RESULTS

The aim of the contribution was to find out to what extent the students of the Slovak University of Agriculture in Nitra are interested in being part of the university's academic self-government bodies and what is their motivation.

The Slovak Agricultural University is located in Nitra. It consists of six faculties:

- ➢ Faculty of Economics and Management (FEM),
- ➢ Faculty of European Studies and Regional Development (FESRD),
- ➢ Faculty of Biotechnology and Food Science (FBFS),
- ➢ Faculty of Horticulture and Landscape Engineering (FHLE),
- ➢ Faculty of Agrobiology and Food Resources (FARS),
- ➢ Faculty of Engineering (FE).

2.1. Elections to the academic senate

The Slovak University of Agriculture has 6 faculties, elections to the academic senate take place in one day in 6 commissions, one for each faculty. Elections are conducted online using the university's information system. Elections are anonymous. They took place on 12.10.2022 (Table 1)

Table 1 Participation in elections to academic senate in 2022

Faculty	Number of eligible voters	Number of voters	Number of candidates
FARS	1114	34 (3.05 %)	5
FEM	1347	186 (13.81 %)	6
FHLE	522	67 (12.84 %)	3
FESRD	213	49 (23 %)	7
FE	813	67 (8.24 %)	6
FBFS	542	75 (13.84 %)	8

We can state that the participation of students in the elections is very low. The largest number of voters voted for the Faculty of European Studies and Regional Development. The reason may be that teaching at this faculty focuses on regional development and several subjects are closely related to participation, and students are aware of the importance of this activity.

Table 2 Participation in elections to academic senate in 2018

Faculty	Number of eligible voters	Number of voters	Number of candidates
FARS	1111	84 (7.56 %)	4
FEM	1522	219 (14.39 %)	10
FHLE	534	38 (7.12 %)	4
FESRD	264	50 (18.94 %)	3
FE	962	115 (11.95 %)	4
FBFS	601	70 (11.65 %)	8

Based on the table, we can see that the number of students participating in the elections is low (Table 2). The academic senate elections in 2018 are based on the results very similar to the results in 2022.

2.2. Results of questionary

Before the academic senate elections in 2022, we conducted a questionnaire survey focused on university students and their participation in the elections. A total of 205 university students participated, of which 58% (118) were women and 42% (87) were men. The largest number of students who responded to our survey (48, 23.4%) attend the Faculty of Economics and Management, which is also the largest faculty.

Table 3 Number of students participating in the survey

Faculty	Number of students
FEM	48 (23.4 %)
FESRD	30 (14.6 %)
FARS	34 (16.6 %)
FBFS	30 (14.6 %)
FHLE	31 (15.1 %)
FE	32 (15.6 %)

We found that 30% of respondents do not know that it is possible to join academic self-government bodies, but up to 53.2% of these students are first-year bachelor's degree students and 22.5% are second-year bachelor's degree students, who are at the university for a short time.

Our next question was whether the respondents are actively involved in any of the aforementioned bodies of academic self-governance, or have been involved in the past. We found that out of 205 respondents, 9 (4.4%) are currently members of one of the academic self-government bodies, and 26 (12.7%) respondents were members of them in the past.

We also asked respondents who were or are members of any of the academic self-government bodies what motivated them to do so. The most common answer was that they wanted to fill their free time, participate in the functioning of the university and to be useful.

We were similarly interested in the reasons of students who decided not to participate in academic self-government bodies. The most frequent answer of the respondents was that they are not interested in this kind of participation, the lack of time of the respondents due to their own activities, and a considerable part did not even know about this possibility.

One of the possibilities of participation in the bodies of the academic self-government is membership in the academic senates of individual faculties. It is ensured by the candidate's victory in the elections, in which all students of each faculty have the right to participate. However, the question was whether the respondents participate in these elections. 121 (59%) students participate in the elections to the academic senate of the faculty, and 84 (41%) students, on the contrary, said that they do not participate in the elections. Subsequently, however, we discovered that up to 62% (75) of respondents who participate in the elections to the faculty's academic senate do so at the initiative of the study departments of individual faculties, which use email to alert them to the ongoing elections. The second most

frequent reason, indicated by 17.4% (21) of the total number of answers, was the support of a classmate in the effort to obtain membership in the academic senate of the faculty.

We were also interested in the reasons of the respondents who did not use the opportunity to vote in the elections. A large part of the respondents (43, 45%) marked that they did not know about this possibility of expressing their own opinion. The second largest part of respondents (27, 28%) stated that it is in their opinion unnecessary, and the last and smallest group of respondents (26, 27%) stated their lack of interest in this type of participation and in academic self-governance as the reason for their non-participation in the elections.

Most students (127, 72%) said that they consider student participation in academic self-government bodies to be moderately or very important. 78 students (28%) consider this activity unimportant.

As the next step of our survey, we conducted guided interviews with 8 students who are currently members of the academic senate of the faculty they attend. At the same time, however, six of them are members of other bodies such as the University Student Council (2), the University Academic Senate (1), the Faculty Disciplinary Committee (2) and the University Disciplinary Committee (1). We were interested in what led respondents to participate in academic self-government bodies. They see the importance of participation mainly in the fact that they are interested in the university, they want to get to know the functioning of it better, the possibility to influence the events and bring the students' view of the university to the teachers, to improve the educational process at the university.

We asked respondents about the reasons why they think it is important for students to be involved in academic self-government bodies. According to the respondents, it is important for their classmates to realize that their vote also decides, that they can influence change at the university, have the opportunity to learn how the university works and bring their own proposals and projects.

We also asked the students what, according to them, could motivate their classmates to get involved in university bodies, or participate in elections. According to the respondents, the most important thing is to be informed, as many students are not interested in the university authorities because they do not know them and their activities.

3. CONCLUSION

We perceive each form of self-government as the management of an independent entity. The academic self-government, whose task is the administration of primary, secondary and also universities, is also such a whole. Public universities are managed through the bodies of academic self-government of universities and individual faculties.

Students can also participate in some of these bodies. In this way, they participate in the functioning of the university they attend. Among the bodies of academic self-government in which students can participate are the Academic Senate of a public university, the Disciplinary Commission of a public university, the Student Dormitory Council, but also the Student Council of Universities, which is one of the bodies of representation. Within the faculty they attend, students can be part of the Faculty's Academic Senate, the Faculty's Disciplinary Committee and the Internal Quality Council.

We found out that young people are often not even interested in voting in the elections to the academic self-government, which can be transferred to a lack of interest in voting in the elections to the municipal self-governments, the parliament and etc. It is necessary to build students' awareness that their voice is valued and that it is important to express their opinion. This can happen in various taught subjects that students complete at a lower level of study.

Currently, it is increasingly difficult to motivate young people to do more, but it is important that they are guided to express their opinion, that they feel heard and perceive that their actions can affect the events around them, and therefore that they perceive that when they make a certain effort, they can have an impact on society. It is necessary for young people with an interest to be informed and motivated to be part of the university's self-government. It is necessary to talk more about these university bodies, inform and point out the real results of their activities. Don't leave it to chance whether the students find out about membership and activities themselves. The time we devote to young people will affect us in the future.

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Education of the Blind in Georgia (at Preschool and Primary School) Problems, Challenges, Solutions

Nino TSKHOMARIA [a*]

[a] *Ivane Javakhishvili Tbilisi State University, Faculty of Psuchology and Education Sciences, Department of Education, Chavchavadze Av. 11, Tbilisi, Georgia, chancellery.pes@tsu.ge*

Abstract

I was interested in the issue of education for the blind during my Master's studies. In 2006, I finished a master's course with a focus on education and defended a master's thesis the topic- "Involvement of blind parents in the process of their child's development". The research in the mentioned direction was conducted for the first time in my country and, therefore, the work received great interest and approved. Normally, the master's topic was relatively broad, and I am continuing my dissertation research in the same direction-"Involvement of parents of blind people in the process of their child's development, pre-school age". This article refers to the presentation of the data analysis conducted by me in the first state of the research. In the space of my country, several problems have been identified that significantly hinder the perfect education of the blind and their socialization. The presenter article also refers to the detailed description and important recommendations of this study.

Keywords: Education, blind, school/primary school, Georgia.

1. INTRODUCTION

One of the strongest human need in life is a normal flow of sensations that directly nourish the human bring, providing it with vital impressions. It is commonly that there are five sense organs, but in reality, as they say, their number is much more. They collect light, color, sound, smell, teste and temperature information from the outside world of the body in the front of touch. He considered the less of all channel connecting the outer worlds to be the greatest tragedy. The influence of blindness on the psycho-physical developments of a person is so strong that completely different psychological types of people are formed on this basis. The famous researcher Burklein goes even further: he perceives the blind, unlike the sighted, as a completely different person, and the main flaw of his view stems from the underestimation of the role of the pedagogical process and the environment in general. This is key issue that determines during work on this issue. According to second view, blindness is only a physical defect of a person. One of this current

* Corresponding author.

representative, Dr. Cohn, writes directly: "To compensate the blind from lost sing. It has so many possibilities that it can be boldly said: it has everything except an indefinite means of displacement.

The purpose of this is to investigate:

1.The impact of blindness on human development;
2.To review and compare the opinions of Burklein and Kohn about blindness;
3.What is the impact of parental involvement on the development of children with similar disorders. All these questions led to the writing of this article, and therefore, I tried to answer the existing questions.

2. HISTORICAL PERSPECTIVE OF EDUCATION FOR THE BLIND

It is known that the blind originates from ancient Egypt (3000 years ago) where there were cases of treatment and teaching of the visually impaired (including the blind). The firs cognitive book was in Spain at the begging of the 17th century, and in the 18 century, the philosophical interest in the relationship between sensibility and cognition deepened, which was reflected in the philosophical thought of John Locke (1632-1704) in the same country. There was an opinion that deaf and blind people did not have the ability to learn. In order to clarify this version, intensive researches were started in Paris to see how correct this opinion was. Until now, we can consider the historical perspective of the blind in three main ways:

1. In ancient Greece, blind newborns were cared for by their parents;
2. An adult blind man sold as a slave;
3. Women were employed as prostitutes.

There was even a horrifying proverb about them, which was full of cruelty and exactly echoes the attitude of the blind population towards the blind – "If you see a blind man, open the door for him, why should you be better for him than God himself". It should be noted that Georgia had a completely different attitude, the state had a liberal attitude towards the blind. This is evidenced by the reign of the blind Thaddeus in the kingdom of Abkhazia in the 8th century, and Bagrat - who was blind by a political enemy in the 18th century, on the throne of Imereti.

3. SCHOOLS FOR THE BIND IN GEORGIA

Georgia has always been distinguished by its tolerant attitude towards different people, in our country, in the capital, there was only one boarding school for the blind, where blind people from all over the country studied and lived there. During the Soviet rule, blind people were employed mainly in factories and factories, e.g brush manufacturing factory, iron workshops and factories. 2017, the approach of the state has change dramatically, it was decided that blind students should be educated in schools, and at the end of the day they should definitely return to their homes, to their family members. According, the transportation of citizens living near the capital and/or its surroundings is provided by the state, where blind people living in western Georgia stay at school (Tbilisi Public school 202).

According to result of the general population census conducted in 2014, the population of Georgia was 3 713 804 people. Of these, men – 1 772 864 and women – 1 940 940. From hole population -0.25%-9 158 people have been given the status of fully blind throughout Georgia, 12.62%-468 710 people are partially blind, 2.65%- 98 480% people have significant vision impairment, and 0.2% - of the population - 7 262 people refrained from answering the mentioned questions, as for 0.88% of the entire population or 32 650 people, did not indicate information about their eyesight.

At the legislative level, our state has developed a professional standard for teachers in 2008, but there is no controlling body that will study the situation in terms of law enforcement. The professional standard of teachers in 2008, Chapter 5 deals with issue of a special teacher, where you can find a note on the function-duty of a special teacher: in case of need, he should be a recommender for other teachers, parents.

In order to develop the necessary ability of a students with special educational needs, the function of a special teacher is perfect at first glance, and all parties are involved for the perfect educational of a child with special educational needs. Obviously, the state shows its readiness, it creates documentation that looks at the development of the child from different perspectives, it involves both the teacher, the special teacher, and the parent in the process, and they work together on the creation and implementation of the documents of the individual educational plan. In order to plan and implement the effective educational process of a student with special educational needs, alternative curricula

are used (professional Standard of Teachers, Article 15 "b", "d" subsection.)Dimitri Uznadze's phrase is quoted to indicate the main essence of the goals written in the national curriculum – "The primary importance in learning is not the product that it gives us in the form of a specific habit or attest with a specific content, but the development of the student's strengths in a specific direction. In accordance with the national goals of education, it is important for the school to take care of the development of skills and competencies defined by the national curriculum. According to the National Curriculum, "the school should promote the learning and teaching of subjects, school projects, sports, artistic and club activities (with the involvement of students, teachers, parents): establishment of mutual respect, tolerance and equality between students, parents and teachers regardless of their social, ethnic, religious, linguistic and worldview" (National Curriculum, Article 18). In accordance with the mentioned document, the teacher should be supporter of the process of integration of the students into the school space (National Curriculum, Article 18), and for teaching in diverse environment, it is especially important for the teacher to have strong motivation and sensitivity, which, according to the teacher's professional standard, is mandatory for all categories of teachers (Teachers' Professional Standard, 2020). It should be noted that the law supports the student's parent, according to which the parent has the opportunity to request the special teacher to attend the lesson process, observe and give recommendations. After observing the teaching process of the special teacher, he will give both the parent and the main teacher recommendations and instructions on how to behave in a specific situation. The professional standard of teachers also includes the recommendations of the leading special for working with children with sensory disorders. In this case, my opinion and that of the author of the last document coincide. It is necessary to determine the ways of optimal use of residual vision, for which the ability to assess the functional vision of a student with low vision special educational needs is mandatory. Determining the need of technical equipment according to the level of need of a visually impaired child.

At first glance, it can be said that the state expresses an opinion for the socialization of the blind, works on various documents, creates legal frameworks, however, in practice, the actions that will directly improve the daily life of the blind are very small. Moreover, it can be said that only in the capital and a few big cities, a small number of events are held, and it cannot be generalized to the whole country. As a result of me personal observation, I encountered such a problem as lack of resources. According to the professional standard of teachers, the main goal is to support the blind student to move to another stage of life, to work on his skills and interests. And for this, the most important thing is to examine the interests of the student with special educational needs- to identify the strengths and then use them to the maximum.

At first glance, the state is focused on the socialization of blind children, however, on the other hand, I received the following response to the information requested from the Ministry of IDPs, Labor, Health and Social Protection from the occupied territories of Georgia, which was related to the collection of information on the provision of state services for blind children: "I would like to inform you that blind children can benefit from various sub-programs approved by the resolution of the Government of Georgia on December 31, 2020- activities within the framework of the 2021 state program for social rehabilitation and child care, although the said program is not defined separately Requirement / Condition regarding the provision of the program in case of the status of blindness, we are deprived of the opportunity to provide you with information about the number of beneficiaries involved in the sub – programs in this regard".

The purpose of this article is to study the issue in depth, therefore, I conducted in-depth interviews with experts works on the subject of the blind and specialists in the field. While working in the issue, I conducted an in-depth interview, on the basis of which it is possible to conclude that the majority of citizens living in the territory of Western Georgia, who need help from a psychological point of view, are related to this issues of improving inclusive education: deaf-mute child, children with psychological disorders, children victims of family violence, children of divorced parents. It is significant that during the last 15 years, not applied to ant blind parents. As the reporter noted, he reasonably doubts that there will be blind people in the wester part of Georgia who need psychological help, but suggests that parents from various reasons refrain and to keep their blind children at home.

Information obtained the framework of my research: from Tbilisi Municipality City Hall, a IP Tbilisi Kindergartens Management Agency, Ministry of IDPs from the occupied territories of Georgia, Ministry of Labor, Health and Social Protection, Ministry of Education an Science of Georgia and also from the National Agency of Statistics of Georgia.

It should be noted that the RM school for blind (public school 202) , which is one of the schools from the blind in the whole part of Georgia, currently has 49 students enrolled. Enrollment in the school is done by 2 methods:

1. The child has 10 % or less of visual acuity;
2. At the request of the parent of the visually impaired child

The psychologist of the 202nd school, Mrs. Irina Ardoteli, works complexly with blind children and special teachers in the following direction: behavior management, learning cognitive and social skills. The respondent has 10 years of work experience in the mentioned direction. He notes that first-graders who come to school today are un the same condition as 10 years ago – they are not ready for school. To the question, how ready are the parents of blind children to accept the psychologist's recommendation, to share the psychologist's advice for complex work on the child's development, the answer is as follows – only about 5 % of parents are eager to take into account the recommendations and follow the advice step by step, and in such case, the maximum result is obtained. The second category of parents hear such recommendations, but do not take them into account (do not pay attention), and the third category of parents are simply not interested in the psychologist's recommendation and consider their approach more justified.

If a student is short-sighted or visually impaired and does not wish to enroll in the above-mentioned school, the Ministry excluded from society. y of Education will enroll him in another public school. By such action, the state expresses its attitude that any person, regardless of the disorder, should be a healthy member of society and should not be excluded from society. The multidisciplinary team of the Ministry of Education is strictly monitoring to prevent arbitrary transfer from school 202 to any other school. According to the guidance of the psychologist, there have been cases where the level of learning and development of a student who has transferred from a public school is much lower than that of a student who attends a special school. Mrs. Irina is given as example of a second grade student who transferred from one of the public school. "The child did not know how to write, read or recognize colors, however, the academic quality of the same student's learning improved so much that it became age-appropriate already in the 5th grade." In the course of the interview, the "guilt" of the parents was revealed several times, they constantly try to "do good job" for their children.

The state's approach is socialization of blind and access logistical issues. Children are equipped with necessary literature, supporting manuals. Years age, the 202nd school had a school-boarding load, studied and lived in the school area. Today the attitude has changed and the state believes that blind children should not be separated from their families. Moreover, from their socialization, students are served by private transport, which provides students with daily activities, both in Tbilisi and in the surrounding area of Tbilisi. As for the students who live in the regions away from Tbilisi, are from Western Georgia - for them, the 202nd school has an offer and said students remain in the school as it was before the reconstruction of the school. Thus, for today, the state promotes the socialization of blind children.

In conclusion, it can be said that the hyper-involvement of parents is the primary problem in the process of child development.

In order to present the complete picture in Georgia. I applied to the City Hall of Tbilisi Municipality and requested the exact number of blind beneficiaries according to age, however, the scarcity of information presented by them allows me to assume that in fact almost no care in taken for the development/socialization of children of this spectrum. According to the information obtained from the City Hall of Rustavi within the framework of the desk research (I requested information about the number of students enrolled in kindergartens under the control of the City Hall), the City Hall does not implement a target program for blind children at all. It only has programs for general inclusive students, the blind are not specifically singled out or taken as target groups. The service does not implement a target program for blind children. The City Hall allows blind children to participate in all events that are generally inclusive. It is possible that the mentioned children received help with the status of disabled or socially disadvantaged, however, it is impossible to identify them with the status of blindness, based on the information stored in the database of the service, because there is no need to collect information on this status based on the goals of the mentioned program. In 2020 – 3694 children between the ages of 3 and 6 benefited from the social program provided be the budget of the city service of health and socials services.

"According to the information provided by the agency for the rescue of kindergartens of AIP Tbilisi, in the kindergarten established by the agency and functioning in the territory of Tbilisi municipality, blind children are enrolled (Krtsanisi district 36th kindergarten) , where they receive an identical (similarly to other problems) do not have children to preschool education (in agreement with the child's parents); is integrated with other children, as for any special programs or social projects, they have to been implemented in the mentioned kindergarten.

It should be noted here that the number of the population in regions, self-governing unit, gender and visual impairments is provided by the education management information systems, as of November, 2014. After that, the data was not updated. Regarding the validity of the data collection methodology, I cannot take responsibility as a researcher on my own, because I completely rely on the information provided by the statistical service.

Table 1. The population of Georgia according to gender visual impairment

	Not at all	**partially**	**significantly**	**completely**	**Refusal to answer**	**Not specified**
common 3 713 804	83,41	12,62	2,65	0,25	0,2	0,88
man 1 772 864	86,13	10,29	2,17	0,26	0,23	0,93
woman 1 940 940	80,92	14,75	3,09	0,24	0,16	0,83

4. CONCLUSION AND RECOMMENDATION

Therefore, as a result of the study of the existing reality, I conclude that a large part of the population does not participate in the survey, as the question and the answers are serve for them. The main problem is the gap between law and reality; as a recommendation, it can be said that:

1.It is effective for the state to develop such programs that ensure heroic socialization of the blind; it will be effective to instruct city mayors to implement special operations developed by the state;
2. It will be effective for the state to allocate a psychologist who will help blind parents/family members with their children in education;
3.It is effective to have a specific body child is carry by the parent to an age-appropriate educational institution;
4.It is desirable for the state to carry out an information campaign, e.g distribute relevant information booklets to blind parents/relatives and/or simply interested persons of society;
5.It is desirable to have at least one school for the blind in every large region of the country, so that children do not end up without education due to moving and leaving the region.

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Linguistic Minority Students in Linguistic Majority Schools and Teaching in Diverse Classroom Environment

Lena (Elene) JAJANIDZE [a*]

[a] *Ivane Javakhishvili Tbilisi State University, Georgia; Centre for Civil Integration and Inter-Ethnic Relations, Tbilisi, Georgia*

Abstract

The article presents a brief overview of the introduction of bilingual education policy in Georgian schools. The issues of teaching the national language to ethnic minorities and providing quality education in such a way, that, the native language and culture of the minorities are preserved and the individual needs of the students are taken into account, are important for all pluralistic countries. The mentioned issues are also a significant challenge for the education system of Georgia, especially in submersion type schools, where the linguistic minority students together with the linguistic majorities create a linguistically, religiously and culturally diverse environment. My research aims to explore ethnic minority students' perceptions of their acceptance of majority students and teachers and how school teachers manage classroom diversity in submersion schools of Georgia. In the framework of the article, I will try to answer the following research questions: 1) What do ethnic minority students think about their acceptance by majority students and teachers? 2) How high expectations do teachers have for non-Georgian speaking students? 3) How different are teachers' expectations of ethnic minority students from Georgian-speaking students? 4) How effectively do teachers and school administration manage existing classroom diversity?

Keywords: minority students, submerison classes, expectations, bilingual education, diversity management.

1. INTRODUCTION

In the modern world, there is almost no longer a closed and isolated culture and society, which accordingly raises the need for harmonious coexistence in a diverse environment. However, understanding ethnic, linguistic and cultural diversity as wealth and resource remains a problematic issue in today's world, but societies are trying to learn to coexist in a diverse world without conflict. Examples of such an attempt could be also find in Georgian society: This is a country that was characterized by ethnic, religious and cultural diversity for centuries. Today, approximately 12% of the population in Georgia are ethnic minorities, who speak a different languages and at the same time have a different cultural backgrounds.

The existing pluralistic situation is somewhat of a challenge for Georgia, because the majority of the ethnic minorities living in the country cannot speak the state language. As long as Georgia was part of the Soviet Union and the Russian language was considered the main language of communication between different ethnic groups, the issue of language policy was not acute in Georgia. After 2005, the language policy aimed at strengthening the state

* Corresponding author.

language and teaching the Georgian language for ethnic minorities. Currently, despite the fact that non-Georgian language (Azerbaijani and Armenian) schools are operating in Georgia to ensure school education for ethnic minorities in their native language, the desire and tendency of ethnic minorities to study in Georgian schools still increases. This means, that the language minority students representing of mostly ethnic Azerbaijani population learn together with students of the linguistic majority in Georgian schools, so called in submersion classrooms.

The purpose of this article is to explore ethnic minority students' perceptions of the acceptance of majority students and teachers and how school teachers manage classroom diversity. Research in this direction is important, both for the context of Georgia in terms of identifying problems, summarizing achievements and implementing further effective measures, as well as for all pluralistic societies, where the issue of integration of ethnic minorities and migrants is considered important.

Due to the population with diverse and different ethnic, linguistic and cultural backgrounds, the challenges of managing classroom diversity are particularly relevant for the educational system of Georgia. In order to get to know the topic better and to understand the context of educational diversity, in the next subsection of the article I will briefly review the main issues of the multilingual and multicultural policy of Georgia and the main challenges of a diverse school environment.

2. EDUCATION OF ETHNIC MINORITY STUDENTS IN GEORGIA

Among the ethnic minorities living in Georgia, the most numerous are the people of the Armenian and Azerbaijani ethnic groups (general population census, 2014). The linguistic distribution of the population of Georgia according to the statistical data of the census is as follows: 91.7% of the population of Georgia is fluent in the Georgian language, for the majority of them (95.4%) the Georgian language is at the same time their native language, only 1.3% of those who speak Georgian fluently are ethnic Azerbaijanians (ethnic Azerbaijanians make up 6.7% of the population of Georgia), and 1.7% (out of 4.5% of the total population) of the Armenian-speaking population (the remaining percentage is divided among representatives of Abkhazian, Russian, Ossetian and other language speakers) (general population census, 2014).

Today, out of 2085 public schools operating in Georgia, 208 public schools are non-Georgian-language schools (Ministry of Education and Science, Education Evaluation Document, 2020). This means that Georgian citizens with different language background are not only allowed to receive full general education in their native language, but the state finances and ensures full general education in their native language for the two most numerous groups of ethnic minorities (ethnically Armenians and Azerbaijanis).

Georgian language is taught as the state language in all non-Georgian language schools. Despite of the opportunity to receive education in their native language and learn Georgian as the state language, a certain number of representatives of the non-Georgian speaking community choose to study in a Georgian school and they begin to receive education in the language of the majority, together with students representing the majority.

Otherwise, this teaching model is called a bilingual education submersion program, the end result of which is monolingualism (Baker, 2010). The mentioned educational trend in Georgia itself is due to the desire of minority representatives and does not reflect the goal of Georgian education policy.

As for the language policy, the Ministry of Education considers learning the state language as a necessary and important factor for the integration of national minorities and at the same time preserving their own linguistic and cultural identity, which is manifested in the efforts and activities to implement bilingual education programs since 2005, such as:

-Ratification of the European Framework Convention by the Parliament of Georgia in 2005;

-Development of the policy document "Integration of National Minorities through Multilingual Education" with the financial support of the OSCE High Commissioner for National Minorities in 2008;

-Implementation of the mentioned document during the years 2009-2014;

-In 2009, the Government of Georgia developed the "National Concept of Tolerance and Civil Integration", which includes the following directions for improving the education of national minorities: preschool education, general education, higher education, raising the level of knowledge of the state language among minorities and ensuring access to professional education (Mekhuzla, Roche, 2009);

-In 2010, the Ministry of Education and Science approved the Multilingual Education Program Regulations, which allowed non-Georgian schools in Georgia to develop multilingual education programs tailored to local needs and submit them for approval. The program included bilingual teaching in the classroom and the acquisition of relevant materials in two languages (Armenian/Azerbaijani and Georgian) (Grigule, 2010). In the same year, bilingual programs were introduced as pilot programs in non-Georgian language schools in accordance with the choice of schools;

-Since 2010, an affarmative action policy/quota system has been started, which determines the quota of non-Georgian-speaking students to be enrolled in the university,. which means passing only one exam (the unified national exam of the general skills) in their native language (Azerbaijani or Armenian) and study in One Year Georgian Language Preparatory program and then continue their studies in the desired direction at the bachelor's level;.

-In 2015, the "State Strategy for Civil Equality and Integration" was approved, and at the same time the implementation of the 2015-2020 Action Plan began (Policy Report on the Protection of National Minorities, 2017);

-Nowadays, in non-Georgian-speaking schools, a Georgian language program is implemented, which involves the teaching of Georgian as a second language, with five weekly contact hours provided by the hourly grid (basic principles of hourly distribution, Article 49, 2015). Furthermore, In the 2022-2023 academic year, a bilingual program was introduced in 41 non-Georgian schools/sectors, where 55 bilingual assistant teachers, 46 local bilingual teachers and more than 4000 students are involved in the implementation of the national curriculum with a bilingual approach (letter of the Ministry of Education MES 4 22 0001620989, 2023).

The introduction of the named important measures and giving the opportunity to ethnic minorities continue studying in higher educational institutions of Georgia increased the interest and motivation of the non-Georgian population in learning the state language, which was manifested in the significant encreased numbers of students which wish to continue their studies in Georgia (in 2010 - 247 ethnic minority students were enrolled in several universities, and in 2019 - 1329 student) (Tabatadze, Gorgadze, 2020).

In addition, according to the statistical data of 2017-2019, the dynamics of the transition of students from non-Georgian-language schools to Georgian-language schools can be clearly observed (Gorgadze, 2019). This is due to the high motivation of receiving education in the Georgian language, which is considered an important perspective for integrating into the Georgian society (Gorgadze. N, 2019). According to the information provided by the Ministry of Education and regional education resource centers, the number of students in Georgian schools and sectors for whom the Georgian language is not their native language is the highest in Kvemo Kartli and Kakheti regions (Jajanidze, 2021).

According to the general data of school students, the number of non-Georgian speaking students enrolled in the Georgian sector or in Georgian schools are increasing over the years. From the 2016-2017 academic year, the percentage of non-Georgian students in Georgian schools/sectors increased from 38.48% to 41.17% by 2021 (Jajanidze, 2021).

While researching the submersion education program in Georgian schools in previous years, I found, that, there are some challenges in managing classroom diversity effectively. Teachers have lower expectations towards non-Georgian-speaking students than their Georgian peers, they are more stereotypical towards linguistic minorities and teachers from this schools may be evaluated with low indicators of intercultural sensitivity (Jajanidze, 2022). Such stereotypical and negative attitudes of teachers cannot provide an emotionally positive classroom environment important for learning. However, it should be noted that within the framework of the existing legislation in Georgia, the teacher is considered as a person of high intercultural sensitivity, who must "take care of the personal

development of the student and the formation of his civic awareness" (General Education Law, Article 21), while the Code of Professional Ethics of the Teacher obliges the teacher to pay equal attention to all students regardless of gender, race, language, religion, national, ethnic and social affiliation, property status or other characteristics" and ensure that all students receive quality education (Teacher's Code of Professional Ethics, Article 3). Like school teachers, public school principals are required to set high academic expectations for each student and implement strategies to improve their achievement (Public School Principal Standards Act, 2010, Article 4).

Moreover, in those Georgian schools, where also linguistic minorities study, the challenges of managing a diverse school environment and evaluating the effectiveness of teaching is an essential issue and represents the general goal of the research presented in this article.

3. HOW IMPORTANT IS A POSITIVE EMOTIONAL ATMOSPHERE AT SCHOOL AND WHY ARE TEACHERS' EXPECTATIONS OF STUDENTS ESSENTIAL?

Every child has the capacity to learn and develop. Having high expectations is especially important for the most vulnerable children, so that, they can achieve better outcomes and some children need additional support during different learning experiences (VEYLDF, 2016).

Education researchers (Brown, Madwey, 2007) in the process of creating a positive cultural environment emphasize the importance of teachers' expectations towards students for maintaining high interest and motivation in learning. Studies have proven that teachers' expectations influence not only students' motivation, but also their self-esteem and self-efficacy. Also, studies clearly show, that children who develop high self-esteem, self-confidence and motivation to learn are more likely to realize their potential in school, while they are more resistant to the effects of risk factors in the field of education (Brown, Madway, 2007).

Rubie-Davies conducted a study in 2006 on teacher expectations of students. This study aimed to examine how teachers with very high (or very low) expectations of their students would rate their own students in terms of personality characteristics and their academic achievement sSix teachers with high expectations and three with low expectations and their 220 students participated in the study. Participating teachers in the study were asked to rate their students' attitudes toward schoolwork, relationships with others, and family support during the learning process. The study showed contrasting results: for teachers with high expectations, the correlation between expectations and all named factors were significant and positive, while for teachers with low expectations, the correlation with all important factors were negative. The correlation with student achievement was also positive and significant for teachers with high expectations, while only one positive correlation was found for teachers with low expectations (Rubie-Davies, 2010).

And what do we mean by having high expectations? Expectation can be defined as a strong belief that someone will achieve some specific, set goal. Accordingly, "high expectations" for children imply the belief that children will be able to fully realize their potential (Saffigna, Church & Tayler, 2011).

Brophy and Goode (1970) suggest a possible sequence of behaviors for how expectations are transmitted and reflected from teacher to student:

1. The teacher sets different expectations for the students' work;
2. Then he begins to treat the children differently according to his different expectations;
3. Children react differently to the teacher because the teacher treats them differently;
4. In response to the teacher's expectations, each child tends to display behavior that meets and reinforces the teacher's expectations of them;
5. As a result, some students' general academic performance increases, while others suffer and have lower results according to teachers' expectations;
6. Expectancy effects appear in annual assessment tests at the end of the year, which is explained by the phenomenon of the “self-fulfilling prophecy” (Brophy & Good, 1970).

A particularly noteworthy and important determinant for the further realization of students' potential is the expectations of teachers towards students who come from low-income families, or represent minority ethnic groups and migrants (Jenks & Phillips, 1998). When teachers have low expectations for minority students, it directly affects

children's self-confidence, belief in their own abilities, sense of empowerment, and their academic outcomes (Jenks & Phillips, 1998; Rubie-Davies, 2006).

Jenks and Phillips (1998) conducted a study to assess the learning outcomes of students from low-income families and ethnic minority students in US schools. The study showed that there is a correlation between the academic achievement levels of students from ethnic minorities and poor families. This research shows, that, poor and minority students, compared to students from higher income families, have lower achievement and grades, which increases the chance of repeating the same low achievements and being placed in special education classes, or dropping out without a certificate (Jenks, Phillips, 1998).

In addition, research shows that students with low academic achievement are characterized by higher levels of anxiety and stress than students with high academic achievement (Andrews, Wilding, 2004). Moreover, stress can become toxic to the learner during activities that are prolonged or repeated frequently—and when protective factors are insufficient to moderate the stress to a level the learner can tolerate. At such times, stress in the school environment may not lead to increased attention and interest in learning, but it may lead to the opposite result: poor performance, decreased motivation, and low self-esteem (Morse and Rothstein, 2019).

A number of studies over the years have consistently confirmed that stress, tension, and feelings of exclusion at school have negative effects on students' academic performance (Spencer, Dupree, Swanson, & Cunningham, 1998; Wentzel, Weinberger, Ford, & Feldman, 1990), motivation to learn (Eccles & Midgley, 1989) and intentionality (Klinger, 1975), as well as engagement in various learning activities (Wentzel, 1994).

Although high personal expectations may not be sufficient for high academic achievement (Kaplan, Ruth, Kaplan, 2005; Jenks & Phillips, 1998), research shows that the school environment and students' sense of belonging to the school environment may be the most important factor that positively affects the student's academic performance (Kaplan, Ruth & Kaplan, 2005; Eccles & Midgley, 1989, Rubie-Davies, 2006).

Valdez emphasizes the role of teachers' intercultural competencies and the impact of their expectations on students' own abilities, self-confidence, and ultimately learning outcomes for the success of students of different ethnicities and races in the classroom environment (Valdez, 2010).

Teaching the national language to ethnic minorities and providing quality education in such a way, the native language and culture of the minorities are preserved and the individual needs of the students are taken into account, while ensuring a positive emotional mood in the classroom, all these issues are important for all pluralistic countries. The mentioned issues are also a significant challenge for the education system of Georgia, especially in submersion type schools, where the linguistic minority students together with the linguistic majorities create a linguistically, religiously and culturally diverse environment.

My research aims, to explore ethnic minority students' perceptions of their acceptance of majority students and teachers and how school teachers manage classroom diversity in submersion schools of Georgia.

4. RESEARCH METHODOLOGY

Quantitative research method was used in the study. Based on the purpose of the research, the research questions were defined as follows:

1) What do ethnic minority students think about their acceptance by majority students and teachers?
2) How high expectations do teachers have for non-Georgian speaking students? How different are teachers' expectations of ethnic minority students from Georgian-speaking students?
3) How effectively do teachers and school administration manage existing classroom diversity?

Selection

The students of public schools of two regions of Georgia inhabited by ethnic minorities, namely Kvemo Kartli and Kakheti were selected for the research, since according to the information provided by the Ministry of Education and educational resource centers (data of 2021), submersion bilingual programs are implemented in these regions.

The research covers all the municipalities of the two named regions, in which, according to the information provided by the educational resource centers, submersion programs are implemented. Two schools were selected from each municipality. The schools were selected according to the following principles:1). the number of non-

Georgian students in the school should be at least 20% and at most 60%, 2). from each municipality one school with a small number of students and one with a large contingent of students. A total of 10 schools participated in the research.

It should be noted, that the city of Rustavi from the Kvemo Kartli region refused to participate in the research, although it is important to point out that, according to general data, a large number of non-Georgian students study in Georgian-speaking schools in Rustavi. However, I was not given the opportunity to clarify their data and study the issue for the moment of the research, due to the reason mentioned above.

Research tool

Within the framework of the research, a quantitative research tool was used: a questionnaire prepared for non-Georgian students of the basic level (grades VII-IX) of Georgian-language schools. The students' quantitative questionnaire included 42 questions/statements. Responses were graded using a Likert scale. In response to the question/statement, the participant could mark one of the options: a) I absolutely agree b) I agree c) I agree more or less d) Do not agree e) I completely disagree.

Selection of participants

The target group of non-Georgian speaking students were selected randomly based on the data provided by the school principals. Every second non-Georgian speaking student from the class list, who was in school at the time of the survey, took part in the research. Age distribution of the participants: from 12 to 16 years. Detailed distribution: 12 years old - 11 respondents, 13 years old - 52 respondents, 14 years old - 61 respondents, 15 years old - 33 respondents, 16 years old - 3 respondents.)

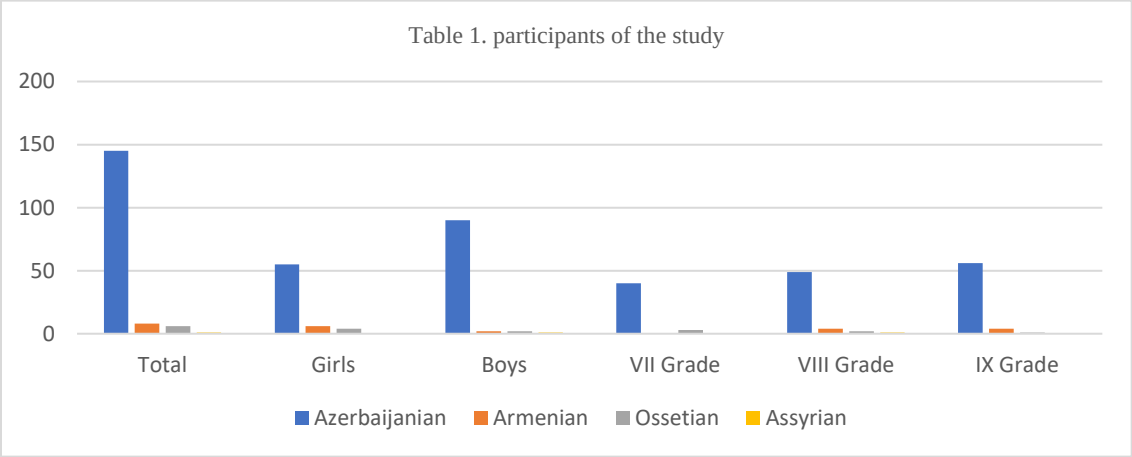
5. ANALYSIS OF RESEARCH RESULTS

As part of the quantitative research, a total of 160 non-Georgian students of the basic level were interviewed, from which 95 were boys and 65 were girls.

The vast majority of interviewed students - 145 students are Azerbaijani-speaking, 1 Assyrian-speaking, 6 Ossetian-speaking, and 8 Armenian-speaking.

43 seventh graders, 56 eighth graders and 61 ninth graders participated in the research (Table 1. Distribution of participants according to classes, language and gender)

Table 1.Participants of the study.



As educational experiences show, various factors influence the academic success and learning motivation of students of linguistic minorities, including teachers' expectations, attitudes, support from the administration, relationships with peers of linguistic majorities and others. Within the framework of the research, I studied the

perception of non-Georgian speaking students, what expectations teachers and students of the linguistic majority have toward them, as well as their emotional state when the language of instruction is different from their native language and they have limited language skills.

From this point of view, the research showed, that according to the assessment of non-Georgian speaking students, teachers and Georgian speaking students have low expectations and stereotypical attitudes towards them. For example, 40.6% of the interviewed non-Georgian students indicate that their teachers' believe that they will not learn as well as their Georgian peers.

In addition, the control question regarding the mentioned attitude confirms the non-Georgian students' perception about teachers' expectations. In particular, 70% of the surveyed respondents with varying intensity (completely agree/ agree/ more or less agree) with the statement that "teachers expect Georgian children to learn better".

However, the majority of interviewed students indicated that they feel proper attention from teachers and teachers do not devote less time to them compared to Georgian children, but 32.5% of respondents believe that teachers pay more attention to Georgian children in the classroom.

Stereotypical attitudes towards minority students are also revealed by the following data: non-Georgian speaking respondents note that if something goes wrong at school or someone misbehaves, the teachers and the school administration think, that, the ethnic minority student should be responsible for this (29.4%). However, the majority of the respondents (70.6%) do not agree with this opinion. The mentioned data do not give us a special difference by gender, 46% of the respondents who do not agree with the opinion "teachers believe I'm a "culprit" are girls, and 54% are boys, however, most of the respondents who perceive themselves as a "culprit" from the teacher's view are boys. Accordingly, in this case, the marking of "inappropriate" behavior towards boys may be determined by gender stereotyped views of teachers and not by ethnic stereotypes.

The research showed that, unlike the teachers, the expectations of the Georgian classmates towards the minority students are not low according to the perception of non-Georgian speaking students. 59.4% of non-Georgian students do not agree with the statement "My classmates expect me not to know the lessons." However, the remaining 40.6% completely agree/ agree/ more or less agree with this statement.

During the survey, ethnic minority students clearly expressed that they wanted to study in a Georgian school with the motivation of interacting with Georgian peers. The majority of surveyed students, 81.3%, agree with the statement, "I wanted to study in a Georgian school in order to form friendship and closer relations with Georgian peers", while 18.7% disagree this statement. The table below presents the distribution of respondents' answers in detail.

Table 2. "I wanted to study in a Georgian school in order to form friendship and closer relations with Georgian peers".

I absolutely agree	25,6 %
I agree	36,9 %
I agree more or less	18,8 %
Do not agree	14,4 %
I completely disagree	4,3 %

Within the scope of the research, I studied what kind of attitudes and relationships minority students have with majority students. A large number of minority students indicate that they currently feel in a friendly environment in the classroom, while 11.9% perceive that they do not feel in a friendly environment. Within the framework of the research, it was also revealed that non-Georgian speaking students (83,7 %) had expectations of friendly attitude from their Georgian classmates from the beginning of the school.

As discussed above, minority students think that teachers' expectations towards language minorities are low and attitudes are stereotypical. In this direction, it is also important to study other factors of diversity management, such as cultural self-presentation, recognition and respect, as well as the use of appropriate techniques and methods with students with different language needs in the teaching process.

Within the framework of the research, I studied the opportunities for minority students of presenting their culture and traditions in order to gain respect and recognition from the school society. During the research, the respondents

showed a clear desire to have the opportunity to introduce their own culture and traditions to their Georgian classmates at school. 76.3% of the total number of surveyed students want to do this, while 14.4% want to do it more or less and 9.3% of respondents don't want to do it at all. In response to non-Georgian students' desire to present their culture and traditions, I studied how much they have the opportunity to talk about their culture in the classroom. The majority of participants indicated that they have the opportunity to talk about their culture. The table 3. below shows the distribution of results in detail.

Table 3. Statement: "I don't have the opportunity to talk and express about my culture in classroom."

I absolutely agree	8,1 %
I agree	17,5 %
I agree more or less	8,1 %
Do not agree	56,3 %
I completely disagree	10, 0%

However, the majority of respondents, 72.5%, also note that they learn and talk about Georgian culture and traditions at school, which implies teaching from the perspective of the majority culture.

25.6% of the respondents also believe that the school administration does not support them to introduce their own culture and traditions to other students, 19.4% of the respondents more or less agree with this opinion (they are neutral), and 54.4% believe that the administration does not respect their culture and traditions. It supports getting to know other students. It must be pointed out that the minority students named the participating in various events as a practice of expressing their culture, and the congratulatory activities of the Azerbaijani holiday Novruz Bayram were identified from the respondents as an example of respect for the traditions of the minorities by the majority.

Within the framework of the research, in terms of managing diversity effectively, I also studied how comfortable and supported minority students feel in a class where the language of instruction is different from their native language. Therefore, it was important to find out, when not understanding the content of the lesson, if the students are supported from teachers or Georgian-speaking peers to further clearify and how often this practice is encouraged in the school environment.

From this point of view, the research showed, that, most of the respondents agree with different intensity the statement "I often feel that I cannot express my knowledge during the lesson because I do not know the language well". A more clear distribution of respondents' answers is presented in the table below.

Table 4. The statement "I often feel that I cannot express my knowledge during the lesson because I do not know the language well."

I absolutely agree	12,5 %
I agree	32,5 %
I agree more or less	16,3 %
Do not agree	34,3 %
I completely disagree	4,4 %

Within the scope of the quantitative research, I was not given the opportunity to identify all the factors hindering the school performance of students of the linguistic minority, although, as mentioned above, the majority of respondents do not mention mocking or stereotypical attitudes from their peers. However, in this regard, the teachers' factor is clearly visible and the majority of the respondents indicate that they hesitate to ask the teacher additional questions to clarify obscure issues, or to tell them that they did not understand the lesson.

Table 5. Statement: "I often do not understand the lesson explained by the teacher, but I cannot tell the teacher about it."

I absolutely agree	15,6 %
I agree	31,9 %
I agree more or less	18,1 %

Do not agree	28,8 %
I completely disagree	5,6 %

The research format did not allow me to find out in more depth the reason/reasons why the majority of non-Georgian speaking respondents cannot discuss with the teacher the issues when they do not understand the new explained lesson, therefore, this is the subject of additional research. In addition, I consider it important to find out, in the form of interviews with teachers, what mechanisms/methods they use to make sure that students, and especially language minority students, have well understood the newly explained lesson material.

The mentioned findings of the research, such as the difficulty in understanding the content of the lesson, the lack of support from teachers and the problems of academic performance of linguistic minorities may be the causes of student frustration and demotivation.

Although studying in a Georgian school was the desire and decision of the students and their parents, and they were not forced by circumstances, a certain part of the students stated during the survey that nowadays, if it were up to them, they would choose to study in their native language.

Table 6. Statement: "Today, if it were up to me, I would study in the school instructed in my native language.

I absolutely agree	10,6 %
I agree	28,1 %
I agree more or less	14,4 %
Do not agree	38,6 %
I completely disagree	8,1 %

46.7% of the respondents do not agree with the mentioned statement, which is probably due to the motivation of learning the Georgian language and establishing friendly relations with Georgian-speaking classmates. In addition, the majority of respondents named the following motivators for choosing a Georgian school: the opportunity to learn the state language well, expect to study with competent teachers, have relationships with Georgian children and pass entrance exams in the Georgian language to a higher education institution. However, despite the fact that for a large part of the respondents, one of the motivators of studying in a Georgian school is to pass the entrance exams in the Georgian language, at the same time, 40.6% of the respondents think that after finishing school, they will still not be able to pass the exams in the Georgian language.

Table 7. Statement "After graduating from school, I will not be able to pass university entrance exams in Georgian language."

I absolutely agree	8,1 %
I agree	16,9 %
I agree more or less	15,6 %
Do not agree	50,0 %
I completely disagree	9,4 %

The presented results raise additional questions about the quality of the teaching of the Georgian language and other exam subjects and require a more in-depth study of other hindering factors. In addition, the answers to the control questions given in the questionnaire, which are related to the post-graduation plan, show a clear trend that non-Georgian-speaking students intend to take exams in the university/vocational school in their native language after finishing the Georgian school, that is, they will benefit from the affermative action education policy. This implies additional financial expenses from minority families and the state budget, and additional time for students to study the Georgian language in the One Year Georgian Language Preparatory Program. Since, the affirmative action policy includes mandatory one-year intensive study of the Georgian language for all those ethnic minorities who benefit from this program.

The mentioned trend again emphasizes the need for an in-depth study of the effectiveness of teaching in the submersion schools, and the identification of the factors hindering the academic success of non-Georgian-speaking students, since the study clearly shows that the motivation of non-Georgian-speaking parents and their children to learn the Georgian language and receive a better education is high (81,3 %), however, at the same time, a large number of students are planning to use the affermative action policy again and believe that they (40,6%) will not be able to pass the exams in the Georgian language.

Therefore, it is important for the administration and teachers of those schools to develop differentiated strategies and techniques, so that all students, taking into account their language proficiency or other special needs, can properly express their knowledge, receive encouraging support to overcome existing challenges with a supportive and positive emotional attitudes from teachers.

6. CONCLUSIONS

Within the framework of focus groups and interviews conducted during different periods of time with the teachers and administration of the schools implementing the submersion bilingual program, the highly negative attitude of linguistic minority students towards studying in Georgian schools were constantly observed, which was explained by the complicated learning process and the reduction in the quality of teaching for both Georgian-speaking and non-Georgian-speaking students.

This research showed that one of the motivators for using the submersion program for the majority of respondents was to collaborate with Georgian-speaking peers and to get a better education in general. In addition, the research also revealed that the same majority of students, at this stage of education, do not believe that they will be able to pass the university entrance exams in Georgian after finishing school because of the lack of language proficiency. This indicates that their expectations and motivating factor to get a quality education and learn the Georgian language in a Georgian school could not be fulfilled.

Students who believe that they cannot pass the unified national exams in the Georgian language are going to join the program provided as an affermative action policy - to pass the university entrance exams in their native language and to study the Georgian language for one more year at the university intensively. It is also important that the students of the linguistic minority are unable to develop their native language at the academic level during their studies in the Georgian school. Therefore, they need to prepare for a native language proficiency test with private teachers even in their native language.

The services of a private teacher and the intensive teaching of the Georgian language for another year at the university, while this should have been provided by the Georgian school, are financially unprofitable for the families of ethnic minorities. And the expenses from the state budget are doubled in such cases. Accordingly, it is important to pay much more attention to this issue in terms of providing equal quality education for linguistic majority and minority students and effectively using state funds in the field of education.

In response to one of the research questions, I found out how non-Georgian-speaking students themselves consider the expectations of teachers and Georgian peers towards them, an important trend was revealed: teachers have lower expectations towards linguistic minority students, in contrast to Georgian-speaking students. However, at the same time, it is also an important finding that linguistic minorities rarely indicate low expectations from their Georgian-speaking peers towards them, which may indicate a more or less comfortable relationship with their peers and can be considered a positive factor in diverse classroom.

It should be emphasized that teachers' different expectations towards non-Georgian speaking students may cause having a sense of non-recognition, injustice, which minorities may associate with their own linguistic or ethnic differences and negatively affect their mood, attitude and motivation to learning or relationships with their peers.

Raising awareness among teachers of submersion program schools about the importance of learning expectations towards students, managing a linguistically and culturally diverse classroom are essential issues and essential factors for the academic success of students. It is important that the Center for Professional Training of Teachers should provide awareness raising meetings with school administration and teachers and develop teacher training programs for diversity management. Implementation of programs tailored to the context of submersion schools will be more effective when existing school diversity and language challenges are taken into account for teacher training.

In relation to the research question on school diversity management, the research revealed that a large number of respondents feel supported by the school administration to present their own culture in the school space, which is a very positive event in terms of integrating students with different cultures and traditions. This approach will help linguistic minorities to present themselves in an interesting light and earn recognition and respect in the environment of their peers.

However, I should note here that I could not specify what activities the language minority students mean by the opportunity to express their own culture because of the limits of the research, although the only activity that was named with reference to the open questions is congratulating Azerbaijani students of the Azerbaijani holiday "Nowruz Bayram". However, I visited and observed the buildings and classrooms of each submersion school and it is worth noting that there are no signs of different culture, language and traditions anywhere in the corridors or classrooms of these schools.

For example, it could be any of the following: phrases from a poem by a famous Azeri-speaking/Armenian-speaking/or Ossetian poet, a work by an artist with different ethnic background, a greeting in the language of a linguistic minority, a short story about Georgian-Azerbaijani/Armenians/Ossetians, or a photo-reportage on the representatives of ethnic minorities who played an important role in the social, cultural or political development of Georgia.

Organizing such exhibitions/presentations will give the ethnic minorities a sense of respectability and make the school space more friendly and homely, and it will make it easier for the children of the linguistic majority to see the culture of the minorities and their contribution in a positive context, which will ultimately lead to social and academic integration.

Finally, within the framework of the research, it was found out that linguistic minorities choose Georgian schools with the motivation of learning the Georgian language, receiving quality education in Georgian and integrating with Georgian-speaking students. The research also showed that, according to minority students, teachers' expectations for them in the educational process are lower, in contrast to language majority students. In addition, students often do not understand the learning material and in most cases they do not tell the teachers about it, which leads to academic failure and which affects the self-esteem of the minority students, as well according to the assessment of minority students, they will not be able to pass university entrance exams in Georgian language after completing their schools.

It should be noted that having high expectations towards students cannot guarantee high academic achievements a priori, and various additional factors, such as cognitive development, the level of language proficiency in the case of minority students, or the availability of other support mechanisms, affect academic success. However, as we learn from the research discussed above, high expectations and actions consistent with those expectations are the most important factors in achieving academic success.

The findings discussed in the article are more or less common to all the target schools involved in the research process, and according to the findings, it is necessary to introduce additional approaches and strategies adapted to diverse classroom environments and prepare teachers to work in diverse classroom environments for more effective teaching in submersion schools.

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Evaluation of Social Dimension in ESG Sustainability Framework

Nazli GOKER[a*], Mehtap DURSUN [b]

[a] *Galatasaray University, Industrial Engineering Department, Ortakoy, Istanbul, Turkey, nagoker@gsu.edu.tr*
[b] *Galatasaray University, Industrial Engineering Department, Ortakoy, Istanbul, Turkey, mdursun@gsu.edu.tr*

Abstract

ESG is an acronym for Environmental, Social, and Governance. ESG sustainability is a framework that helps stakeholders understand how an organization manages risks and opportunities around sustainability issues. The social dimension refers to an organization's relationships with stakeholders. In this study, the factors included in social dimension of ESG are evaluated, and their importance weights are determined. Intuitionistic fuzzy cognitive map is a suitable tool due to the presence of interrelationships among evaluation criteria, fuzziness, vagueness, and hesitation in data. The application is illustrated through a case study, which is conducted in a consulting firm that performs in Turkey.

Keywords: ESG sustainability, intuitionistic fuzzy cognitive map, hesitation

1. INTRODUCTION

While sustainable finance approaches are increasingly used by financial market participants, a number of challenges still undermine and hinder the efficient mobilisation of capital to support environmental, social and governance (ESG), and climate-related objectives [1]. ESG is a framework that helps stakeholders understand how an organization is managing risks and opportunities related to environmental, social, and governance criteria (sometimes called ESG factors). ESG is an acronym for Environmental, Social, and Governance. ESG takes the holistic view that sustainability extends beyond just environmental issues. While the term ESG is often used in the context of investing, stakeholders include not just the investment community but also customers, suppliers, and employees, all of whom are increasingly interested in how sustainable an organization's operations are.

Environmental factors refer to an organization's environmental impact(s) and risk management practices. These include direct and indirect greenhouse gas emissions, management's stewardship over natural resources, and the firm's overall resiliency against physical climate risks (like climate change, flooding, and fires).

The social pillar refers to an organization's relationships with stakeholders. Examples of factors that a firm may be measured against include Human Capital Management (HCM) metrics (like fair wages and employee engagement) but also an organization's impact on the communities in which it operates.

Corporate governance refers to how an organization is led and managed. ESG analysts will seek to understand better how leadership's incentives are aligned with stakeholder expectations, how shareholder rights are viewed and

* Corresponding author.

honored, and what types of internal controls exist to promote transparency and accountability on the part of leadership [2].

This work introduces an intuitionistic fuzzy cognitive map (IFCM) technique to determine the importance degrees of social factors of ESG sustainability. The presence of interrelationships among evaluation criteria, fuzziness, vagueness, and hesitation in data led us to employ IFCM methodology as an appropriate tool.

The remaining sections of the paper are organized as follows. Section 2 explains briefly intuitionistic fuzzy cognitive map methodology. The following section illustrates the application via a case study conducted in a consulting firm. Final section delineates conclusions and future research directions.

2. INTUITIONISTIC FUZZY COGNITIVE MAP TECHNIQUE

Intuitionistic fuzzy cognitive map (IFCM) technique includes intuitionistic fuzzy numbers into cognitive maps in order to determine the power of cause-and-effect relationships [3]. First, concept nodes and power of causal links among them are defined by obtaining experts' opinions. Second, the power of causal links is represented by intuitionistic fuzzy numbers that are associated with intuitionistic fuzzy scale. Hence, membership, non-membership, and hesitation values are identified. Finally, N x N weight matrix is formed by employing the information collected from the experts.

The following iterative formulation of IFCM is run until the system will be stabilized, in other words, all factor weights will converge [4]. In this way, the concepts' values are computed.

$$A_i^{(k+1)} = f\left(A_i^{(k)} + \sum_{\substack{j=1 \\ j\neq i}}^{N} A_j^{(k)} w_{ji}^{\mu} - A_j^{(k)} w_{ji}^{\pi})\right) \quad (1)$$

where $A_i^{(k)}$ is the value of concept Ci at kth iteration, w_{ji} is the weight of the connection from C_j to C_i, w_{ji}^{μ} and w_{ji}^{π} denote the weight matrices that show membership values and hesitation values of causal links, respectively, and f is a threshold function, which is considered as sigmoid function for this work.

3. CASE STUDY

This work presents an IFCM approach for evaluating social factors of ESG sustainability. The case study is conducted in a consulting firm performing in Turkey through three experts' opinions. Initially, factors that are determined by interviewing the project managers of the case company and Google search, are delineated in Table 1.

Table 1: Social factors of ESG sustainability

Label	Concept
C_1	Employee relations and diversity
C_2	Working conditions
C_3	Local communities
C_4	Health and safety
C_5	Conflict

The experts provide their opinions by reaching a consensus and they used the linguistic scale shown in Table 2.

Table 2: Linguistic Scale

Linguistic term	**Intuitionistic fuzzy number**
VH	<0.95,0.05>
H	<0.70,0.25>
M	<0.50,0.40>
L	<0.25,0.70>
VL	<0.05,0.95>

The linguistic data, membership values, non-membership values, and hesitation values for causal relationships, are given in Tables 3, 4, 5, and 6, respectively.

Table 3. Linguistic Data for Causal Relationships

	C_1	C_2	C_3	C_4	C_5
C_1	-	-	H	VL	VH
C_2	VH	-	M	VH	-
C_3	H	-	-	-	H
C_4	-	-	-	-	-
C_5	H	-	L	H	-

Table 4. Membership values

	C_1	C_2	C_3	C_4	C_5
C_1	0	0	0.7	0.05	0.95
C_2	0.95	0	0.5	0.95	0
C_3	0.7	0	0	0	0.7
C_4	0	0	0	0	0
C_5	0.7	0	0.25	0.7	0

Table 5. Non-membership values

	C_1	C_2	C_3	C_4	C_5
C_1	0	0	0.25	0.95	0.05
C_2	0.05	0	0.4	0.05	0
C_3	0.25	0	0	0	0.25
C_4	0	0	0	0	0
C_5	0.25	0	0.7	0.25	0

Table 6. Hesitation values

	C_1	C_2	C_3	C_4	C_5
C_1	0	0	0.05	0	0
C_2	0	0	0	0	1
C_3	0	0	0	1	0
C_4	0	0	0	0	1
C_5	0	0	0	0.05	0

IFCM technique is employed and importance weights are obtained by running the formulation (1) until it will be stabilized, and the values of concepts will remain same. FCMapper software is used for these operations. The concepts' values are given in Table 7.

Table 7: Importance weights of factors

Label	**Concept**	**Weight**
C_1	Employee relations and diversity	0.944554
C_2	Working conditions	0.659046
C_3	Local communities	0.886994
C_4	Health and safety	0.897384
C_5	Conflict	0.919672

4. CONCLUSIONS

To obtain the importance weights of social factors of ESG sustainability framework, evaluation criteria are determined through expert opinions and then algorithm of the work is reported by considering IFCM technique. Importance weights of concepts are assigned by applying IFCM methodology, employee relations and diversity is the most important factors however working conditions is the least important criterion. Future research will focus on proposing group decision making approaches for this evaluation.

Acknowledgements

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Mapping Approach for Evaluating Neuromarketing Technology Selection Criteria

Nazli GOKER[a*], Mehtap DURSUN [b]

[a] *Galatasaray University, Industrial Engineering Department, Ortakoy, Istanbul, Turkey, nagoker@gsu.edu.tr*
[b] *Galatasaray University, Industrial Engineering Department, Ortakoy, Istanbul, Turkey, mdursun@gsu.edu.tr*

Abstract

Neuromarketing, which utilizes neuroimaging technologies for marketing objectives, is represented as the application of neuroscientific methods for analyzing and understanding consumer behavior with regard to marketing initiatives. Medical diagnostic devices for brain imaging are used by marketers as neuromarketing technologies. This paper introduces an intuitionistic fuzzy cognitive map approach for determining importance degrees of neuromarketing technology evaluation criteria from the point of view of the participants. Intuitionistic fuzzy cognitive map is a suitable tool due to the presence of interrelationships among evaluation criteria, fuzziness, vagueness, and hesitation in data. The application is illustrated through a case study, which is conducted in a marketing firm that performs in Turkey.

Keywords: Neuromarketing, technology selection, intuitionistic fuzzy cognitive map, hesitation

1. INTRODUCTION

Initially, rapid advances in medical field led the neuroscientists to focus on neuroimaging by considering neuronal activity; however, marketing had not been aware of such advances and their potential benefits. Neuromarketing, being a research area, can be represented as the application of neuroscientific techniques in order to analyze and comprehend human behavior regarding marketing initiatives [1]. Recently, developments in technology and management motivated marketers and researchers to incorporate science into the marketing [2]. Nowadays, neuromarketing, which requires supplement research techniques, has been in the position of the use of neuroimaging methods for selling goods [1].

Neuromarketing, that makes use of neuroimaging technologies for marketing goals, is employed in many marketing research fields such as product attraction, advertising efficacy, brand recognition, fidelity to the brand, logo and media selection. There are a lot of global companies that incorporate neuroscientific techniques into market research such as Coca-Cola, Delta, Estée Lauder, Google, McDonald's, Carlsberg Beer, Microsoft, Procter & Gamble and Yahoo [2].

In order to match products with consumers, neuromarketing becomes more and more popular throughout the world for two reasons. First, neuroimaging methods may be cheaper and faster than other traditional marketing techniques. Second, the marketers can obtain hidden information which is unavailable via classical marketing methods. The former is seen to be impossible; however, there is evidence that the latter may provide the information about customer experience that is not obtainable through other marketing techniques. Another important property of neuromarketing

* Corresponding author.

is that the marketers can use it before the product comes together with consumers. In other words, neuromarketing methods can be applied for early product design [3].

In order to employ neuromarketing methods, companies utilize brain imaging techniques that can be called as "neuromarketing technologies" in this work. Throughout the medical literature, there are a lot of neuromarketing technologies namely fMRI (functional magnetic resonance imaging), EEG (electroencephalography), MEG (magnetoencephalography), TMS (transcranial magnetic stimulation), eye tracking, galvanic skin response, electrocardiography, electromyography, analysis of pupil dilation, blush, blinking, heartbeat, or breathing [3,4]. fMRI, EEG, MEG and TMS are defined as medical diagnostic devices, which are considered as the most frequently used neuromarketing technologies [2]. fMRI, which is a technique using an MRI scanner for measuring the blood oxygenation level-dependent signal, is the most widely used brain imaging technology in the world [2,3]. EEG utilizes electrodes that are placed on the head of a person to measure changes in the electrical area of the brain region underneath [3,5]. MEG, being an expensive version of EEG, is applied to measure the changes in the magnetic area induced by neuronal activity. TMS creates a magnetic field for inducing electrical currents in underlying neurons by using an iron core, which is placed on one's head [3].

This work introduces an intuitionistic fuzzy cognitive map (IFCM) technique to determine the importance degrees of neuromarketing technology evaluation factors. The presence of interrelationships among evaluation criteria, fuzziness, vagueness, and hesitation in data led us to employ IFCM methodology as an appropriate tool.

The remaining sections of the paper are organized as follows. Section 2 explains briefly intuitionistic fuzzy cognitive map methodology. The following section illustrates the application via a case study conducted in a marketing firm. Final section delineates conclusions and future research directions.

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The following iterative formulation of IFCM is run until the system will be stabilized, in other words, all factor weights will converge [7]. In this way, the concepts' values are computed.

$$A_i^{(k+1)} = f\left(A_i^{(k)} + \sum_{\substack{j=1 \\ j\neq i}}^{N} A_j^{(k)} w_{ji}^{\mu} - A_j^{(k)} w_{ji}^{\pi})\right) \quad (1)$$

where $A_i^{(k)}$ is the value of concept Ci at kth iteration, w_{ji} is the weight of the connection from C_j to C_i, w_{ji}^{μ} and w_{ji}^{π} denote the weight matrices that show membership values and hesitation values of causal links, respectively, and f is a threshold function, which is considered as sigmoid function for this work.

3. CASE STUDY

This work presents an IFCM approach for evaluating neuromarketing technology evaluation factors from the point of view of the participants. The case study is conducted in a marketing firm performing in Turkey through three experts' opinions. Initially, factors that are determined by interviewing the project managers of the case company, are delineated in Table 1.

Table 1: Evaluation factors of neuromarketing technology selection

Label	Concept
C_1	Complexity
C_2	Reliability
C_3	Customer experience
C_4	Suitability
C_5	Willing of participants

The experts provide their opinions by reaching a consensus and they used the linguistic scale shown in Table 2.

Table 2: Linguistic Scale

Linguistic term	Intuitionistic fuzzy number
VH	<0.95,0.05>
H	<0.70,0.25>
M	<0.50,0.40>
L	<0.25,0.70>
VL	<0.05,0.95>

The linguistic data, membership values, non-membership values, and hesitation values for causal relationships, are given in Tables 3, 4, 5, and 6, respectively.

Table 3. Linguistic Data for Causal Relationships

	C_1	C_2	C_3	C_4	C_5
C_1	-	-	H	-	VH
C_2	-	-	VL	-	VH
C_3	-	-	-	-	H
C_4	-	L	-	-	-
C_5	-	M	H	-	-

Table 4. Membership values

	C_1	C_2	C_3	C_4	C_5
C_1	0	0	0.7	0	0.95
C_2	0	0	0.05	0	0.95
C_3	0	0	0	0	0.7
C_4	0	0.25	0	0	0
C_5	0	0.5	0.7	0	0

Table 5. Non-membership values

	C_1	C_2	C_3	C_4	C_5
C_1	0	0	0.25	0	0.05
C_2	0	0	0.95	0	0.05
C_3	0	0	0	0	0.25
C_4	0	0.7	0	0	0
C_5	0	0.4	0.25	0	0

Table 6. Hesitation values

	C_1	C_2	C_3	C_4	C_5
C_1	0	0	0.05	1	0
C_2	1	0	0	0	0
C_3	0	0	0	1	0
C_4	0	0	0	0	1
C_5	0	0	0	1	0

IFCM technique is employed and importance weights are obtained by running the formulation (1) until it will be stabilized, and the values of concepts will remain same. FCMapper software is used for these operations. The concepts' values are given in Table 7.

Table 7: Importance weights of factors

Label	**Concept**	**Weight**
C_1	Complexity	0.659046
C_2	Reliability	0.804821
C_3	Customer experience	0.877876
C_4	Suitability	0.659046
C_5	Willing of participants	0.894245

4. CONCLUSIONS

To obtain the importance weights of neuromarketing technology evaluation factors, evaluation criteria are determined through expert opinions and then algorithm of the work is reported by considering IFCM technique. Importance weights of concepts are assigned by applying IFCM methodology, willing of participants is the most

important factors however complexity and suitability are the least important criteria. Future research will focus on proposing group decision making approaches for this evaluation.

Acknowledgements

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The Economic Connection between Sport and Sports Events with Tourism: Development and Opportunity

Ivan ANASTASOVSKI[a*]

[a] *University St. Cyril and Methodius Faculty of Physical Education, Sport and Health, Dimche Mircev 3, Skopje, Macedonia, email: prof.anastasovski@gmail.com*

Abstract

The paper explores the economic connection between theme of active sports tourism and sports events those in contact with nature or classic tourism and their development and opportunity for each society. Sports tourism generates between 12 and 15 million international arrivals (visitors) each year, with a growth forecast of around 6% per year in the short term. It represents 10% of the world tourism industry, with a turnover of around 700 billion euros. This paper needs to shows that it is a rapidly developing sectors because it is less expensive than other tourism segments, produces more economic impact for the host territory and is more attentive to respect for the environment. Also here is development, the profile of sports tourists, the role of communication and host branding, the contamination between sports tourism and other forms of tourism, and the prospects for future development of this sector. With this paper will be explain the significance of sports tourism and sports events in response to a recreational or competitive need, but we must emphasize that they also appear as a need for the development of tourism. Aside from the economic benefits, they have positive impact on cross-cultural and socio somatic awareness on humanity and environment. Regardless of whether it is the recreational (non-competitive), competitive and classic tourist offer in the broader sense of its meaning, it includes an offer that serves the needs of visitors, participants but also the organizers of sports events from an economic, social or sports aspect. The connections between sports and sports events on the one hand and classical tourism on the other hand, have two explanations that are related to visitors (as an economic potential): the internal mood to be part of the event (although maybe not sports supporters - a trend) and collective action or a reaction to spending one's own finances as part of the tourist environment manifested by visitors to sports events. The conclusion of this expert story is that the development and opportunities of a society from an economic, cultural, social or sports point of view will be positive if great importance is given to the connections between sport, sports tourism and sports events and classical tourism.

Keywords: Sports tourism, sport event, tourism, Society, visitors, environment.

1. INTRODUCTION

1.1. Sports tourism main characteristic

Tourism and sports are two social phenomena in the 21st century that mobilize millions of people the world over. They are sectors that complement each other and share common goals such as forging understanding and closer relations between peoples of different cultures and lifestyles; and contributing to the promotion of peace among

* Corresponding author.

nations. Together, tourism and sport also represent the most powerful economic driving force of society today with enormous potential to generate a very wide-range of economic spin-offs.

According authors Alexandris and cor., sport tourism is one of the fastest-growing segments in the tourism industry[1]. Millions of tourists are interested in sport and leisure activities during their travel regardless of whether sports are the main objective of the trip or not (Alexandris, K.; Girginov, V.; Scheerder, J.J, 2022).

The paper explores the economic connection between theme of active sports tourism and sports events those in contact with nature or classic tourism and their development and opportunity for each society. Sports tourism generates between 12 and 15 million international arrivals (visitors) each year, with a growth forecast of around 6% per year in the short term. It represents 10% of the world tourism industry, with a turnover of around 700 billion euros.

Tourism and sports are interrelated and complementary. Sports – as a professional, amateur or leisure activity – involves a considerable amount of traveling to play and compete in different destinations and countries. Major sporting events, such as the Olympic Games, football and rugby championships have become powerful tourism attractions in themselves – making a very positive contribution to the tourism image of the host destination.

Sports tourism is a very diverse market. Sports events fans is a great potential for society which is applicant for sports event, regardless of whether it is individual or collective sports events. Sports tourism is a very diverse market. Before the Covid19 pandemic, sports tourism was one of the largest growth markets, after they pandemic restrictions were abolished, we have better situation with traveling fans for sports and the same time tourism's reason.

1.2. Impact of sports events & tourism sustainable development on society's

Sports events are emerging in response to a recreational or competitive need, but we must emphasize that they also appear as a need for the development of tourism in one society. They have positive impact on the psychic functions of man. Recreational-tourism offer in the broadest sense includes an offer that serves to meet the needs of visitors, participants and organizers of sports events. Sports events are the most important political event for a country that pretends to be a host country and at the same time provides a huge opportunity to promote social, traditional and cultural values of society.

Sports events represent a creative and complex social system that has sports, recreational and entertainment character. Sports events take place according to a defined, pre-prepared program, and they also have tourist effects and have socio-economic significance for the place and region of their maintenance.

According to (World Tourism Organization 2013), at an economic level, sport tourism contributes to sustainable development goals (promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all) by creating many opportunities for new business activities that will create the need for many new jobs[2]. Furthermore, sport tourism contributes to sustainable development goals (ensure healthy lives and promote wellbeing for all at all ages).

As suggested by (Tomino, A.C., Perić, M., Wise, N. 2020:12) to achieve future sustainable sports events, residents should be deeply involved in the event's planning and implementation, an issue that can trigger further interest in bottom-up investment in the sustainability of events (permanent jobs as a motivation or supporting stable and sustainable planning)[3].

1.3. Theoretical background

a. Sports events (manifestation)

The theoretical basis of the term event comes from the term *manifestare* which means *clear display* which in the essence of the word it refers to:

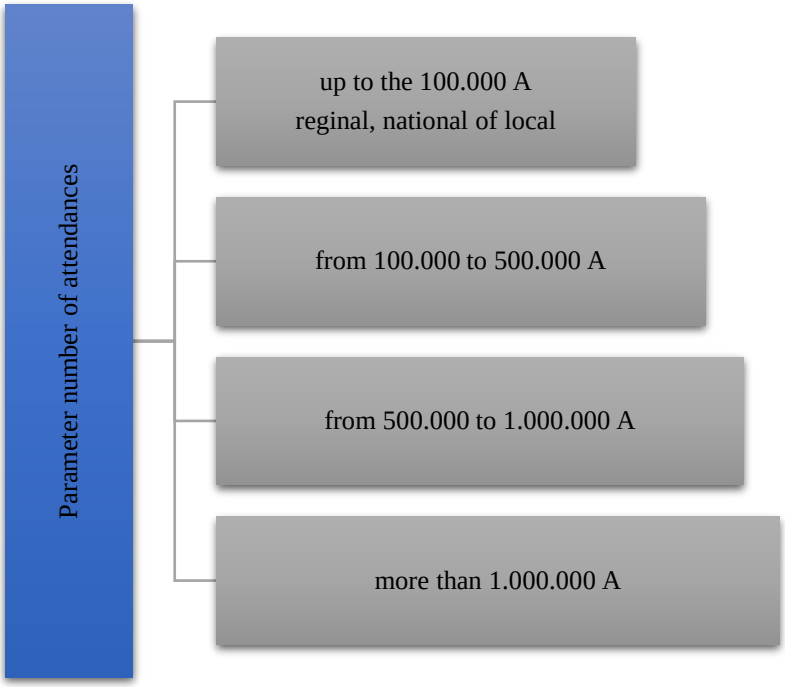
a. visible (external) display of some internal state, conclusion, mood (life, psychic manifestations - manifestations of joy, fear and rage) and
b. (usually in plural manifestations), a collective action in which a crowd shows with an exclamation, etc. expresses his delight on the occasion of an event, approves of a decision, expresses honor and sympathy to a person.

[1] Alexandris, K.; Girginov, V.; Scheerder, J.J. (2022). Running Events: Policies, Marketing and Impacts; London, UK: Routledge, 2022
[2] World Tourism Organization. (2013). Sport Tourism and the Sustainable Development Goals (SDGs); Madrid, Spain, UNWTO.
[3] Tomino, A.C., Perić, M., Wise, N. (2020). Assessing and Considering the Wider Impacts of Sport-Tourism Events: A Research Agenda Review of Sustainability and Strategic Planning Elements. *Sustainability*, *12*, 4473

In doctoral thesis in 2010 I define sports event as: *form of public event that stimulates the behavior of many thousands of people over a period of time*[4] (Anastasovski, I. 2010:60). The author Kasper has contributed a lot to the definition of sports events (Kaspar, C. 1987: 19-21) who at the 37th Congress of Scientific Experts in Tourism (AIESEST) held in Calgary, Canada, in which he also takes the two conditions as parameters (economics) for the realization of sports events, and that:

a. According to *the visitors* of sports events – parameter number of attendances (see below, Picture1).
b. According to *financial benefits* (Schwartz, P.J. analysis FORBES)[5] or scope of the economic assets of sports events – parameter amount of money in dollars (see below, Picture 2)
c. According *the location/s* of the sports events – parameter the attraction of the place.[6]
    1. If it is seen from the aspect of attractiveness of the location of the sports event sports fans prefer locations with sun and more places to have fun.
    2. As country sports fans prefer Spain, Italy, Portugal, USA, Australia but also and England.

Picture 1. Sports events defined according the visitors – parameter numbers of attendances



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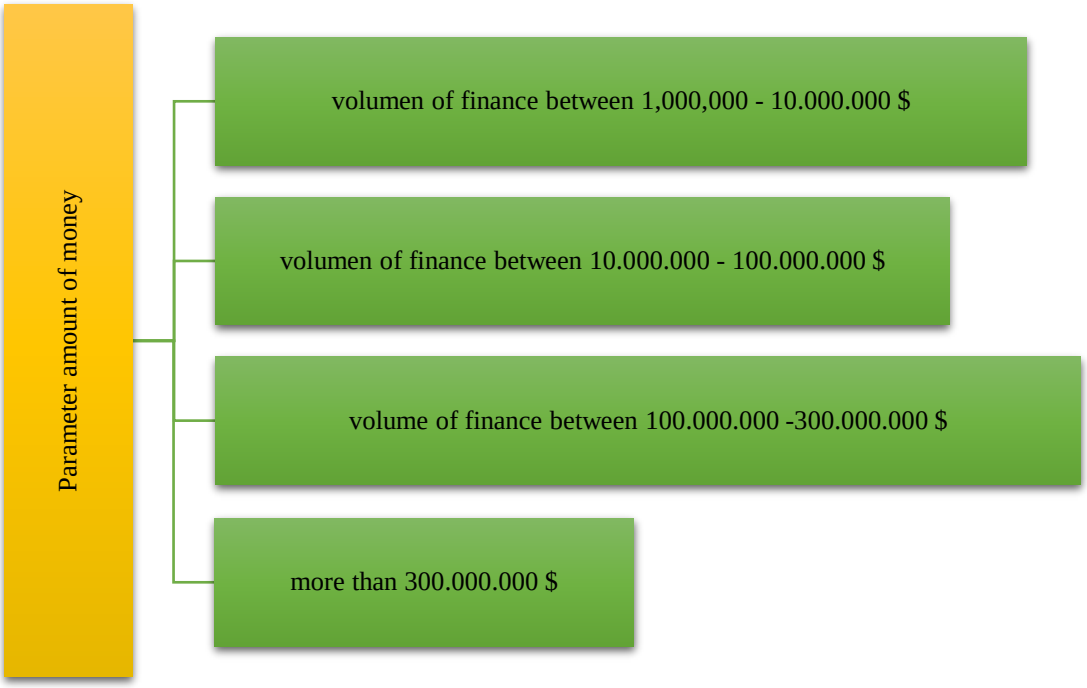
Picture 2. Sports events defined according the financials benefits – parameter amount of money



According the internet page bookjelly.com in article "The ten richest sporting events in the world" they have made a list of the 10 richest sports events in sports according to this analyze they use "Total Prize Money" filter to draw this list together (see below, Table 1).

Just for clarity:

a. figures in the middle indicate the "Prize pool" for the whole tournament, and
b. all figures are for the most recently held tournaments.

Table 1. List of the top 10 riches sports events in the world by www.bookjelly

No.	Sport event	Prize pool	Legend
10	**US Open Golf**	**$17.50 million**	The US Open Golf tournament pips the British Open this time for the 5th year in a row. The prize money for the British Open moved up to $14 million – a raise of almost 22% over the previous year, yet it wasn't enough to surpass the US Open
9	**Dubai World Cup**	**$30.50 million**	Organized by the Dubai Racing Club, Dubai World Cup is the richest race meeting on the planet. The total prize pool of $30.5 million was spread across 9 races. The grand prize of the night carried a staggering $12 million payday
8	**FedEx Cop 2022**	**$57.90 million**	The PGA tour championship culminates in the FedEx playoffs competition every year since 2007 Once the tour is over, the top 125 players get into a progressive, four-phase elimination competition – The Northern Trust championship (125 players), the Dell Technologies Championship (100 players), and the BMW Championship (70 players)
7	**US Open 2022**	**$60 million**	Contrary to popular perception, the Wimbledon tournament held in England every year is not the most remunerative one. The US open pips its English counterpart in the world's richest sports events.
6	**Daytona 500**	**$100 million**	Despite slashing ticket prices for 4,000 seats by 73% last year, the Great American Race still generates close to $30 million in gate and infield parking receipts from stock car fans

5	**The World Series Championship**	**$107 million**	The World Series is the annual championship of MLB (Major League Baseball). Don't be fooled by the name though. Despite being called the World Series, the tournament is restricted to North America and is played amongst all-American teams
4	**FIFA World Cup 2022**	**$440 million**	FIFA World Cup secures the place of the most spectacular, hi-decibel event in the world of sports. The buzz generated around the event is unparalleled. The first World Cup was played in 1930 and ever since, it has been held after every 4 years, of course, barring a few exceptions in between
3	**UEFA Europa League 2018/19**	**$561 million**	Europa League for years has served the second fiddle to the much bigger Champions League competition. Every year in May, with the respective conclusion of seasons in various leagues, fans get to know where their favorite clubs would play
2	**Formula One 2022**	**$900 million**	Scuderia Ferrari, apparently, is one of the biggest beneficiaries of this formula Despite the fact tha it has't won a single championship in the last decade, Ferrari tops the earnings chart every year. It receives a special cut from the revenues for its long-term contribution to the sport. The 2022 cut was being pegged at $117 million
1	**UEFA Champion League 2021/22**	**$2.14 billion**	The big one. The insurmountable. The richest sporting event. The glamorous parade of the best football clubs on planet Earth. UEFA's elite tournament brings together 32 of the best football clubs in nine months long competition Unlike other competitions, the mathematics behind the prize money is a little complex. That is unless you are an ardent football fan, you know

b. Tourism

Tourism, it represents the act and process of spending time away from home in pursuit of recreation, relaxation, and pleasure, while making use of the commercial provision of services.

Tourism is a form of travel, and it is fair to say that all tourists are also travellers. However, tourism only occurs for specific purposes, such as leisure or business, and must meet previously explained criteria. Therefore, it is possible to travel between locations and fail to meet the criteria where you would be considered a tourist.

c. Sports truism

Many people in the world wonder what sports tourism is? Simply definition for sports truism is "Sports tourism is traveling from one region, country, state, etc. to another in order to watch a sports competition or game". As defined by (Gibson, H.J.,1998:49), sport tourism[7] is a "leisure-based travel that takes individuals temporarily outside of their home communities to participate and/or watch physical activities or to venerate attractions associated with physical activities". According emphasised on (Zauhar, J. 2004:13), "the points of contact between sport and tourism have increased dramatically – the mutual benefits for both are quite perceptible and the relationships very compatible[8]. In fact, the term 'sports tourism' has been coined to better understand the use of sport as a touristic endeavour".

While sports tourism has not always been extremely popular, during the recent decade the amount of people attending out of area sporting events has drastically increased. People are now traveling far and wide just to attend their favourite events, and it is no wonder as to what has encouraged the sudden spike in popularity.

1.4. The economic connection between sport and sports events with tourism: development and opportunity

We will always ask himself *What is main economic aspect for sports events and tourism for each country?* Maybe hotels or infrastructure or sports facilities or historical culture of country they have some impact but for me main point is *traveling fans/supporters (Tf/s).*

7 Gibson, H. J. (1998). Sport tourism: A critical analysis of research. Sport Management Review, 1, 45-76.
8 Zauhar, J. (2004). Historical perspectives of sports tourism. Journal of Sport & Tourism, 9(1), 5-101.

No clear definition for this what is Tf/s, only theoretical view for this term. *Gareth Southgate* as England national team manager will be saying: *"The fans play an important role in helping the team to perform. Wherever we turn up, we know there will be supporters with us every step of the way.*

Although there are not many stories and articles about traveling fans but according to the writing of James W. from 2020 year who bases his view on research on the National Sporting Goods Association in 2009 year, he indicates that that there are more economic parameters through which they are measured starting from: traveling cost of supporters (plane, train, cars, bus) addition to ticket sales, the cost of attending the venue adds (hotels, apartments etc.) to as well as the daily consumption of each traveling fan so up to the revenue seen in the sports industry. Also traveling fans spend additional money on quality parking when attending the venue in addition to purchases made at concession stands. The costs increase significantly when fans visit from another area, with money being spent on transportation, lodging and other areas typical to a vacation stay.

Generally, according this research the estimate is the average amount spent annually by sport fans is $725. Analyzing young professionals alone, the amount rises to $1,143, and for the wealthy it averages $1,544.

According author (Volić, I. 2003) sports tourism[9] or traveling for participating in sport and traveling for watching the sport. Sports tourism is a temporary movement of people outside their homes and jobs, which includes experiences that are not of everyday life. Sports tourism is the experience of physical activity related to the experience at the venue of the event.

A large part of the participants in the sports events are tourists and people who just want to travel to get to know new places and new challenges through sport and sports events. Sports events have the potential to promote social values as well as the natural beauty of a country that are organized event. Therefore, sports events and tourism have their own connection, and they have a positive benefit for the state organizers of such events. The impact of the sports events of the recreation and tourists is reflected in many aspects, not only from attracting large number of visitors and participants, but also to direct financial questions for the society.

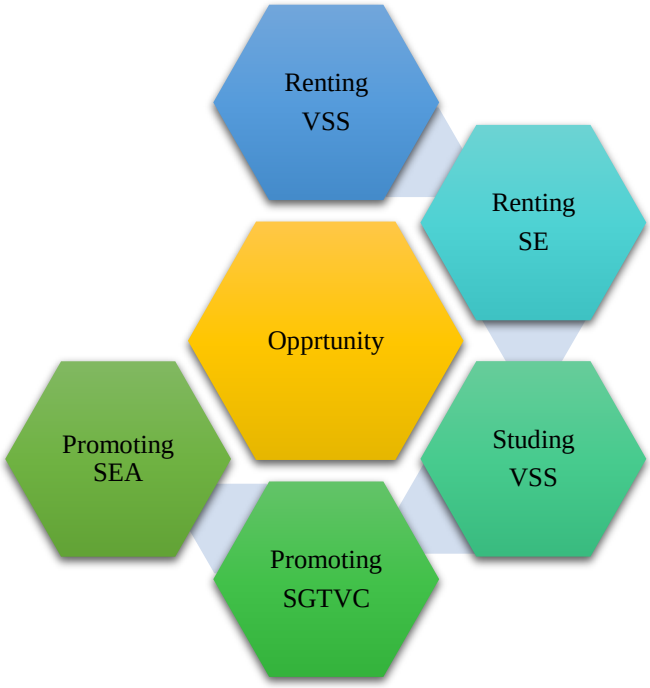
Therefore, interest in this paper is directed at the economic connection between sport, sports events and tourism but also for financial benefits for society's and their reflection over the tourism in a society, through which the tourists appeared as active participants in various sports events, as well as the role of sports experts in this field.

As an opportunity to improve the economic situation of the country (see below, Picture 3), the organizer of the sports event according (Bartoluci, M. 2003:23).is that the sport and tourism programs[10] that appear as an integral part of the tourist offer including are:

1. Renting various sports facilities (RVSF).
2. Renting sports equipment (RSE).
3. Studying various sports skills (SVSS).
4. Promoting of sports games, tournaments and various competitions (PSGTVC).
5. Promoting of sports-entertaining attractions (PSEA).

[9] Volić Ivana (2009). Sport and tourism, Internet book for teaching, Novi Sad: Faculty for sport and tourism.
[10] Bartoluci, M. (2003). Economic and management of sport, Zagreb: Informatory. pp. 23.

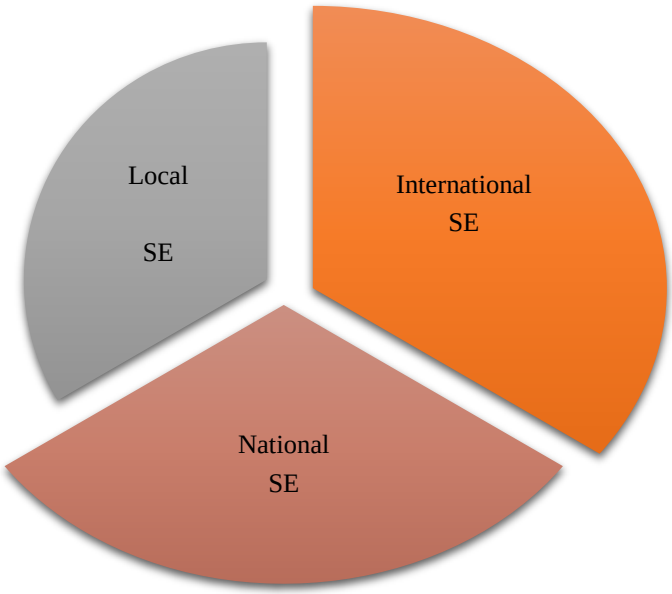
Picture 3. Opportunity to improve the economic situation of the country by Bertoluci



Here with this title made an attempt to classify sports events according to the organization level/level of significance of the sports event (see below, Picture 4), in such a context present a division of sports events categorized according the above-mentioned criteria, and that:

a. **Level 1 -** *Local Sports Events, (LSE).*
b. **Level 2** - *National Sports Events, (NSE).*
c. **Level 3** - *International Sports Events, (ISE).*

Picture 4. Classification of sport event according organization level/level of significance of the sports events



LSE are of particular importance to the locals and the promotion of their local values and traditions. According to the claims on (Kim et al. 2018:1196) pointed out in their research[11], "a destination brand with strong equity leads to greater commitment in the form of loyalty and willingness to revisit the destination". Not only for its image developed by sports tourists but also it is critical to prepare the destinations (i.e., cities) for sustainable growth. The specific following suggestions can be emphasized for sport cities:

a. Accessibility (e.g., transportation and highway access)
b. Basic sports facilities
c. Hotel and lodging facilities
d. Local government (city) involvement

In addition, it is strongly recommended to partnership with educational institutions to maximize the outcomes as well as sustainable development for cities (i.e., destination).

NSE are of great importance to the host organizer and the national values of a society, these are mostly events organized by a country and only members of that country participate. This type of sports events, it is exclusively aimed at strengthening national feelings and interests among supporters. the benefits from sports events of a national character are only in the interest of the state that organizes it, and the promotion of its cultural and traditional values.

ISE means any international sporting event recognized by a National Sports Federation or by an International Sports Federation or means an international team or individual sporting event governed by an international sports federation or sport's governing body, including but not limited to sporting events governed by the international Olympic committee and the international sport federation. Also, ISE can be regional (with participants from the region concerned), then continental (where participants from one continent are present) and world events where participants from all continents. In the recent years, a very popular activity especially for economic reasons organizing a sports event in two or more countries as a motive for the development of tourism which directs traveling fans to be on the move from country to country where their national team is playing, and thereby spending funds to support sports and the economy of the host country. Benefits from this type of sports events have more states and international federations and their economy.

11 Kim, Y. H., Li, H., & Nauright, J. (2018). A destination development by building a brand image and sport event tourism: a case of Sport City USA. Sport in Society, 21(8), 1196-1203.

2. CONCLUSION

From all of the above, we can conclude that sports events are not just sports character, also they are a big promoter of tourism from more aspects and they are: economic, political social and cultural aspect who has a great important for countries, also for cities, and people.

Furthermore, sport and sports events give the opportunity to promote the recreational tourist facilities of the country organizer, in case it does not have any other significant natural goods or natural attractions. Also, тhey offer an opportunity to enrich the recreational and touristic stay as it benefits a modern society.

Sport and sports events as tourism opportunity are a good base and motive for recreational and tourist trips to people around the world. However, it must be emphasized that recreational and tourist needs of the visitors are different and depend on the subjective tastes of the visitors at the sport event. However, it must be clearly emphasized in concluding that traveling fans and visitors to sports events are a great economic potential for national economies through the willingness and passion to spend their own finances to support national sports teams and clubs wherever they played in the world.

Accordingly, careful with drawing conclusions and from this reason, we must be I can conclude that through the organization of sports events, we can achieve two effects from an economic, sociological and cultural aspect that effect can be in two directions, and that

a. Positive effect
b. Negative effect

Positive effects can primarily be reflected in the breadth of sports events contributing to social and cultural values in developing the region. From the social effect primarily to the improvement of the quality of the personal relations of the visitors. They have an impact on the positive development of the environment health and hygiene conditions, as well as the socialization of people. But they also represent a good opportunity for starting a cultural development, encouraging the cultural activities of the region, as well as developing the social and cultural views of people.

Negative effects unlike the positive effects, can have dire consequences. The negative effects may reflect on the image of the host country's, which can be expressed by various ethnic outbursts, nationalist slogans, intolerance, humiliating and booing of the national anthems and the most terrible thing that can be the loss of human lives. It is for these reasons that the organizer has a great duty and responsibility for the entire organization.

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Indicators to Evaluate Sustainable Practices in Agribusiness: Bibliometric Study Based on SCOPUS Database

Sónia MONTEIRO[a*], Patrícia QUESADO[b], Verónica RIBEIRO[c], Maria Eduarda FERNANDES[d], Teresa EUGÉNIO[e], João COSTA[f]

[a] *CICF - Research Centre on Accounting and Taxation, Polytechnic Institute of Cávado and Ave, Portugal, smonteiro@ipca.pt*
[b] *CICF - Research Centre on Accounting and Taxation, Polytechnic Institute of Cávado and Ave, Portugal, pquesado@ipca.pt*
[c] *CICF - Research Centre on Accounting and Taxation, Polytechnic Institute of Cávado and Ave, Portugal, veronica@ipca.pt*
[d] *ESTG - CARME – Centro de Investigação Aplicada em Gestão e Economia, Polytechnique Institute of Leiria, Portugal, eduarda.fernandes@ipleiria.pt*
[e] *ESTG - CARME – Centro de Investigação Aplicada em Gestão e Economia, Polytechnique Institute of Leiria, Portugal, teresa.eugenio@ipleiria.pt*
[f] *CICF - Research Centre on Accounting and Taxation, Polytechnic Institute of Cávado and Ave, Portugal, joaommrc@gmail.com*

Abstract

Purpose: As global concerns for sustainability matters have gained attention for businesses, industries and economies, including agribusiness, the need to investigate the indicators that could evaluate the sustainable performance it this sector has also risen. The aim of this paper is to analyze the scientific production in the last decade (2011-2022) related to sustainable indicators (environmental, economic, social and ESG (Environmental, Social and Governance) in agribusiness.
Design/methodology/approach: A bibliometric study based on articles from Scopus database was carried out. Afterwards, the most cited articles, journals and countries were analyzed, as well as a thematic analysis of the keywords. Word maps, trend topics and thematic maps were carried out, and also clustering analysis.
Findings: Results indicate that research on sustainable indicators of agribusiness has increased over time. In last years, the number of scientific papers on these topics has been increasing, probably associated with the approval of the United Nations 2030 Agenda, in 2015. Italy is the country with most publications, the highest number of citations, and with the largest collaboration network. Most papers are published in 2 journals of higher impact. LCA (Life Cycle Assessment) is cited as the most usual method to assess the impact of business. Regarding the indicators to evaluate the sustainability of agribusiness, there is a greater predominance of environmental indicators compared to economic and social indicators. Clustering analysis show that the clusters 2 "environmental indicators" and 8 "LCA" have a greater impact and centrality.
Research limitations– The study is limited in scope to SCOPUS database. Further research should include Web of Science (WOS) platform.

Keywords: Sustainability, Indicators, Agribusiness, Bibliometric Study

* Corresponding author.

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Possible the Evolution of Corporate Reputation Management in Strategic Management Logistics Market Estimating the Pandemic Situation

Aleksandr POLUSIN[a*]

[a] *Vilnius tech, Sauletekio al.9, Business management faculty, Vilnius, Lithuania*

Abstract

Company reputation serves as a signal for the underlying quality of a firm's products and services; the payment of lower prices in its purchases due to lower contracting and monitoring costs; attracting more qualified people in the labor market because of the association of good corporate reputation with high self-esteem; greater loyalty from employees because employees prefer working for high-reputation firms; greater loyalty from customers because customers value associations and transactions with high-reputation firms [39]. The issue of corporate reputation management in the time of accelerated digitization has been a subject of research by academics and practitioners for more than a decade. The study aim was to provide insight into the issue of reputation management in the Internet environment during the time of the global pandemic.

Keywords: Value chain, corporate reputation, logistics, value, market, industry, economics.

1. INTRODUCTION

In terms of corporate reputation, the literature offers a wide range of views, from interpretational formalized views to views of an almost informal nature. In general, all of these views agree that reputation as a business asset is an extremely fragile element [35], even if the issue of development and management of a company's intangible assets is relatively well - researched. We often encounter a relative content vacuum in the professional literature in terms of corporate reputation management and development, especially when it comes to its development in the virtual environment of the Internet [44]. Back to the very essence of the concept of corporate reputation from the perspective of the Internet (often referred to as online reputation or virtual reputation), it is nothing other than reputational issues in the Internet environment; at the same time, we could also call this statement the simplest definition of the term. We assume that the advent of accelerated digitization in the late 1990s has largely redefined the approaches used to manage this extremely fragile business asset. Traditional communication channels have allowed relatively considerable control over the flow of information content through a series of obstacles and restrictions, thus creating a highly closed ecosystem of the form: content media-target audiences [26]. With the integration of the Internet into the daily lives of individuals, the market began to change gradually [10], and the regulated form of the media market began to be deregulated. Although Internet version 1.0 offered only static pages, in any case, their content no longer required lengthy approval by the editorial boards of media houses or the boards

* Corresponding author.

of companies. The power of the individual and the form of one-to-many communication [26] has become a phenomenon at the onset of the new millennium. The digital market is constantly evolving [19; 24; 50]. While the traditional media market of the late 20th century used relatively stable patterns of marketing communication, valid for almost a quarter of a century, the digital market is undergoing continuous evolution. The variables that need to be considered when creating a media strategy are multiplied by the arrival of new communication platforms to an almost unquantifiable extent. Awareness of this fact was a key point for the further direction of our research. The issue of managing corporate reputation in such a highly turbulent environment is a relatively large challenge for marketing managers, but what happens if the market is suddenly exposed to a phenomenon known as the black swan. This question arose at the beginning of our research, the results of which are described in this study. The second decade of the 21st century could be called a decade of accelerated digitization [43; 25]. Businesses of all sizes have moved much of their identities to the online environment [40]. Social networks, in our case mainly the social network facebook, represent the places where companies moved their presence after the end of the age of websites [5, 47] Communities participated in the development of brands or products. Both sides of the market maximized their benefits resulting from intensive and targeted business-to-consumer communication, with appropriate frequency and nature of the interactions. The ecosystem showed signs of continuous development. At the end of the second decade of the new century, a black swan phenomenon appeared on the market. In its initial phase, it had the form of an unknown respiratory disease, first reported in the Chinese city of Wuhan (World Health Organization 2020). The disease caused by the coronavirus SARS-CoV-2 was named COVID-19, and at the beginning of 2020, it resulted in a global pandemic of unprecedented dimensions [49]. The onset of the pandemic was drastic [32, 13, 14]. The governments of the affected countries responded to this previously unknown disease with the closure of their economies. Many efforts to slow down the spread of the pandemic were radical in many cases [16, 29]. Millions of people found themselves in forced isolation, with the exceptions often being the physical commuting of people belonging to a country's critical infrastructure [30,31].. The COVID-19 pandemic was a significant global determinant of change, with a pattern of behavior across the global market showing a high degree of similarity [7].. If the second decade of the new century was in the spirit of accelerated digitization, the beginning of the third decade was characterized by almost complete digitization of most human interactions with the outside world [1,2]. From the physical perspective, social distancing meant full socialization for social media, which thus fulfilled their main essence, although as researchers, we do not think that their creators envisaged such a scenario. The digital infrastructure has undergone a major stress test [30,31]. The opportunities and threats mentioned in the introduction of our study have taken on a whole new dimension in this highly nonstandard environment [45, 31]. At this point, as researchers, we followed up on the topic of the new rules of marketing communication in the context of digitization and the Internet, which we supplemented with the issue of corporate reputation management. The synthesis of these topics led to the initial research question of the presented study, namely: "How can a global pandemic affect the corporate reputation of companies?". By extrapolating this question, we determined two key points in the problem. We identified critical points or neuralgic points of the issue of corporate reputation management in the online environment through (i) the distribution flow and (ii) the communication flow. The aim of the pilot study in 2020 [36] on which our empirical investigation in the current research was based was to describe how selected companies of national importance dealt with reputational risks arising from congested logistics infrastructure. A good corporate reputation is ''a top-level factor for achieving sustained competitive advantage for the organization'' [41] to bring about benefits of demanding a higher price premium for company offerings. The concept of corporate reputation has attracted the attention of companies and scholars during the past few years [11] argues that the subject of corporate reputation used hardly made a list of subjects for top management before 1997. He adds that with the presence of several driving forces like people's hunger for information or economic competition, the significance of corporate reputation is changing rapidly [11]. Despite the increasing momentum of the corporate reputation concept, [3] argues that the commonly agreed definition is lacking. In early literature, [21] argued that corporate reputations remained relatively understudied; they attributed this lack of a systematic attention to corporate reputation to the diversity of relevant academic literature. In their research,[21] analyzed the diversity of academic disciplines that actively contribute to knowledge in this area, whether grounded in strategic management, organization theory, economics, marketing, communications, accounting, or finance.

Aim of research

The study aims to prove the prominent role of corporate reputation in value chain management in the Asian market.

Purpose of research
To create a scientific theory of China's corporate reputation in value chain management in China's logistics market

Tasks of research
1. Scientific theoretical literature analysis
2. Scientific empirical observation creation

Object of research
Corporate Reputation in Value Chain Management on China Logistics Market

Basic hypothesis
Corporate reputation plays a prominent role in value chain management on China logistics market.

Methods of research: comparative scientific literature, comparative scientific observation

Methods and methodology
This study aimed to provide insight into the issue of reputation management the environment during the time of the global pandemic by comparing two event horizons of the pandemic. The first was represented by the previously unprecedented first closure of the economy at the onset of the pandemic when the first of the data sets was collected on the theoretical and empirical parts. At the same time, we wanted to quantify the degree of reputation damage or the reputation profit of companies over time.

1.1.The basis of the theory of value in economics

The history of economic thought can be studied for many purposes. One may trace the effects of contemporary economic and social conditions on economic theory or rather more bravely-the effects of economic theories on economic and social developments. One may study the history to find the original discoverers of theories, spurred on by the dream of new approaches or one may compare the economics of the great economists with that of the rank and file, as a contribution to the structure and process of intellectual change. Or one may, and most often does, simply set forth the major steps in the development of a branch of economic theory, hoping that it can be justified by its contribution to the understanding of modern economics. The word value, it is to be observed, has two different meanings, and sometimes expresses the utility of some particular object, and sometimes the power of purchasing other goods which the possession of that object conveys. The one may be called "value in use"; the other, "value in exchange." The things which have the greatest value in use have frequently little or no value in exchange; and on the contrary, those which have the greatest value in exchange have frequently little or no value in use. The objective classical theory of value dates from the mid - to the late seventeenth century, reflecting increased interest in the production of commodities and reduced emphasis on the circumstances of their exchange. It was the cornerstone of classical political economy [12, 34]. While China is home to the world's oldest and most continuous culture, it has also been subject to massive institutional changes since the nationwide establishment of the Communist regime in 1949. It is indicative that [27] chose to subtitle their review of the field 'The Impact of Societal Culture on Organizations around the Globe''. Even before [28] seminal work, international studies of organizations generally regarded culture as the key explanatory factor for cross-national differences, as reviews such as [38] make clear. Key institutions are the state, the legal system, the financial system, and the family. In turn the norms and rules of such systems impact important corporate and managerial behavior. It has to be admitted that although the institutional perspective draws on a long sociological tradition, there is still not much agreement about, or understanding of, the processes whereby institutions are formed and in turn impact on organizations [46]. There is, however, more consensus about the potential analytical power that the perspective offers. In China, for example, the foundation of Chinese respect for hierarchy and the family social collective is based upon the relational norms expounded by Confucius and legal codes such as those developed during the Tang Dynasty 2 [17]. This institutionalized relational logic has shaped a society whose transactional order rests on the social obligation to the higher authority and to the family rather than on rules oriented to protecting the individual. Chinese capitalism is seen to be intrinsically different from Western capitalism because of this contrast in institutional framing over a long period time [18, 48]. The hierarchical and collective orientation it has produced has become today commonly regarded as an inherent characteristic of Chinese culture. As 'same cultures, different systems examples like Mainland China and Hong Kong illustrate, the impact of institutional differences is sufficient for Hong Kong managers to regard managing operations in the Mainland as problematic [9].

1.2. Divergent perception of value in Chinese vs. European markets

One of the most striking features in world economic history is the divergence in relative living standards and productivity levels that emerged in the late 18th century with the onset of the Industrial Revolution. Many economists believe that the break from millennium of economic stagnation to modern growth is closely related to the availability of market-supporting institutions and the widespread presence of markets for economic transactions. Efficient markets permit the gains from the specialization of labor and increasing returns to be realized. In addition, free markets are also a key channel that permits innovations to be transformed into productivity and output growth and to find their best use, creating gains not only from static efficiency but also from a self-regenerating process of innovation and invention [4]. Empirical studies of contemporary cross-sectional growth seem to confirm that a country's stance towards openness is positively correlated with subsequent growth [23]. According to Douglas North and Robert Paul Thomas, the west succeeded in overcoming the institutional blockages, weak property rights, and other barriers that caused economies throughout history to become lodged in places where incentives could not flow towards specialization and division of labor (North ant Thomas, 1973). The last three decades also saw a transformation from a command-based economy to a more decentralized and market-based system. The priority accorded to industry stunted services development—particularly in productivity terms—while the emphasis on physical investment constrained investment in human capital [4]. While the traditional driving forces of growth are far from exhausted, many signs suggest that they are likely to gradually weaken over time [15]. Yet workers will become more productive as the physical and human capital stock per worker continues to rise. These demographic changes should have a sizable impact on the rate of potential growth [8]. In addition, China's expanding education system and a large supply of workers with science and engineering skills bode well for the future [42]. In addition, China is expected to upgrade its technological capabilities by fostering a learning and research environment that encourages new ideas and lateral thinking and gradually making the pursuit of innovation more sensitive to market signals, with the government playing a more facilitating role [42].

1.3. The development of value chains and partnerships in the logistics market

A value chain is the aggregating of a firm into its strategically relevant activities for the purpose of to understand the behavior of costs as well as the existing and potential sources of differentiation. The concept has been extended beyond individual organizations. The industry - wide synchronized interactions of those local value chains create an extended value chain, sometimes global in extent. Capturing the value generated along the chain is the new approach taken by many management strategists. Creating value in any stage of a virtual value chain involves a sequence of five activities: Gathering, organizing, selecting, synthesizing, and distributing information. The value stream customer has certain desires, and the value stream consists of work activities dedicated to serving that customer. Value streams and their customers cannot be separated: The focus on the customer gives the value stream its purpose. Value Stream: An end-to-end collection of activities that create a result for a customer, who may be the ultimate customer or who may be an internal "end user" of the value stream. The value stream has a clear goal: to satisfy or delight the customer. Value streams differ from functions in that a value stream is a cycle of activity that begins with a specified event and ends when a specified output is produced.

1.4. Company naturalistic observation

Naturalistic observation (i.e. unstructured observation) involves studying the spontaneous behavior of Chinese company managers in natural surroundings. The researcher simply records what they see in whatever way they can. There is the involved methods of sampling instantaneous (target time). Observational study qualitative research method based on case of Chinese company, acquisition of information from the primary sources, to collect and record data. There is data collected during the scientific activity. The scientific method based an observational study of nature to formulate and test hypothesis. The observational study involve the recording of data via the use of scientific instruments. An observational study of a case company composed of age 30 years of workers, the investigator observes subjects of the Chinese corporate reputation and measure variables of interest. There is essential to analyze, interpret and record the observation. Corporate reputation refers to the enterprise's stakeholders, namely, shareholders, managers, employees, customers, suppliers, distributors, competitors, government, media, and local communities and the enterprise's past behavior, and the stakeholders' satisfaction with the needs and expectations, and comprehensive evaluation of enterprise future development plan, etc. Corporate reputation is an important intangible asset of enterprises. A good corporate reputation can effectively improve the competitiveness

of the enterprise, such as retaining customers, attracting various talent, improving morale, attracting investors, have a greater influence on suppliers and distributors, reducing transaction cost, setting up barriers to market entry, and so on. However, a large number of facts indicate that no matter which country or region, no matter the size and length of the enterprise, and no matter industry it is engaged in, the construction of a corporate reputation will not be easy. The above characteristics are related to the construction process of corporate reputation and its basic laws. It is generally believed that it takes a long time to build an enterprise's reputation and its special path dependence: First, the formation of corporate reputation is based on corporate citizenship behavior. Different corporate citizenship behavior performances are not identical, good corporate citizenship behavior can realize the social performance of economic benefits at the same time, in a social performance at the same time, make the enterprise obtain financial profit. Second, the construction process of corporate reputation can be divided into planning, organization, leadership, and control. Decision - making is the essence of management work, and the building of a reputation depends on the correct decision of the enterprise. Third, enterprises have different construction goals in different stages of development. For example, in the start-up period, enterprises generally use the media more and raise their visibility. In the long term, it is generally committed improving the quality of products and services and enhancing reputation. Fourth, enterprise reputation construction is a system engineering, which follows the "bucket principle" or "short board theory". Enterprise management behavior to shareholders, managers, employees, customers, suppliers, distributors, competitors, government, media, local communities and other stakeholders, if the enterprise obtained from each stakeholder support, then establish a good reputation for us; If a group of stakeholders strongly objects to an enterprise's decision, the reputation of the enterprise must be affected. In addition, there is the dynamic interaction between stakeholders, which can also affect the reputation of enterprises. A fifth, a good reputation once established, will become the enterprise safety net and opportunity platform. The safety net can help companies weather the crisis, and the opportunity platform can help businesses expand their living and development space.

1.5. X company case naturalistic observation

Companies are more likely to adopt a technology that is able to provide better performance and higher economic gains than the other technologies. Relative advantage is positively related to the adoption of innovation. Potential organizational benefits of green practices include reduced energy and natural resource consumption, reduced waste and pollutant emission, improved environmental and financial performance, and greater responsiveness to social and environmental expectations. How the new technology fits in with the operational knowledge that a company already possesses is an important factor that influences technical innovation. Compatibility is the degree to which an innovation is perceived as being consistent with the existing values, experiences, and needs of the firms. To lessen possible objections against the diffusion of new technology, a company will be more likely to adopt the new technology that is more compatible with the company's current operational knowledge. Compatibility is also relevant to green practice adoption. As several green practices are additions to companies' current technologies and processes, adopting green practices is not a single event but can be described as a process of knowledge accumulation and integration. Green practices will be more easily diffused within a company when the practices are more compatible with the company's current technologies and processes. A company is apt to advance technical innovation when knowledge is shared easily within the organization. Efficient knowledge sharing can lead to better innovative capabilities in terms of higher - order learning and, consequently, improve organizational performance including environmental management effectiveness. Complexity is the degree to which an innovation is perceived to be difficult to understand and use. It will increase the difficulty in knowledge transfer and innovation diffusion and is usually hypothesized to be negatively related to innovation adoption. A technology with high complexity contains a lot of tacit knowledge that requires laborious efforts to learn and diffuse. The difficulty in learning and sharing tacit techno - logical knowledge makes it relatively difficult to adopt complex technology. Green practices incorporate both tacit and explicit knowledge. The tacit knowledge may be inherent in identifying sources of pollution, reacting quickly to accidental spills, and proposing preventive solutions. It leads to the complexity of the green practices and, consequently, makes it difficult to learn and diffuse the green practices within the company. Organizational factors are commonly analyzed in research on technical innovation and environmental management. A variety of organizational characteristic variables such as quality of human resources, top management's leadership skills, organizational support, organizational culture, and organizational size have been discussed on their influences on technical innovation and environ - mental strategy. In general, sufficient organizational resources and qualified organizational learning capabilities are two relevant organizational characteristics advancing technical innovation as well as environmental performance and green practice adoption. Therefore, this study focuses mainly on organizational support, quality of human resources, and company size because they are organizational re- source-related variables widely analyzed in research on technical innovation and environmental management. The extent to

which a company supports employees using a particular technology or system will influence technical innovation. Providing incentives for innovation adoption and ensuring the availability of financial and technical resources for innovation have positive effects on the adoption of technological innovation. For the development of environmental management, organizational support is essential because the resources required for adopting green practices will be more easily available and the employees will be motivated to implement green behavior. Above all, the top management plays an important role in organizational support. Many green practices require the collaboration and coordination of different departments and divisions during adoption. To ensure successful implementation, green initiatives are usually endorsed and encouraged by the top management.

2. CONCLUSION

There is presented a base of Chinese corporate reputation and value chain management as composing the whole structure of Chinese business philosophical harmony has always been a highly valuated virtue. Harmony is at the core of Chinese traditional business culture. Equilibrium and harmony were highly valued by Chinese corporate reputation. "Pursuing harmony" refers to moderation, fitting, balance, and harmony. The issue of managing corporate reputation in a turbulent environment is a relatively large challenge for marketing managers. The basic research question of the study regarded what happens if the market is suddenly exposed to a phenomenon known as a black swan. This question arose at the beginning of the research, the results of which were further described. The study aimed to provide insight into the issue of reputation management in the environment during a global pandemic. The goal of our research efforts was to quantify the degree of reputation damage or the improved reputation of the companies over time. The answer to the research question was relatively brief, although in its essence it synthesized an extensive knowledge base of both reference and our empirical research. Research showed that market players on both the supply and demand sides of the market adapted to the new conditions relatively quickly.

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Employees Commitment to Work in Gastronomic Industry in Post-Pandemic Period

Jarosław UTNIK [a*]

[a] *Jan Kochanowski University in Kielce, Faculty of Law and Social Science, ul. Żeromskiego 5, 25-369 Kielce, Poland, Corresponding Author: jaroslaw.utnik@ujk.edu.pl*

Abstract

The aim of conducted research was identification of employees commitment to work in gastronomic industry in post-pandemic period. Enterprises operating in this area were heavily affected with negative consequences of COVID-19 pandemic. Governments around the world, which have faced sharp increase in COVID-19 incidence rate, have introduced restrictions in functioning of gastronomic industry, which lasted several months. Numerous enterprises operating within this area have not survived and went bankrupt, and a huge portion of them have fallen into debt. In order to restore high profitability of the enterprise, every employee commitment to work employed in mentioned enterprise is crucial to achieve this goal. Using quantitative research methods (CAWI, PAPI), author has managed to diagnose employee commitment to work level, employed in gastronomic industry in few perspectives. It has been proven, that employees in research sample do not constitute a homogenous group in this regard. The highest level of commitment has been shown by female employees, aging between 18 and 35 years old with secondary education, who are employed in large enterprieses. The lowest level of commitment in gastronomic area, however, has been shown by male employees aging over 55 years old with primary education, who are employed in micro-enterprises. The obtained results allow the enterprises from gastronomic industry to maintain focus on employees, who have low level of commitment to work and, in consequence, improve the results of enterprise operations.

Keywords: employee commitment to work, human resources management, gastronomic industry

* Corresponding author.

Measuring Walkability in Urban Context for Touristic Purposes

Domenico GATTUSO[a*], Caterina GATTUSO[b], Gaetana Claudia RUBINO[c]

[a] Mediterranea University, Via R.Zehender, Reggio Calabria, 89124, Italy, domenico.gattuso@unirc.it
[b] Calabria University, Rende (Cosenza), Italy. caterina.gattuso@unical.it
[a] Mediterranea University, Via R.Zehender, Reggio Calabria, Reggio Calabria, 89124, Italy, gaetana.rubino@unirc.it

Abstract

In the context of sustainable mobility research, a field of great importance is represented by "active mobility" and, specifically, by "walkability". And there is a growing interest of local government authorities for this issue in the urban development planning, noting potential benefits in terms of health, economy, environmental sustainability, quality of life, from measures aimed at promoting walkability. With this contribution, after a state of the art on the topic, criteria and attributes useful for characterizing walkability in urban areas for tourism purposes are proposed; a specific attention is paid to the utility functions perceived by the users, starting from studies of Transport Systems Theory. Reflecting on walkability means not only knowing the "current state" of pedestrian mobility in a city, an area or a single street but, above all, thinking about future perspectives, outlining innovative proposals and new projects, until providing a basis for the elaboration of new strategies and policies. Walking is the first and simplest human activity. It is probably moving on foot that man will contribute to winning the challenge of sustainability, redesigning the relationship between town planning and transport planning. The paper focus in depth on the walkability in relation to touristic mobility in urban context and the user cost functions.

Keywords: walkability; sustainability; urban and transportation planning; cost function, performance indicators

1. INTRODUCTION

Many disciplines are focusing their studies on the theme of walkability. This need also arises as a result of the rampant phenomenon called "sprawl" (Duany et al., 2000) [1], defined as the rapid and disorderly expansion of cities which has had as consequences the reduction of green spaces, soil consumption, dependence on cars due to the distance from services and the workplace as well as the remoteness of access points to public transport. These issues, with impacts on pollution and the health conditions of the population, are now addressed both at government and scientific level. On the institutional side, one of the 17 objectives of the 2030 Agenda, Goal 11 "Make cities and human settlements inclusive, safe, resilient and sustainable", was specifically intended for cities in order to integrate new needs into the urban and transport planning phase of sustainability. An objective that presupposes a new vision of cities, not only as agglomerations served by transport corridors designed for vehicular traffic, but as liveable places capable of responding to different needs for types of users, in a context which, from the beginning, should born as multimodal. This approach, which aims at drastically reducing the superfluous use of the car and therefore at increasing the role of walkability, has been translated into the urban policies of many states with the promotion of special planning tools: from Europe (Urban Plans for Sustainable Mobility, Urban Traffic and Road Safety Plans, Plans des Déplacements Urbains), to the United States (Pedestrian Safety Action Plan), from Australia (Australian Walking Strategy and Action Plan) to New Zealand (Pedestrian Plan).

* Corresponding author.

At the same time, the academic world is accompanying and promoting institutional reforms with extensive research on the subject, focusing on sustainable mobility and, specifically, active mobility, centred on walking or cycling. To facilitate walking, it is necessary to analyse how suitable a territory is for pedestrians to walk through.

From here the broad line of research on the theme of walkability unfolds; walkability to be understood not only as ability to move on foot in space but above all as the ability of space to be travelled on foot.

For humans, walking is the most natural way to get around. In some cases, walking also acquires aesthetic or health purposes but often these two purposes find space on rural paths, in natural contexts and enhanced by enchanting landscapes. In urban areas these purposes are rarely met, indeed, as previously mentioned, the increase in the sprawl phenomenon has had a negative effect on the possibility of walking on medium-long urban routes, often characterized by a polarization between the centre and the periphery, and on designed to facilitate the flow of vehicles. However, analysing urban neighbourhoods, it can be observed that walking mobility can often be improved, i.e. useful measures could be taken to promote active mobility. Not only drastic measures such as the pedestrianization of entire urban areas, but also through lighter and more indirect interventions, such as traffic calming schemes (Zone 30), new cycle paths, extension of sidewalks.

Overall, walkability is a transversal theme that concerns numerous thematic spheres (Cerema, 2021) [2]:

- health: promotion of active mobility aimed at physical well-being (consumption of calories, reduction of obesity, muscle exercise, breathing in open air, etc.) therefore at the prevention of diseases and for the benefit of public health;

- economic: the presence of pedestrians makes the urban environment and neighbourhoods more liveable by increasing the value of economic activities and private properties (for example the Walk Score index);

- ecological: walking is the only way of moving that does not impact the environment either directly or indirectly;

- intermodality: public transport is seen as an "increased pedestrian system", i.e. as infrastructures aimed at increasing the possibility of pedestrians to move on foot;

- accessibility: paths also accessible to people with reduced mobility (PRM) are also favourable to pedestrians. For this reason, the aim is to design pedestrian infrastructure according to an approach aimed at allowing access to the most vulnerable pedestrians (the elderly, children, the blind, people in wheelchairs, etc.);

- Uses: it is important to know the pedestrian practices within the specific context. The methods of use of the infrastructures are the subject of investigations aimed at exploring the elements present along a natural (trees) or artificial (benches, fountains, toilets, etc.) path that positively influence the attractiveness or, on the contrary, hinder it (such as the presence of inconvenient parking spaces); as well as the "perceived" elements, i.e. the effective use that is practiced in the space, which influences the perception of the pedestrian.

One of the first visions of mechanistic measurement of the level of walkability was proposed by Fruin in 1971 [3]. He systematized the comfort of different pedestrian infrastructures based on different types of pedestrians. Although this early study had its limitations, it formed the basis for the main walkability metric officially used in the United States, the one included in the year 2000 version of the Road Capacity Manual (HCM) of the Transportation Research Board (TRB). What emerges in the Manual is clear: the outflow of pedestrians is easy when the pedestrian space is large and free from obstacles.

This concept is achieved by using for the different levels of service (LoS) relating to pedestrians, metrics similar to those already used for infrastructures intended for vehicles: space available to the pedestrian, capacity, speed; ratio of sidewalk size to capacity.

The 2010 version of the HCM specifies that the main characteristic of pedestrian flows, speed, is influenced by individual characteristics (such as gender, presence of children, elderly, PMR) or group characteristics (e.g. people who know each other and travel together, called "platoons"). The 1990s saw planning move towards a multimodal approach with the inclusion of different types of indicators including: Presence and continuity of sidewalks and pedestrian routes; accessibility of facilities to people with different abilities; directness of pedestrian paths and connectivity of the street network; connections to frequent transit services; ease and safety of crossings; visual interest; perceived or actual security (Ria Hutabarat Lo, 2009) [4].

Of great interest is the Global Walkability Index (GWI) (Krambeck, 2006) [5], formulated to compare different cities and made up of 14 variables, grouped into 3 categories of components, as described in the table below.

Table 1 Component and Variables of the Global Walkability Index (Krambeck, 2006)

Component	Variables
Safety and Security	1. Proportion of road accidents that resulted in pedestrian fatalities
	2. Walking path modal conflict
	3. Crossing safety
	4. Perception of security from crime
	5. Quality of motorist behaviour
Convenience and Attractiveness	6. Maintenance and cleanliness of walking paths
	7. Existence and quality of facilities for blind and disabled persons
	8. Amenities (e.g., coverage, benches, public toilets)
	9. Permanent and temporary obstacles on walking paths
	10. Availability of crossings along major roads
Policy Support	11. Funding and resources devoted to pedestrian planning
	12. Presence of relevant urban design guidelines
	13. Existence and enforcement of relevant pedestrian safety laws and regulations
	14. Degree of public outreach for pedestrian and driving safety and etiquette

It is clear that one of the major differences between the two types of approaches (the one based on flow capacity and the one based on multimodality) lies in the scale of measurement, one more detailed and the other more macro-type.

At the same time, urban planning is also interested in walkability criteria, focusing above all on the subjective perception of city spaces by the user. In particular, we refer to K. Lynch (Lynch, 1984) [6] who identifies 5 performance characteristics relating to the urban environment capable of affecting user satisfaction and, therefore, the increase in active mobility: Sense (Identity, Structure, Congruence; Transparency, Legibility; Significance); Vitality (Sustenance, Safety, Consonance), Fit (Adequacy; Adaptability); Access; Control. The author also adds two transversal meta-criteria to all the previous ones: Efficiency and Justice. Another author who dwells on the design of elements capable of stimulating active mobility in public spaces is J. Gehl who, in 1987 [7], mentions elements such as the slope, the pavement, the type of road.

However, the existence of a discrepancy between transport planning and urban planning in the search for walkability criteria is evident. An attempt to fill this gap was made by F. Jaskiewicz in 2000 [8]. Starting from the assumption that the definition of the pedestrian service level (LoS) implies much more than volumes and capacities and that pedestrian mobility is a valid transport alternative, he identifies 9 criteria, to be evaluated according to a scale from 1 to 5, in order to classify the paths on the basis of a scale from A to F of LoS (A= 4.0 to 5.0 = very pleasant B = 3.4 to 3.9 = comfortable C = 2.8 to 3.3 = acceptable D= 2.2 to 2.7 = uncomfortable E = 1.6 to 2.1 = unpleasant F = 1.0 to 1.5 = very unpleasant).

In his study Jaskiewicz not only demonstrates how the classification of LoS identified exclusively through traditional metrics changes significantly compared to the proposed methodology, but also proposes specific improvements to be used to improve the LoS related to a study area. He comes to the definition of 9 factors influencing LoS: Enclosure/Definition; Complexity of Path Network; Building Articulation; Complexity of Spaces; Overhangs/Awnings/Varied Roof Lines; Buffer; Shade Trees; Transparency; Physical Components.

Further contributions on the theme of urban factors capable of influencing active mobility come from the study of the correlation between socio-political factors and walkability carried out by E. Peñolosa (2000) [9] and by Mason and Fredericksen (2006) [10]; as well as the correlation between neighbourhoods more suitable for physical activity to promote physical well-being (an activity that is very different from those who move for commuting reasons, for example), studied by Rosenblatt et al. (2005) [11] and by Boer et al. (2007) [12].

From 2005 onwards, the number of researches on walkability indicators increases exponentially. They quote among others: Spoon (2005) [13] which groups 13 factors into 3 categories of variables according to their importance in relation to pedestrian behaviour: Essential (Mixed land use, Accessibility/Convenience; Presence of pedestrian facilities; High connectivity); Desirable (Street pattern, Density, Aesthetics, Presence of parks, plazas, and open space, Traffic calming and street speeds); Extras (Street orientation, Access to transit); Ewing et al. (2009) [14] with 5 variables: imageability, enclosure, human scale, transparency and complexity. Of a different nature is the study published by Maghelal et al. (2011) [15] which relies on the use of GIS to measure the built environment. It defines 25 walkability indices.

Other types of research are more empirical and focus on the evaluation of a selection of indicators in urban contexts. A reference study is that of Galanis and Eliou (2011) [16] which starts from the definition of walkability understood

as "the suitability that the urban road environment offers to pedestrians" and is expressed in accessibility, convenience, attractiveness, road safety and personal safety. Objective indicators relating to the characteristics of the streets or urban furnishings have been assumed, with the aim of comparing the pedestrian infrastructure in terms of walkability with the convenience of pedestrians to take the desired route. Other studies have broadened the view to wider and more complex urban systems with multiple indicators, such as for example the one proposed by Cerin et al. (2011) [17]. The research led to the development of a specific analysis tool (EAST-HK, Environment in Asia Scan Tool – Hong Kong) to evaluate the aspects of the neighbourhood environment that are assumed to influence walkability in metropolitan contexts. An interesting approach is the one presented by Monteiro de Cambra (2012) [18]; the author develops a walkability evaluation model with the aid of multi-criteria decision analysis techniques and analysis of GIS networks, at different territorial scales. He deduces, following some experimental applications, a positive correlation between the estimated walkability and the pedestrian movement patterns.

In parallel with the studies aimed at identifying walkability indicators, the research also develops on another important theme, the close link between urban planning and transport (and in particular pedestrian infrastructure), specifically the strategies for increasing walkability, with the theme of sustainability.

Among these studies we mention the research of Moayedib and Rogers (Moayedib et al., 2013 [19]; S. H. Rogers et al., 2013 [20]).

Moayedib et al. specify that “Walkability is also an important measure in determining a better environment within a sustainable development due to its economic, social and environmental benefits”. The authors highlight that the ultimate goal of conceptualizing walkability indicators is to understand how walkability can influence human life and to broaden knowledge on how to measure and evaluate the sustainability of the built environment, or, in short, on how to “create more liveable pedestrian environments”.

The study by Rogers et al. it is peculiar because, unlike many other studies focused only on two of the pillars of sustainable development (environmental sustainability and economic sustainability), the research focuses on social sustainability often considered as "the weakest and least described pillar".

The authors analyse the positive correlation between aspects of the built environment, including walkability (measured through the perception of the interviewees) and social capital, as a measure of the social sustainability of the development of a community.

In 2015 from Italy comes the proposal of a methodology for evaluating urban walkability together with a software tool to support decision-making and urban planning. The creation of the software takes place downstream of the elaboration of a theory of walkability which starts from the theoretical framework within the capability approach. This is the study presented by Blečić et al. (Blečić et al., 2015) [21] which, starting from the relevance of the concept of walkability for urban quality, present a spatial and multi-criteria evaluation model, applied by way of illustration to the city of Alghero. Compared to other researches present in the literature, the one presented by Blečić et al. it differs in the overturning of the method perspective: "instead of assessing how walkable a given place is in itself, the calculated walkability score reflects how and towards where a person can undertake a walk starting from that place".

Still in the same year, and still in Italy, another working group (D'Alessandro D. et. Al., 2015) [22] developed another tool, called the "Territorial Suitability Index for the Way" (T-WSI), with the aim of preparing a simple method to evaluate the walkability of a district, in order to support the Public Administrations in the decision-making process concerning health and local development policies. The tool involves entering the data collected for each street in a district into a special algorithm designed for the execution of weight sums capable of aggregating the indicators and categories, thus arriving at defining the final index.

In 2017, the study presented by Yin L. (Yin L., 2017) [23] extends the research conducted up to then on composite walkability indices through the application of 2D and 3D Gis technologies that help, according to the authors, to fill that gap of data collection that until then had not made it possible to integrate the indices used with the characteristics of the urban landscape in microscale capable of influencing the pedestrian experience, such as visual characteristics i.e. visual horizon or proportion of the sky.

The interest in geomatics and in new technologies, therefore, helps to automate data collection and enrich reflection on the method, as attested by the numerous researches conducted also in Italy, of which Chiantera's intervention on the model of the city of Turin (Chiantera et al., 2018) [24].

The problem of the difficulty of data collection is also addressed in the work conducted by F. Shatu and T. Yigitcanlar in the same year (Shatu et al., 2018) [25]. The authors investigate the link between the road environment and the choices of pedestrian routes by validating the tool called "SWATCH", whose peculiarity is the integration of data collection through a threefold method: a survey administered to pedestrians and pertaining to the reasons for choosing their paths, regarding a list of indicators; a virtual survey conducted thanks to the free Google Street View tool; a physical analysis of 47 road segments randomly chosen but belonging to the routes highlighted by the survey.

Then the validity of the method was tested by comparing the scores obtained through the virtual and physical survey using some statistical measures including: % agreement; Kappa coefficient; Intra-class correlation coefficient, ICC.

From 2019 to the present day the studies have focused on additional walkability detection tools also applied to concrete urban cases or on technological tools that integrate innovations including open data, computer vision and machine learning.

Other lines of research rather than on the method have been focused on the point of view of the users and on their socio-demographic characteristics or on particular types of pedestrians such as the elderly; children and adolescents; women or particular groups or on resident foreigners.

Another point of view of the research has taken into consideration the territory on which the pedestrian paths are created, i.e. particular urban areas such as university campuses, military areas, gated communities; small cities, geographical areas with a high intensity of technological innovation, vertically integrated, rapidly developing or developing.

Finally, in consideration of the pandemic that has hit the planet since 2020, a line of study has focused on the consequences that Covid has had on pedestrian behaviour and walkability.

An exemplary list, by no means exhaustive, of these studies conducted from 2019 to today on these 5 sectors is shown in the table below.

Table 2 Main researches on walkability from 2019 to the present grouped for category

Concrete urban cases	Technological tools that integrate innovations	Socio-demographic characteristics and particular types of pedestrians	Territory or particular types of areas	Covid or post-covid
Carvalho M.F. et al. 2020; [26] Manzolli, J. A. et al., 2021; [27] Alshammari T. O., 2022; [28] Kashef M., 2022; [29] Fonseca, F. et al. 2022; [30]	Yang Y. Et. Al, 2019; [31] Cleland C. L. et al. 2021; [32] Kasraian D. et al., 2021; [33] Kim, H., 2022; [34] Ng H. R. et al. 2023; [35]	*Socio-demographic characteristics*: - Semple, T., & Fountas, G., 2022; [36] *Elderly*: -Herrmann-Lunecke, M. G. et al., 2022 [37]; *Children and adolescents*: -Lee S. et al, 2020 [38]; *Women*: -Adlakha, D., & Parra, D. C. 2020; [39] *Particular social groups*: -Yoon, H. et al., 2021; [40] *Resident foreigners*: -Yoh, K. tt al., 2022[41]	*University campus*: -Fernandes P. et al, 2019; [42] *Military areas*: -Balletto, G. et al., 2022; [43] *Gated community*: -Saadawy, N. A., & Hady, S. I. A., 2022; [44] *Small cities*: -Saadi, I et al. 2022; [45] *High innovation areas*: -Bereitschaft, B., 2019; [46] *Vertically integrated areas*: -Gopalakrishnan, S. et al. 2022; [47] *Rapidly developing areas*: -Chan, E. T. H. et al., 2021; [48] *Developing areas*: - Nasrin S. et al., 2019; [49]	Moreno C. et al. 2021; [50] Jardim, B., & de Castro Neto, M., 2022; [51]

2. THEORY

As seen, the research on the theme of walkability has focused on the identification of indicators and indices, on the methodology and tools for detection and representation as well as on the link between walkability, sustainability and urban and transport planning. Research has rarely approached walkability with reference to the choice of pedestrian itineraries to follow for movements related to reasons other than those that commonly guide citizens within urban perimeters. It can be understood that travel caused by work reasons, by the need to go to a public office, or by neighbourhood social reasons follow different logics from other types of travel such as, for example, those linked to tourist reasons. There are several subjects who make the trips (citizens vs. tourists); knowledge of places and itineraries is different; different travel times; often also the language used (with difficulty in translating signs for example). The aim of this work is, therefore, to investigate a walkability model suitable for touristic movements. First, however, it is necessary to investigate what is meant by tourism and, in particular by cultural tourism, a type of tourism often guided by principles of sustainability aimed at promoting pedestrian movements.

The World Tourism Organization defines the tourist as: “Anyone who travels to countries other than the one in which he has his habitual residence, outside his daily environment, for a period not exceeding one year and whose main purpose of the visit is different from the exercise of any type of remunerated activity within the country visited”.

Specifically, it is always the World Tourism Organization (UNWTO, 2017) that defines cultural tourism as “A type of tourism activity in which the visitor’s essential motivation is to learn, discover, experience and consume the tangible

and intangible cultural attractions/products in a tourism destination. These attractions/products relate to a set of distinctive material, intellectual, spiritual and emotional features of a society that encompasses arts and architecture, historical and cultural heritage, culinary heritage, literature, music, creative industries and the living cultures with their lifestyles, value systems, beliefs and traditions".

Cultural tourism adds to and sometimes overlaps with other known types of tourism such as mountain, seaside, food and wine, religious, congress, spa or wellness, school, naturalistic tourism.

It becomes clear that if, as the World Tourism Organization already stated in 2017, tourist trends are increasingly oriented towards cultural tourism, this changed perspective needs to be studied from the point of view of tourist supply and demand.

In particular, it is evident that the classic tourist packages are no longer attractive. Tourists are looking for new experiences that challenge them personally, often directly engaging their five senses, putting their entire body in motion. Hence the proposal of paths and footpaths both rural (Gattuso C. et al., 2020) [52] and peri-urban and urban.

The walking route is configured not only as a type of journey that responds to the wishes of the users, but also to the objectives of sustainability, since it is capable of respecting the natural environment in which the tourist moves, enhancing the assets of the territory (from the natural heritage to the historical and cultural one) but also capable of promoting local resources such as food and wine and typical crafts, generating relationships and connections with the communities crossed and favouring the economic development of the territories.

3. METHODS

A first classification of pedestrian itineraries can be made by taking the urban boundary as a reference. Therefore, we will have urban itineraries if they take place within the urban perimeter; therefore, there are rural itineraries if the itineraries cross this border; mixed if the itinerary includes a route that crosses the urban border. The classification of the route as urban, rural or mixed is essential since the variables to be taken into consideration will change not only with reference to the objective characteristics of the route (for example, on a scale from urban to rural, dirt paths will become predominant) but also those relating to the use of the itinerary (for example, other types of cost will become predominant, such as accommodation costs). This paper considers urban routes. These, in turn, can be classified on the basis of the purpose of travel in paths for pedestrian mobility when the need for mobility is inherent in systematic movements of a social, school or professional nature; and routes for tourist mobility, when the objective of the route concerns the visit of places of cultural, historical or architectural interest.

Mobility for touristic purposes can be further investigated by adopting a specific classification criterion.

Therefore, if the purpose of the tourist trip is used as a classification criterion, there will be different types of stay, for example i.e.. seaside tourism, mountain tourism, cultural tourism, etc.).

The second type of classification concerns the characteristics of the traveller.

The organization of mobility for tourist purposes and the relative analysis may vary according to the following characteristics:

- If the tourist travels individually or in a group;
- On the basis of one's socio-demographic characteristics;
- Presence/absence of special needs (PRM, elderly, children, etc.)
- If the traveller intends to move independently or take advantage of an organized tour because this modifies the services he will purchase;
- Budget level to be allocated to the holiday/tour.

All this will influence the organization of tourist mobility, but the issue is not the subject of this work and further insights will be dedicated in subsequent publications.

Finally, an analysis of mobility can be done with reference to the type of means used to move, i.e. whether the tourist intends to move towards active mobility (on foot or by bicycle) or vehicular.

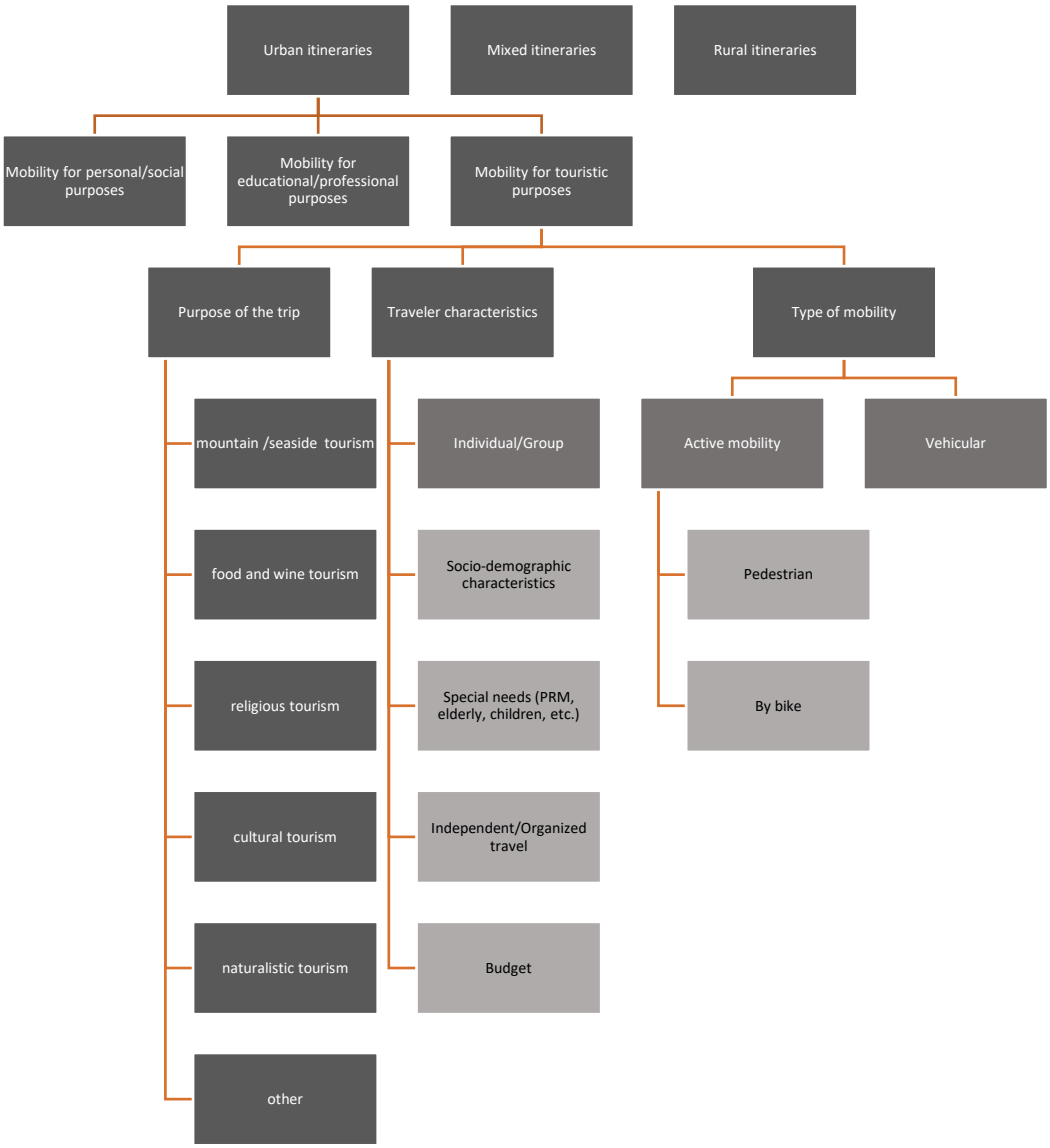

Fig. 1. Itinerary classification criteria

Therefore, let us take a set of pedestrian mobility routes with tourist purposes aimed at visiting *n* points of interest (*Poi*) connected to each other by a series of branches. We will qualify the network of these urban routes (or tours) using cost functions, according to the Transport Systems Theory approach (Cascetta, 2011) [53]. On the basis of this approach, we first of all distinguish the time and monetary cost components.

In the first case we consider the travel times on the branches (T_i) and on the routes (T_k), where by branch we mean a stage of the itinerary at a point of interest and by route a Tour, i.e. an itinerary made up of an ordered succession of stages. This mode allows the distances between points of interest to be taken into consideration without referring to the mere length but to the time taken by the pedestrian.

We can express the travel time on a branch *i* as:

$$T_i = L_i / v_i$$

Where L_i represents the length of the stage; V_i is the average walking speed on the stage.

The time relating to a route *K* will be given by the sum of the times relating to the branches (stages) belonging to the route itself; indicating with I_K the set of branches belonging to the path *K*:

$$T_K = \sum_i T_i \qquad \text{for i } \epsilon \text{ } I_K$$

The travel speed in the usual modelling practice for urban areas is assumed to be equal to 3.6 km/h (1 m/s), however it can be further differentiated according to the characteristics of the user considered (young, senior, user with children, person with reduced mobility, single/group), the type of route (asphalt, pebbles, slope), the environmental conditions (season, weather conditions).

In general, the average speed can be expressed as a function of the type: v_i = f(user, type of route, environment).

Likewise, the dwell time at the point of interest *i* can be expressed with T_{Si}. The dwell time T_{Si} also varies according to the degree of interest of the users (superficial; normal interest; further study).

For the entire route we will have the total stop time expressed as:

$$T_{Sk} = \sum_i T_{Si} \qquad \text{for i } \epsilon \text{ } I_K$$

With reference to the monetary costs, we can express them with the following function referring to a generic user for the entire tour K:

$$C_K = C_g + C_v + C_b$$

with C_g cost for guide services, C_v cost of meals, C_b cost of entrance tickets to paid points of interest.

It will therefore be possible to formulate a generalized utility function for the entire tour:

$$U_k = \alpha C_K + \beta T_K + \gamma T_{Sk}$$

Where α will be a parameter that will negatively affect utility; β and γ will represent two utility time replacement rates.

Specifically, β can be negative, positive or null depending on whether the time spent on the route constitutes an impedance, a value or a neutral variable for the user (for example, crossing an aesthetically significant urban route will itself constitute a value for the user assuming a positive value). While γ will assume a positive value since the stop at points of interest itself represents the priority aspect of the tour chosen by the tourist.

The maximization of this utility function will have to submit to some constraints, including the opening hours of the Points of Interest (if they are structures subject to opening/closing such as museums, churches, etc.) and the duration of the tour. Furthermore, upstream of the modelling, the proposal could be improved by excluding from the route branches which could positively affect the journey time but which from a tourist point of view would cause damage (for example shortcuts that cross peripheral districts).

4. FINDINGS

The proposed utility function is of great interest because, thanks to the quantitative nature of the variables represented, it allows for the analysis of urban itineraries for tourism by studying the demand/supply interaction, comparing two or more tours, calibrating the itineraries in relation to the type of expected users, also possibly selecting Points of interest belonging to certain categories to be classified by assigning priority scores according to the user's interest (for example historical places; nature; monuments; typical places, etc.).

It is evident that the economic-organizational advantages are multiple, especially with reference to the tourist offer and accessibility. Furthermore, from the point of view of medium-long term planning, there could be advantages in terms of urban regeneration, since the possible crossing of unexplored neighbourhoods could lead to their valorisation. This would involve the recovery and insertion of the roads that cross them between the branches initially eliminated with an evident overall social and urban benefit, combining the use of the more commercial points of interest with visits to lesser known places but not for this reason minor importance, following the example of the Metropolitan Paths (International Charter of Metropolitan Paths, 2020) [54]. This would ensure, especially in large cities, to decongest the flows, distributing them in various areas of the city, avoiding the negative consequences that mass tourism entails, also favouring the inclusion of more fragile subjects who, even from the presence of crowds of groups, would only be detrimental, such as people with reduced mobility. Therefore, it would also translate into a new vision of sustainable tourism not only for the way tourists move between urban areas (pedestrian mobility) but also and above

all because it would limit the impacts and negative consequences that uncontrolled flows generate on green areas and monumental.

5. DISCUSSION

The representation of the Walkability of urban routes for tourism purposes through utility functions allows a serious reflection on the different dimensions of the offer with consequences also from a promotional point of view. In close synergy with the marketing function, capable of processing customer needs, it will be possible not only to refine the quantitative parameters used, but above all a correct balance of the strategy inherent in the choice of the 4Ps (Product, Promotion, Place, Price) will be guaranteed (Kotler P., 1967) [55].

6. CONCLUSIONS AND IMPLICATIONS

According to the forecasts indicated by GlobeNewswire, one of the world's leading news agencies, the worldwide cultural tourism market will grow to almost 12 billion dollars in turnover by 2028 (+160% on 2021) with an average compound annual growth of 14.4% over the next six years. Analysing, designing and promoting new pedestrian itineraries in a structured way, respectful of the environment, capable of enhancing local resources (both in terms of communities and products) could represent a concrete opportunity. Furthermore, the study of differentiated itineraries could form the starting point also in terms of urban regeneration. The paper proposes an unprecedented approach in this direction, through a systematic analysis of the components involved. The next step could be the test of the model on an urban reality characterized by a list of points of interest and by an already existing flow of tourists.

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An Examination of the Nexus between Oil Prices and the Current Account of Jordan: Evidence from Time Series Data

Rami HIJAZINE [a*]

[a] *The University of Pécs, Faculty of Business and Economics, Pécs, Hungary, ramihijazine@yahoo.com*

Abstract

The purpose of this study is to investigate the relationship between oil prices and Jordan's current account by using Johansen's and Vector Error Correction (VECM) methodology. The study uses four variables, namely oil prices, electricity production, GDP growth, and current account to examine the dynamic relationship among them for the period 2000 to 2021. Empirical results indicate that there is a significant long-run relationship between the current account and oil prices. Additionally, the long-run results indicate that an increase in oil prices deteriorates Jordan's current account balance, indicating that the country is susceptible to fluctuations in global oil prices. Further, GDP growth is found to have a positive effect on the current account balance, while electricity production has a negative effect over the long term. The study also found only one unidirectional causality running from GDP to the current account. Based on the study's conclusions, policymakers should diversify the economy and reduce the economy's dependence on oil in order to minimize the adverse effects of oil price fluctuations on the current account.

Keywords: energy economics, oil prices, monetary policy, current account, Jordan

1. INTRODUCTION

Even though the world is taking series steps towards renewable energy integration until 2030, oil, coal, and gas will continue to be the dominant energy sources according to Deutch (2010). And in 2022, things haven't changed significantly, as nonrenewable energy sources are still the major driver of the world's growth inflation. Globally, oil remains the most widely used fuel (IEA, 2021).

If the country is experiencing a deficit, then its spending exceeds its earnings. This gap can be filled by foreign loans or by decreasing the central bank reserves. The current account deficit can hurt the economy if it leads to capital flight during a downturn and can be beneficial if it attracts foreign investments which will lead to higher productivity and living standards besides being an implicit vote for the steadiness of the economy (Ozata, 2014).

In addition to its small market business and limited natural resources, Jordan is largely affected by changes in the crude oil market (Muhtaseb and Assaf, 2016). Furthermore, the local production of energy reached about 5% of Jordan's total energy needs. It heavily depends on petroleum products and crude oil which account for 95% of the energy required to address the needs for social and economic growth. Due to the elevated demand (as the population grows) and the steady increase in world oil prices, a significant burden has been put on the Jordanian economy because of the increasing oil bill (The Ministry of Energy and Mineral Resources, 2016).

This paper examines the relationship between oil prices and Jordan's current account and investigates whether electricity production is primarily for consumption or productive purposes. The proposed set of variables study includes

* Corresponding author.

will measure the effect of oil prices even after importing, by examining the direction in which they are used. And this not been studied as per the author's awareness and research.

The remaining parts of the paper consist of the following: Part 2 provides an overview of the Jordanian economy, Part 3 offers a theoretical framework, Part 4 presents a review of the relevant literature, Part 5 discusses the methodology adopted for the study, Part 6 presents both descriptive and empirical results, and the last part summarizes the findings and offers concluding remarks.

2. AN OVERVIEW OF THE JORDANIAN ECONOMY

Jordan is classified as a middle-income country with a GDP of JD 31.48 billion in 2019 (see Fig.1), ranking it at the 89th worldwide other than being one of the top 20 performers in the doing business report (The World Bank, 2020). It has too little natural resources, and 36% of its added value of the GDP comes from the service sector (especially finance, insurance, real estates, restaurants, and business services) in addition to some light manufacturing industries, such as clothing and textiles as stated by the CBJ monthly statistical report (Central Bank of Jordan,2020). The Jordan's economy is experiencing a severe trade deficit, as well as public deficit, and relies heavily on the remittance's inflow from abroad, especially from the neighboring Arab countries.

After the economic crisis of 1989-90 and the damaging effect of the Gulf war 1990-91, Jordan has taken on its shoulders significant economic reforms in cooperation with the International Monetary Fund (IMF) through Privatization and joining the World Trade Organization (WTO) in 2000.

At 2002, Jordan was experiencing a high economic growth up to 5.78% and a decrease in the debt of more than the half to reach 99.7% as figure 3.1 shows. Growth In exports (especially with joining WTO, and the U.S.-Jordan free trade agreement) was one of the main reasons behind the ease of the trade deficit, and thus, the improving GDP growth (Bino et al, 2014).

The Jordan's real GDP kept growing to reach an average of 6.5% during 2000-2009, and a debt-to-GDP ratio to reach its lowest of 60.24% in 2008. However, the combination of the international financial crisis 2008-09, the Arab Spring 2011, along with the arrival of a large number of refugees and the closure of trade routes with neighboring countries like Iraq and Syria, in addition to the oil drop in 2014 which had more drawbacks than expected benefits of reducing the imports bill due to the more significant inverse ramifications on

The remittance's inflow and the amount of grants received. All have pressured the average growth down to 2.4% and the debt-to GDP ratio to 97% by the end of 2019 despite the huge fiscal and structural reforms taken (The Economic Policy Council, 2018).

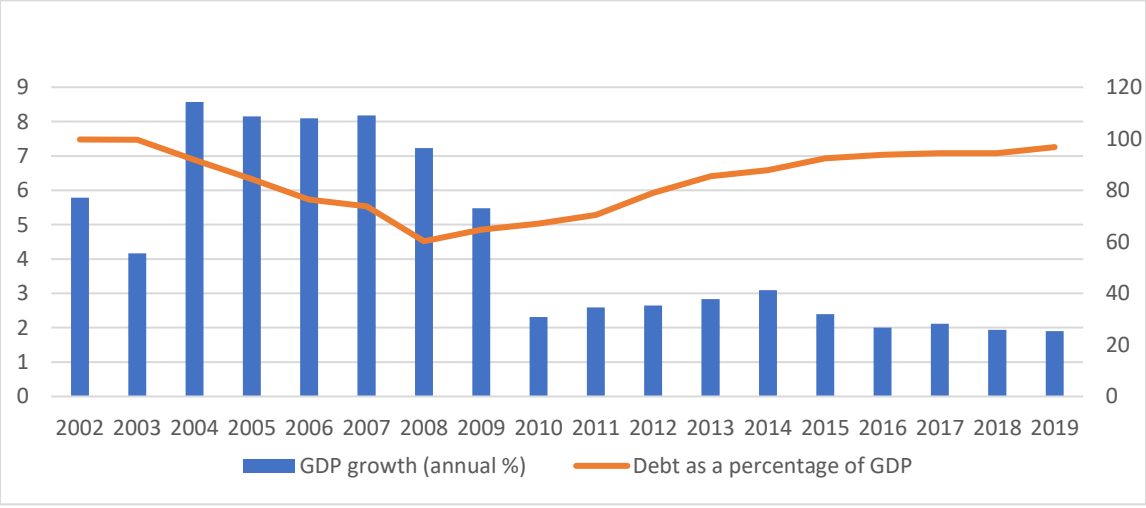

Fig. 1. Real GDP growth and debt in Jordan during 2002-2019
Data Sources: By the researcher based on the historical data of The World Bank and The Ministry of Finance Archive of Public Debt Bulletin

3. THEORETICAL FRAMEWORK

A number of theories have emerged as a result of studying the balance of payments (BOP) regarding the current account. Essentially, it is a method of recording all payments that have a direct effect on international money transfers (Mishkin, 2016).

Several theories have developed over time. Dynamic equilibrium theory asserts that the balance of payments (BOP) must be adjusted over time. Among the earliest to develop the theory so were classist economists such as David Hume. In his view, a decrease in price in the giving country would result from the flow of money, and an increase in price in the receiving country would result from the flow of money, and this fluctuating movement would continue until the BOP of the countries involved reached an equilibrium, at which point the money stopped flowing (Scitovsky, 1957).).

Based on the BOP's current account, Alfred Marshall and Abba Lerner examined how exchange rate adjustments are affected by import elasticity factors.

Following the 1930s collapse of the gold standard, Keynesians developed Income Theory, which focuses on the main cause of BOP disturbances and how they affect incomes. In other words, income theory examines the process of change, rather than the restoration of BOP to equilibrium. In accordance with the absorption theory, which is based on the Keynesian income theory, a country's export earnings must exceed its domestic expenditures to achieve a balance of payments surplus.

Hume and Gervaise's contributions contributed to the evolution of the balance of payments theory, also referred to as the monetary approach. According to Johnson (1976), monetary policy is the sole remedy for correcting imbalances in the BOP caused by changes in money supply and demand.).

Crude oil is the most traded commodity in terms of future contract volume (Cinquegrana, 2008). Unlike any other commodity, the oil price is mostly influenced by demand and supply. Any imbalance between supply and demand affects prices, according to Gyagri et al. (2017). Additionally, technical, sentimental, and miscellaneous factors influence oil prices.

As a result of lower oil prices, oil-importing countries will increase consumption by lowering energy bills, which will lead to higher real incomes per capita (Kilian, 2014); however, due to a decline in oil exportation revenue, exports from oil-importing to oil-exporting countries may decline. As a result of higher oil prices, the current account deficit increases. The current account balance is an important indicator of a country's well-being (Ogunniyi et al, 2018). In Jordan's case, a current account deficit means the country spends more than it earns. It is generally held that public policy should not intervene in current account deficits resulting from shifts in private sector behavior. This view is known as Lawson Doctrine theory. Due to recent currency crises in Asia and Latin America, it has become discredited. An alternative view is one that could be called "prudential" or "IMF"; even when private savings and investments are reflected in deficits, distortions exist and lead to excessive deficits (Blanchard, 2007). Bacon & Kojima (2008) argue that governments should intervene to reduce deficits.

A major reason for the continued growth of the current account deficit is the increased imports by producers and consumers. Moreover, the fall in interest rates and the expansion of credit facilities put a greater emphasis on imports. Likewise, Ozata, (2014) argue that economic growth is also the main culprit behind current account deficits.

Oil-importing small open countries are at risk from an increase in oil prices due to their weak savings ratios, which prevent them from generating enough capital to support high investment levels (Ozlale, 2010). The ability of a country to absorb oil shocks depends on its level of economic diversification, which is in turn determined by oil prices. In countries with a prominent oil sector, there is usually a strong correlation between their current account and oil balance (Gnimassoun et al, 2017).

Ans since the 1970s oil shocks and the global recessions that followed, recent oil price increases have had a milder impact on economic growth via monetary policy. And these milder effects are attributed to more efficient energy use, a more flexible labor market, and-in general- stable oil price changes. However , the effects of oil price changes can be harmful if they are extremely sharp (Blanchard and Gali, 2008).

An increase in oil prices results in an increase in consumption expenditures and a deterioration in the current account of oil-importing countries. In spite of this, following a J-curve pattern, full economic recovery takes time when the economy rebounds and the current account returns to its pre-shock level.

4. LITERATURE REVIEW

In spite of the fact that few studies have focused on how oil prices affect the balance of payments and the current account in middle eastern countries, the results of the studies in developing countries, particularly in Jordan, were contradictory.

The relationship between oil prices and the Turkish current account was analyzed structurally by Ozlale and Pekkuranz (2010). Using SVAR (structural vector autoregression). Current account deficits may occur as a result of sudden increases in oil prices. Furthermore, the study indicates that the impact of oil prices on current account balances is not a one-to-one effect, underscoring the importance of policy measures such as international financial integration when it comes to reducing the adverse consequences of oil price shocks.

Over the period 1970-2015, Kilian (2010) examined how crude oil supply and demand shocks affect oil and non-oil trade balances, current accounts, capital gains, and net foreign assets. Results showed that non-oil trade balance reaction heavily determines the net impact of oil shocks.

A numerical simulation of OECD countries that import oil, such as the Euro area countries, Australia, Denmark, Japan, Sweden, and Switzerland, was used by Schubert (2014) to study how a shock to the oil price affects current accounts for a small open economy. As oil prices increase, the current account deficit will be reduced, eventually resulting in a surplus as the trade balance improves.

According to Huntington (2015), 91 countries' current accounts and oil trade were examined from 1984 to 2009. Oil exporting countries' net oil exports were significantly correlated with their current account surpluses after controlling for other exogenous factors. A higher oil import bill does not necessarily lead to a decline in the current account balance in oil-importing countries, as net oil imports have no significant impact on the current account deficit. The study was repeated by Musau and Veka (2018) after extending the sample size and time period. The study found that net oil exports contribute significantly to current account surpluses. Since trade balance is the dominant component of a country's current account, there is no relationship between oil imports and current account deficits.

Longe et al. (2018) examined the relationship between oil prices and current account balances in Nigeria between 1977 and 2015, using time series data and the Autoregressive Distributed Lag (ARDL) method. Based on their results, the short-run current account was not significantly influenced by any variables. In the long run, however, only the oil price and gross domestic product had a significant impact on the current account balances. There was no significant impact of other variables such as trade and population growth, both in the short and long run.

In Jordan, as Mohaddes and Raissi (2011) found in their study, the volatility of output can be attributed to fluctuations in foreign net income, whereas an increase in oil prices indirectly contributes to Jordan's GDP by increasing foreign inflows as remittances.

Based on Variance Auto Regression (VAR) analysis, Bash (2015) investigated the relationship between crude oil prices and Jordanian budget deficits from 1995 to 2013, revealing a significant correlation.

An analysis of Jordan's economy was conducted by Tahtamouni et al. (2017) between 2006 and 2015. During the decline of oil prices, Jordan has seen a decline in remittances and financial aids, resulting in a worsening economic situation. Furthermore, Abu-Asab (2017) found that oil prices influence economic growth asymmetrically, since rising oil prices negatively affect growth while falling oil prices has no effect.

5. METHODOLOGY

The purpose of this study is to examine how oil prices affect Jordan's current account. To find the volume and direction of the impact for the period of 2000-2021, data were analyzed on a yearly basis. There are three sources of data: for the current account is the CBJ (Central Bank of Jordan), for the oil prices is the IEA, for the GDP is the World Bank data, and for the electricity data is the Our World in Data (data from this source is used by many other scientific papers such as DeFries and Nagendra (2017)).

According to the study's theoretical econometric model, the following equation is used:

$$Yt = \beta 0 + \beta 1 GDPt + \beta 2 EPt + \beta 3 OP_{Gt} + et \qquad (1)$$

Y represents the dependent variable:

Current Account (*LCA*): the logarithm of the current account represents the difference between the value of goods and services exported by the country versus goods and services imported by the country.

The independent variables are as follows:

Gross Domestic Product (*GDP*): refers to the annual percentage growth rate of GDP at market prices. As an indicator of economic activity, it can show two contrasting signs. The output gap is negative when actual output exceeds the potential value as a result of inflationary pressures, whereas the output gap is positive when actual output exceeds the potential value.

Oil prices (*LOIL*): Oil prices are measured using the logarithm of European Brent crude oil spot prices. An increase in the price of oil will generally have a negative effect on the current account by affecting production costs.

Electricity Production (*LEP*): The logarithm of electricity production (measured in TWh) represents the direction of economic activity. There can be a positive effect if it is used mostly for productive purposes, but a negative effect if it is used primarily for consumption. (Note that, as a result of non-technical transmission and distribution losses, the production factor is taken into account rather than the consumption factor in developing countries).

The stochastic error (e): refers to a random error in the data. This error distribution is assumed to have a zero mean and a constant variance of, which, indicating white noise properties.

6. DESCRIPTIVE AND EMPIRICAL RESULTS

6.1 Correlation analysis and basic statistical indicators

As shown in Table 1. A correlation analysis has been performed among the variables of the study in their level form. As the economy and population grow, there is a greater need for energy production. This is why there is a high correlation between electricity production from one side, and the current account and GDP on the other side. Further, oil prices are highly correlated with the current account, whereas the rest are not correlated.

Table 1. Correlations between variables

Variables	*CA*	*GDP*	*EP*	*OP*
CA	1	0.3991	0.5315	-0.6209
GDP	-	1	0.8183	-0.1414
EP	-	-	1	-0.3094
OP	-	-	-	1

Table 2. Provides basic statistical indicators. Standard deviation is always influenced by the volume of the mean; the electricity production variable shows the smallest mean, indicating that the data are tightly centered around the mean and the standard deviation is low.

Table 2. Descriptive statistics

Variables	*CA*	*GDP*	*EP*	*OP*
Mean	1922.7	4.0742	2.1	63.8477
Median	1705.25	3.0606	2.09	63.02
Maximum	4249.8	8.5672	2.6	111.63
Minimum	54.7	-1.5695	1.57	24.46
Standard Deviation	1179.131	2.664	0.3053	28.177
Skewness	0.3676	0.2375	-0.1327	0.3159
Kurtosis	2.1279	2.4377	1.9205	2.0288
Jarque-Bera	1.1926	0.4966	1.1327	1.2304

Probability	0.5508	0.7801	0.5676	0.5405
Sum	42299.4	89.633	46.2	1404.65
Sum Sq. Dev.	29197357	149.0367	1.9572	16672.77
Observations	22	22	22	22

6.2 Unit root analysis

Stationarity is critical to the analysis of time series. A stationary process is one whose statistical characteristics remain constant over time. A stationary time series must meet two essential requirements (Baumohl and Lyocsa, 2009).
Firstly, the mean and variance of a time series should remain constant over time in order to ensure that the expected value of the data is both finite and consistent. If this condition is not met, it could result in the inability to analyze the generated data within the same population or unpredictable results.

As a second requirement, there must be a constant variance over time. To put it another way, the covariance value should only depend on the distance (lag) between two time periods, not the actual time.

Phillips-Perron tests (PP) are among the most popular stationarity tests that examine the null hypothesis of having unit roots in each time series. If the PP is negative, then the null hypothesis will be rejected with greater confidence at a given level of confidence.

For each variable, three specifications were used: (-) without intercept (-) with intercept and trend (-) with intercept and trend.

Statistical tests were conducted under the null hypothesis that all variables were unit roots. Based on Table 3. the PP test failed to reject the null hypothesis of unit root for all specifications at a significance level of 5 percent. As soon as the first difference I (1) is taken, the null hypothesis for the variables in all specifications is rejected. . Results indicate that variables are integrated by an order of I (1), which allows for further examination.

Table 3. Phillips-Perron unit root test

Variable	Level						First Difference					
	Intercept		Intercept and trend		None		Intercept		Intercept and trend		None	
	Adj T-Stat.	Probability	Adj T-Stat.	Probability	Adj T-Stat.	Probability	Adj T-Stat.	Probability	Adj T-Stat.	Probability	Adj T-Stat.	Probability
LCA	-2.89	0.06	-3.34	0.09	-0.96	0.29	-11.8	>0.01	-12.3	>0.01	-9.01	>0.01
GDP	-1.76	0.39	-2.32	0.41	-1.82	0.07	-4.51	>0.01	-4.57	0.01	-4.45	>0.01
LEP	-1.07	0.71	-3.4	0.78	-9.53	0.29	-6.61	>0.01	-6.92	>0.01	-6.61	>0.01
LOP	-1.75	0.39	-1.62	0.75	0.52	0.82	-3.76	0.01	-3.82	0.04	-3.77	>0.01

Adj T- stat. refers to the adjusted T test statistic.

6.3 Cointegration analysis

Cointegration is used to detect situations where two or more nonstationary time series are integrated in a manner that maintains equilibrium over time.

With cointegration estimation, a first difference vector autoregression is estimated, along with variables in the lagged level. Johansen-Juselius examines cointegration for multiple time-series and allows for more than one cointegration relationship, which this study is planning to employ.

Johansen-Juselius methodology has two test types. The first type is the trace test in which the null hypothesis for the trace is the number r=r*>k of cointegration vectors, and the alternative hypothesis is the r=k, according to the following equation:

$$i\lambda trace = -T\sum_{i=r+1}^{n}\{ln\,(1-\hat{\lambda}\,i\}) \qquad (2)$$

In addition, there is the eigenvalue test, which is of the second type. Denoted by ($\hat{\lambda}\, i$), the null hypothesis for the alternator test is r=r*+1, as follows (Hjalmarsson and Osterholm, 2007):

$$(\lambda max(r, r\ +\ 1) = -T\ ln(1\ -\ \hat{\lambda} r\ +\ 1) \qquad (3)$$

The results presented in table (4) indicate that there is at least one cointegrating equation between the variables at a significance level of five percent, indicating the existence of a cointegration relationship. VECM can be used to assess the intensity of the cointegration relationship based on these outcomes.

Table 4. Johansen cointegration test

Hypothesis	Eigenvalue	Trace Test			Max Eigen Value		
		Trace statistics	0.05 Critical Value	P-value	Max- Eigen statistics	0.05 Critical Value	P-value
None*	0.765215	55.61731	47.85613	0.0079	28.98167	27.58434	0.0329

** Indicates rejection of the hypothesis at a level of 0.05.*

Testing for the normalized cointegrating coefficients, based on the T-statistics absolute value, table (5) shows that in the long-run, only the GDP has a positive significant effect on the current account, while oil prices and electricity production affect the current account adversely. Based on the results of this study, it is demonstrated that oil shocks are not transitory, and reliance on fossil fuels negatively impacts Jordan's current account, which contradicts Mohaddes and Raissi (2011); Tahtamouni et al. (2017) as Jordan suffers when oil prices decrease. Furthermore, even if grants and remittances support the current acount in the short run (Hassan and Holmes, 2015), the long-run effect on the current account is not negligible. According to the results for electricity production, as production increases, the current account deficit increases, which is attributed to the growing population, since energy demand is increasing by 5% annually and is still going up (Alrwashdeh, 2000), accompanied by a lack of productive activities in the economy and geopolitical events that adversely affect the economy.

The production of electricity has a negative impact on the current account, which indicates that most of the energy produced is allocated to consumption rather than productive economic activities.

Table 5. Normalized Johansen cointegration coefficients

LCA	*GDP*	*LEP*	*LOP*
1	0.472832	-4.064333	-1.294422
	-0.08761	-1.79693	-0.26079
	[5.39687*]	[-2.26182*]	[-4.96352*]

() Standard errors & [] T- statistics
** Denotes significance at 5 percent level.*

6.4 Vector error correction model (VECM)

Granger (1983) defined cointegration as a phenomenon in which non-stationary processes can show linear stationary combinations. The two time series are considered cointegrated when they exhibit a linear relationship. Typically, linear combinations are derived from economic theory and are regarded as long-term equilibrium relationships. If all regressors are stationary at the first difference I (1) and not cointegrated, statistical results may be considered spurious (Zivot and Wang, 2006).

Cointegration tests are used to detect situations in which two or more non-stationary time series have been integrated in such a way that they cannot stray from a state of equilibrium in the long run. It is designed to assess the degree to which two variables are responsive over time to the same mean price value.

In order to select the optimal lag period, we used the Akaike Information Criteria (AIC) and the Hannan-Quinn Information Criteria (HQ). According to the results, one period is the optimal lag period for the current account model.

Based on the findings presented in table (6), with one cointegrating vector, VECM results shows the ECM coefficient is both negative and statistically significant. The estimation of the VECM using a current account model has resulted in a cointegration relationship. Using equation (1), table (6) presents the ECM short-run results.

$$\Delta Y = \beta 0 + \sum_{1=1}^{P-1} \beta 1 \Delta GDP_{-1} + \sum_{1=1}^{P-1} \beta 2 \Delta LEPt_{-1} + \sum_{1=1}^{P-1} \beta 3 \Delta LOP\_Gt_{-1} + \pi\, ECTt_{-1} + et \qquad (4)$$

Where:

- Δ: the first difference
- EC: error correction term
- et: random error

The speed of adjustment toward long-term equilibrium is 9.99% per period, which implies the dependent variable will reach equilibrium within approximately one period. At the level of 5%, none of the explanatory variables has a statistically significant impact on the current account.

Table 6. VECM short-run results

ECT	*Δ(LCA(-1))*	*Δ(GDP(-1))*	*Δ(LEP(-1))*	*Δ(LOP(-1)*
-0.999964	0.253003	-0.361584	2.868589	0.164602
-0.30283	-0.24674	-0.18231	-2.44297	-0.83521
[-3.30210*]	[1.02537]	[-1.98333]	[1.17422]	[0.19708]

Standard errors and T-statistics are denoted by () and [], respectively.
** Denotes significance at 5 percent level.*

In accordance with Table 7. Diagnostic tests were applied to the model, and the results indicated that at a significance level of five percent, we failed to reject the null hypothesis of no serial correlation and heteroskedasticity.

Table 7. Residual Tests

Model	VEC Residual Heteroskedasticity Tests (Levels and Squares)	VECM Residual Serial Correlation LM Tests
	Prob. Chi-Square	Prob. Chi-Square
Current Account	0.4894	0.9664

6.5 The causality test

According to statistical principles, the causality test is used to predict the outcome of one time series from another (Wei, 2016). A Granger causality test based on Vector Autoregression Models (VARs) is used to examine the causal relationship between the variables.

According to Table 8. There is only one unidirectional causal link running from economic growth to the current account.

Table 8. VAR Granger causality/block exogeneity Wald tests

Dependent Variables	Independent Variables			
	LCA	*GDP*	*LEP*	*LOP*
LCA	-	3.933613	1.378801	0.03884
		(0.0473*)	-(.2403)	(0.8438)
GDP	0.077592	-	0.312909	0.252087
	(0.7806)		(0.5759)	(0.6156)
LEP	1.544858	1.422367	-	2.356871
	(0.2139)	(0.233)		(0.1247)
LOP	0.43138	0.68788	0.005092	-
	(0.5113)	(0.4069)	(0.9431)	

Independent variables are shown in the column, while dependent variables are shown in the rows.

Values in () represent the p-values**.**

* Denotes significance at 5% level.

6.6 IMPULSE response function (IRF)

The shock's effect on the same indigenous variable or on another variable is measured by the IRF (Lutkepohl, 2005). As a result, it is possible to determine how each variable reacts to innovations in the other variables.

Since oil prices are at first difference I (1), a shock of one standard deviation to the growth rate of real oil prices will result in permanent increases in real oil prices, where when we observe impulse responses, the shock decays exponentially. According to Table 9. A one-standard deviation shock to the oil real price growth leads to a statistically significant increase in the current account deficit, but the effects are easined after about 10 periods, which means that the effects are short-lived.

Table 9. VECM impulse response function

Period	*LCA*	*GDP*	*LEP*	*LOP*
1	0.948553	0	0	0
2	0.36115	0.006688	0.095327	-0.258
3	0.082857	0.638474	0.005653	-0.303
4	0.070511	0.569535	0.01343	-0.1118
5	0.219667	0.346374	-0.008473	-0.1589
6	0.206529	0.431694	0.01214	-0.1616
7	0.188566	0.405989	0.010316	-0.1714
8	0.182667	0.438519	0.007459	-0.1707
9	0.18349	0.426887	0.008584	-0.1635
10	0.189059	0.421527	0.007364	-0.1673

6.7 Variance decomposition test

Variance decomposition can be used to attribute and decompose fluctuations caused by other variables when they affect the dependent variable. This allows a better presentation of the contribution rates of different variables and shows how each variable affects the dependent variable (Liu, 2019; cited in Yang-Chao Wang et al., 2021).

By simplifying a large number of variables, multivariate analysis reveals structures. The relationship between variables can be explained using vector autoregressive models. By applying the variance decomposition test to each variable in the model, we can determine the relative importance of each shock. Based on the order of variables in a given model, this study utilizes the 'Cholesky Decomposition' method to eliminate concurrent issues in multiple variables (Lutkepohl, 2010).

Table 10. Shows variance decomposition results, in which oil prices account for 9.94% of current account variability in the last period, while GDP accounts for 52.01 %, indicating that exogenous shocks have a significant influence on Jordan's current account.

Table 10. VECM variance decomposition

Period	*S.E.*	*LCA*	*GDP*	*LEP*	*LOP*
1	0.948553	100	0	0	0
2	1.051617	93.15331	0.004045	0.8217	6.02095
3	1.269755	64.32184	25.28685	0.56561	9.8257
4	1.39796	53.31949	37.45933	0.47585	8.74533
5	1.465549	50.76146	39.6697	0.43631	9.13253
6	1.550194	47.14437	43.21079	0.3961	9.24873
7	1.622645	44.37882	45.69833	0.36556	9.5573
8	1.699367	41.61755	48.32406	0.33522	9.72317
9	1.769333	39.46666	50.39889	0.31159	9.82285
10	1.836306	37.70034	52.05909	0.29088	9.94968

7. CONCLUSION

The study examines the correlation between oil prices and Jordan's current account, and explores the predominant purpose of electricity production, whether it is mainly for consumption or production activities. To evaluate the short- and long-term impact of oil prices on the current account, as well as other explanatory variables such as GDP growth and electricity prices, the study uses the Johansen cointegration test and the VECM approach and other diagnostic tests.

Empirical results show the error correction model to be significant with the anticipated negative sign for its coefficient. In the short run, variables have no significant effect on the current account. While in the long run, GDP affects the current account positively, whereas oil prices and electricity production have a significant negative effect on the current account. Based on the results of this study, it is demonstrated that oil shocks are not transitory, and reliance on fossil fuels negatively impacts Jordan's current account, which contradicts Mohaddes and Raissi (2011); Tahtamouni et al. (2017) as Jordan suffers when oil prices decrease. Furthermore, even if grants and remittances support the current account in the short run (Hassan and Holmes, 2015), the long-run effect on the current account is not negligible. According to the results for electricity production, as production increases, the current account deficit increases, which is attributed to the growing population, since energy demand is increasing by 5% annually and is still going up (Alrwashdeh, 2000), accompanied by a lack of productive activities in the economy and geopolitical events that adversely affect the economy. The study also found only one unidirectional causality running from GDP to the current account.

Based on the study's conclusions, policymakers should diversify the economy and reduce the economy's dependence on oil in order to minimize the adverse effects of oil price fluctuations on the current account.

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Teaching Mathematics through Computational Thinking: A Project Description

András MARGITAY-BECHT[a,b*]

[a] *Eötvös Lóránd University, Faculty of Informatics, Department of Media and Educational Technology, 1117 Budapest, Pázmány Péter sétány 1/C, Budapest, Hungary, abecht@inf.elte.hu*

[b] *Saint Mary's College of California, Department of Economics, School of Economics and Business Administration, 1928 St. Mary's Road, Moraga, CA, USA am17@stmarys-ca.edu*

Abstract

This paper proposes a constructivist approach to teaching mathematics through computational thinking. Since mathematical and algebraic thinking share some key components with computational thinking, these connections can be used as an educational pathway. Because computational thinking can be more closely related to the students' everyday experiences than abstract mathematical constructs, approaching math from computational thinking might lead to more intuitive understanding and less anxiety for the students.

Keywords: Computational Thinking, Mathematical Thinking, Mathematics Education, Algebraic Thinking

1. Introduction

The term Computational Thinking arose from a desire to empower students, even children, through the wonders of computers to become more curious, educationally well-rounded, and possibly overcome their fear of mathematics. This would then enable them to more readily become involved with science and technology and could also provide them with a general improvement in their life outcomes.

Building on the above background, the main goal of this article is to demonstrate a way to demystify mathematics for students who have a robust background in computational knowledge. It is argued that both at the beginning of their educational career, in elementary school, and towards the end, late high school / early college, students with more robust computational thinking than mathematical skills can leverage the former to speed up their progression in the latter. It is then proposed that possibly the desired knowledge progression should focus on computational thinking first, and then expand mathematical thinking.

As a pilot project, an ideal target audience for this way of teaching is first-year computer science students. In Hungary, for example, nearly all students starting a computer science university program at ELTE (Eötvös Lóránd University) had taken advanced level computer science high school final exams, while less than a third of them took one in Mathematics. Since this population is comfortable with coding, testing out supplementary mathematics material with the constructivist mindset can deepen their understanding and reinforce the mathematics material.

* Corresponding author.

The article first will give a summary of the general issues of teaching mathematics, with a specific focus on teaching math in STEM (Science, Technology, Engineering and Mathematics). Then it introduces the origins of the term Computational Thinking, and the goals of the individuals who coined it. It will be shown that those goals are as valid now as they were decades ago, although some progress has been made to empower students. Then the article will proceed to introduce efforts to spread computational thinking to the students through their mathematics education and will conclude by sketching a proposed test workshop focusing on teaching introductory linear algebra using spreadsheet programming.

2. MATH EDUCATION

It has long been understood that a significant portion of the population is afraid of Mathematics. In his seminal book, Seymour Papert[1] devoted an entire chapter to "Math phobia". According to the 2012 PISA results[2], 30% of students have anxiety doing mathematics:

> One way that a student's negative self-belief can manifest itself is in anxiety towards mathematics. Some 30% of students reported that they feel helpless when doing mathematics problems: 25% of boys, 35% of girls, 35% of disadvantaged students, and 24% of advantaged students reported feeling that way. -- Page 18

This anxiety carries forward to the pupil's adult lives, which causes negative financial impact for them, and for the economy they live in as well[3]. According to a UK government report, around 8 million adults in England (that is over 15%, according to the Office for National Statistics[4]) have the numeracy skills of elementary school children, and 60% of disadvantaged pupils don't have basic math skills at the age of 16[5]. To address this, Prime Minister Rishi Sunak proposed compulsory math education for students until 18 years of age (compared to the current 16). The proposal is extremely controversial, as some feel this will make students' lives harder. Even some local mathematics education experts spoke up against the plan as they feel it will have the opposite effect than intended[6].

Focusing specifically on the transition from secondary to tertiary education, the situation is not better. Atuahene and Russel[7] found that US college students have great disparity by gender and race between their math scores, and their SAT scores barely contribute to college math success. Among German Economics students, Büchele and Feudel[8] saw a marked decrease in the ability to carry out symbolic calculations over the past decade, though an increased ability in reasoning and mathematizing was found. Among Math students in Italy, Di Martino and Gregorio[9] experienced a general crisis in transitioning to college level mathematics. The US Community Colleges in general seem to be struggling with transitioning students to College level mathematics[10].

2.1. Mathematics in STEM education

It is natural to think that science and engineering students are not affected by this difficulty, but research shows otherwise. In one Czech technical university, students were found to lack high school math knowledge[11], although they were aware of this shortcoming. Similarly in the Philippines, one university found that a majority (57%) of the incoming freshmen engineering students were not mathematically college ready[12]. In the United States a strong correlation was found between high-school math performance and graduation rates in STEM[13] and engineering[14]. Furthermore, students who can't start their college career with Calculus directly were found to be less likely to graduate with their engineering degree[15]. At the community college level, a two-prong problem emerged. Cohen and Kelly[16] found that nearly 70% of STEM students who participated in a remedial program failed Algebra and trigonometry, and even those who did pass kept underperforming students not on the remediation track. On the other side, students who were placed in too low of a math course were also found to be more likely to drop out of the STEM pathway[17].

Looking at online remedial Mathematics attempts at engineering schools provides a mixed picture. In Boise State university, NSF (National Science Foundation, a government fund to support the sciences) funded a grant to offer free online preparatory course for Calculus and pre-calculus[18]. They experienced higher participation from female and underrepresented minorities in the program than in the STEM degrees, and participants attained higher retention rates in the STEM programs. Similar results were found at a Historically Black College[19]. At the University of Texas, an intervention program aimed at students who nearly qualified for Calculus seen mixed results[20]. They

found that students' performance greatly declined if they had to work a summer job while participating in the intervention course. In the University of Louisville a similar intervention saw some general skill improvement among students, but their grades in follow-up classes did not improve[21].

With the backdrop of math anxiety, integrating computational thinking and the allure of the computer to mathematics education could possibly prevent the development or help manage the treatment of math anxiety, leading to better results at college and university.

3. COMPUTATIONAL THINKING

This chapter provides a quick overview of the history of the term "computational thinking", paying careful attention to the origins and original purpose, in addition to the transformation of the term over time.

3.1. The beginning: Papert

The term computational thinking was coined by Seymour Papert, one of the designers of the Logo programming language, in his book Mindstorms: Children, Computers and Powerful Ideas[1]. The book's main focus is to discuss the ability of computers to stimulate children, to encourage them to be inquisitive and instill a desire for learning through the attraction of computing:

> "The computer is the Proteus of machines. Its essence is its universality, its power to simulate. Because it can take on a thousand forms and can serve a thousand functions, it can appeal to a thousand tastes." -- Page viii

Papert sets a grand vision for the computer: to transform society by breaking down the barriers around learning science and technology, and even be able to make "mathphobia" disappear. The notion of "mathphobia" is so central in the book it has its own chapter dedicated to it.

Looking at this book from 43 years ago can fill the reader both with hope and despair. Many of the goals set forth in the book have not been achieved two whole generations later. Programming is still primarily done by engineers, a special class of people who do this as a profession, even though physical access to the hardware has become ubiquitous. At the same time, and possibly most importantly, computers **did** start to break down the preconceptions of "who can understand what and at what age" (page 4).

The book sets out two basic premises:

1. It is possible to design computers so that learning to communicate with them can be a natural process.1

2. Learning to communicate with a computer can change the way other learning takes place.

It is arguable that since the release of Scratch[22] and Scratch Junior, the first goal has been achieved (by the same MIT that was Papert's home institution). The second point is the same point that has been argued ever since by everyone supporting computational thinking to be part of the K-12 curriculum.

Interestingly, the term "computational thinking" appears only once in the book, and it is used in reference to the failures of computer clubs to make computers exciting. Instead, the entire book is an expansion of the idea of a computational way of seeing the world, modeling, thinking (computational geometry, computational drawing, pre- and computational cultures, etc).

The book was re-published in 1993, and Papert followed it up with an article a few years later[23], but neither had the immediate transformative impact he hoped for.

3.2. Re-introduction: Wing

In her extremely influential (over 10000 citations) three-page article, Wing[24] re-introduced the notion of computational thinking. The key statement is right in the second paragraph:

> "Computational thinking is a fundamental skill for everyone, not just for computer scientists. To reading, writing, and arithmetic, we should add computational thinking to every child's analytical ability." (ibid.)

The article continues to highlight how ubiquitous computational thinking already is in everyday life, and how everyday activities can be re-phrased in the terminology of computational thinking (for example, packing a backpack the night before is prefetching and caching).

Instead of providing us with a concise definition, the article lists the characteristics of computational thinking:

Conceptualizing, not programming: thinking in bigger picture than coding

- *"Fundamental, not rote skill"*: highlights that computational thinking is required to succeed in today's society

- *"A way that humans, not computers, think"*: highlighting the creativity computational thinking and computational devices enable in humans

- *"Complements and combines mathematical and engineering thinking"*: foreshadowing the purpose of this article, computational thinking is related to the other two

- *"Ideas, not artifacts"*: computational thinking is not the things we build with it, it is the way we build them

- *"For everyone, everywhere"*: the goal for computational thinking is to be so ubiquitous that we won't have to talk about it separately anymore

In her follow-up article, Computational thinking and thinking about computing[25], the first sentence states that

> "Computational thinking is taking an approach to solving problems, designing systems and understanding human behaviour that draws on concepts fundamental to computing."

Key areas of computational thinking are:

- *"Computing: abstraction and automation"*. The abstractions of computational thinking are richer than that of mathematics or physics because (a) Computational abstractions can be more general, non-algebraic, for example stacks, algorithms, the programming languages themselves (b) Since computational abstractions are implemented in the real world, they are forced to deal with edge cases and failure cases (c) Computational abstractions work in layers, and we usually work with two or more layers simultaneously (the current layer of interest, and the layer above or below the current layer), and we use interfaces to traverse these layers

- *"Computational thinking everywhere"*: already at the time of the article, more and more disciplines use computational thinking. In the intervening 15 years, this utilization has spread exponentially. Vision 1 states that "I envision that computational thinking will be instrumental to new discovery and innovation in all fields of endeavour", and we can readily conclude that by now it has become a reality, from natural sciences through social sciences all the way to art.

- *"Computational thinking for everyone"*: the article clearly identifies that if computational thinking will be so transformative as by now we see it is, it becomes critical to teach it effectively to everyone. Wing states a challenge and a vision here: What are the most effective ways of teaching computational thinking to a child? To lead to a world where computational thinking is an integral part of childhood education.

Wing has been an evangelist of this notion ever since, through follow-up articles[26], YouTube videos[27–29], and as Corporate Vice President of Microsoft Research between 2013 and 2017.

3.3. Computational Thinking in education

Ever since Wing re-introduced the term, computational thinking has been spreading in K-12 and college curricula. In the 2010s, interest in integrating computer literacy and/or computational thinking in school curricula, for example in Australia[30], England[31], Finland[32], Hungary (see below), Sweden[33] and the USA[34].

Computational thinking seems to live up to its promise, in that it appears to be a strong predictor of academic performance[35]. It can be utilized outside engineering and STEM education as well [36–38], and can improve student learning experience and outcomes even for students who are not in the STEM field[39]. A bit of a challenge when it comes to computational thinking education is that both its teaching[40] and assessment[41] seems to focus too much on programming at the expense of the other aspects of computational thinking. When analyzing ways of teaching computational thinking, Taslibeyaz et. al [42] found that there are many different definitions of computational thinking, but there seems to be a focus on problem solving and lifelong learning. However, when assessing the effectiveness of teaching, the focus seems to be on tests, and real-life reflections are not included or real-life skills tests are usually not performed. In certain cases, however, Computational Thinking implementations can effectively integrate other aspects of the field [43] to teach more well-rounded engineers.

3.4. Computational Thinking education in Hungary

The national core curriculum of 2012 [44] lists the following nine key competencies, two of which are related to computer literacy and technology:

- **Competence in natural sciences and technology**, with a specific focus on being able to utilize and understand technologies, be driven by critical thinking, be able to identify and reject false information, and be dedicated to environmental sustainability

- **Digital competence**, focusing on information and telecommunication technologies, the use of office software and electronic communication

While the focus is primarily on user level skills and understanding the opportunities and risks of digital technologies, this curriculum already calls for certain computational thinking skills at an early age. For example, during grades 1-4, students were to learn:

- Identifying properties of people and objects

- Interpreting and grouping data

- Everyday examples of algorithms

- Making a drawing with Turtle graphics

- Recognizing, expressing and executing simple algorithms

- Solve problems, partially independently, partially with the help of the teacher

These skills were then further developed in ages 5-6, 7-8 and 9-12.

Barely three years after the publication of these goals, local experts warned that more needs to happen for the next update of the core curriculum[45], as performance of the Hungarian students in international competitions were slipping. A key insight of the paper is that information technology is progressing rapidly, while national curricula are changed only infrequently, which makes keeping up complicated.

The 2020 update of the national curriculum[46] took the recommendation to heart. The basics of robotics and coding appears as early as grades 3-4, and continues throughout the curriculum. Grades 5-8 see block coding and algorithmic thinking, and robotics as separate areas on top of the user-level goals. In grades 9-12 formal

programming languages appear. This curriculum is expanded by various design concepts and creative problem solving approaches, integrating key components of computational thinking into the curriculum.

4. COMPUTATIONAL THINKING IN MATH EDUCATION

To address the issues of Mathematics understanding, some have suggested utilizing computational thinking and the allure of computers to overcome the fear of Mathematics. Based on Papert's work, an approach called constructionism emerged. Students are learning through design, through active construction[47]. Learners are given freedom to learn constructively, but this leads to differences in learning paths among students, some guidance might be needed to achieve the planned learning goal. In addition, some extra effort needs to be paid to ensure that learning in one context transfers to learning in another context.

This approach was successfully utilized by many in the Logo educational space, for example [48, 49]. In the past decade, with the advent of Scratch, a Scratch based approach sprang up in the United Kingdom called ScratchMaths. As it is in its introductory phase, the results are mixed. Students are more engaged, and teachers report increase in self-motivation [50, 51]. Moreover, students seem to show improved computational thinking skills[52], though the same study found no improvement in their Math score.

In an attempt to close the Computational Thinking gap, Sweden decided to integrate Computational Thinking into Math education in the K-9 space[53]. In this context, Heintz and Mannila[54] found some potential dangers. On page 7, they write: "Scratch in all its greatness also seems to lure people into believing that they know more than they do", describing how teachers had difficulty translating their Scratch skills to other programming languages, or even to teach each other the skills they acquired. A different Swedish study saw a few additional issues: students didn't have the level of digital fluency teachers assumed, and pupils sometimes felt that the inclusion of programming caused a conflict between perceived expectation of the teacher and the programming task[55]. Wu and Yang[56] found that mathematics teachers need to learn more about programming before they can successfully integrate computational and mathematical thinking. A French study found outright negative experience with using Scratch in teaching Math concepts[57]. Overall these difficulties seem to stem from the introductory aspect of these projects, as the positive experiences are perception forming, while the negative ones appear to stem from short-term implementation issues.

At the university level, Broley et. al.[58] introduce a useful framework for describing the level of programming used in mathematics education. Level 0 utilization just observes the results of some computational approach, while Level 5 includes actual coding. They found that most math professors do not use programming, and even when it is used, usually it is utilized at the lower levels. A South African project[59] is a good example of a lower level usage: students are shown and explained code that creates quadratic equations, but they are not the ones writing the code itself. Brock University has an opposite approach, a true Level 5, where students are creating so-called Exploratory Objects to drive understanding of mathematics[60, 61]. Lockwood and De Chenne [62] showcased a Level 5 case study where students used Python to understand basic combinatorics understanding. The positive results of this project inspired the authors to call on undergraduate math educators to incorporate more algorithmic and computational thinking into their education[63].

5. PROJECT EXAMPLES AND MOTIVATIONS

There are multiple life stages where students might be more advanced in programming than in mathematics. These situations can happen if they received a particularly thorough training in programming basics as young children. It also happens a decade later in their education when entering college: in the Hungarian case, for example, most of them are experienced programmers, but have not encountered calculus, linear algebra, graph theory or any other advanced topics. In cases like this, utilizing their programming skills to provide them with deep insight into new mathematical concepts can lead to quicker and deeper understanding. Being able to design and implement a program will quickly internalize the mathematical concepts, all that is left is the semiotic transition from the computational context to the mathematical one.

5.1. Understanding multiplication through SCRATCH programming

Kids who have started working with introductory robotics and programming toolkits in the first few years of school will have a robust understanding of simple Scratch programming long before the concept of multiplication is introduced. Alternatively, if they engage with programming after the introduction of multiplication, they might still be able to internalize the concept better if they code.

The attached quick Scratch program was created by an 8-year-old re-using parts of their 2-dimensional "Minecraft" Scratch game to illustrate the process of multiplication. The user can enter two values, and then the square object will proceed to create a rectangle of clones determined by the values. Inside the inner loop, the "Multiple" variable will be incremented, thus arriving at the correct result without using the actual multiplication operator.

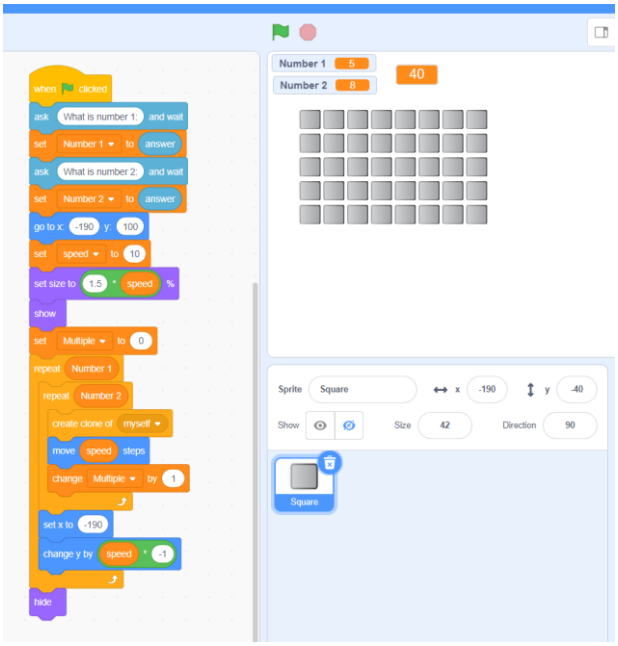

Fig. 1. Simple Scratch code created by an 8-year-old to illustrate and perform multiplication

This simple coding exercise:

- Explains the rectangular representation of multiplication
- Explains the relationship between multiplication and addition
- Demystifies multiplication
- Prepares the student for concepts of divisibility and numbers being made up of multiples of other numbers

Furthermore, the exercise can be extended depending on the interest of the pupil, to further the engagement:

- The sprite representing the element can be replaced
- The sprite can be animated while it draws
- Three-component multiplications can be implemented by drawing multiple rectangles

The same concept can be used a few years later to understand powers.

5.1.1. Understanding Linear Algebra through spreadsheet programming

On the other end of the educational spectrum, a subset of 11-12th grade high school students and 1st year college students have robust programming skills but limited mathematical understanding. This can easily happen among computer science students: while they have above average computer science skills (since that was their interest that drove them to the major), they often have only baseline math skills.

So far, it was shown, that:

- Mathematics anxiety is a common phenomenon
- It also affects students who are in a STEM program, like computer science
- In Hungary, there is a strong foundation of computational thinking in the K-12 (3-12) years, which is reinforced by self-motivation for computer science students

Putting the above together, the proposal is to create a set of supporting workshops for first year programming students that utilizes the strong programming background when introducing new mathematical concepts. At the Eötvös Loránd University, at the Faculty of Informatics, first year students start their studies with a subject called Basic Mathematics[64]. This course first starts with a refresher of high-school level concepts like algebra, trigonometry, basic mathematical logic and equalities (the recommended material for this part of the course is high school level textbooks). The slightly longer second half of the course, however, is new to most students: introduction to the basics of linear algebra (vectors, operations, independence, bases, matrices, matrix operations, rank, determinants, linear equation systems, inverse matrices, eigenvalues and -vectors, Euclidean spaces). These concepts are relatively speaking simple, yet cause significant stress among the students. Introducing them through programming can start the process with both a visual and operational understanding, similar to how introducing multiplication through coding left the young children with an intrinsic understanding of the operator.

An example assignment could have them design and code a matrix multiplication program when introducing matrix multiplications. Doing this will:

Enable them to dig deep into the workings of the algorithm:

- What exactly do we multiply by what?
- What do we add to what?

As noted by Wing [25], the implementation will force them to understand edge cases:

- Why do the number of columns on the left matrix have to be equal to the number of rows on the right matrix?
- How to handle it if they are not?

There are multiple programming environments suitable for this introduction. The Python environment makes it inherently comfortable to work with matrices through Pandas dataframes. However, something even lower level, like Visual Basic in Excel or JavaScript in Google Sheets makes the spreadsheet handling part of the exercise trivial, and the students can directly focus on the algorithm in question.

6. EXTENSIONS AND NEXT STEPS

The first test of this approach will be the workshops that are currently scheduled to be offered in the Fall of 2023. Based on the feedback received there, the program can be expanded multiple ways:

- Fine-tune the linear algebra material
- Expand the material covered to the entire underlying course
- Develop a scalable set of materials that can be presented as a MOOC

Once the program proves successful for the computer science students, it can be expanded with introductory computational thinking components to make it applicable for the general audience.

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The Information Overload Phenomenon: An Introduction to Different Frameworks and Models

Thomas RACHFALL[a*], Robert BOHNKE [b]

[a] *Hochschule Merseburg, Fachbereich Wirtschaftswissenschaften, Eberhard-Leibnitz-Straße 2, 06217 Merseburg, Germany, E-Mail: thomas.rachfall@hs-merseburg.de, Phone: 49 (0) 3461 46 2449*
[b] *Hochschule Merseburg, Fachbereich Wirtschaftswissenschaften, Eberhard-Leibnitz-Straße 2, 06217 Merseburg, Germany*

Abstract

Information overload (IO) is critical for individuals and organizations. IO is described, based on work from various scientific disciplines, as a circumstance in which the time required to process information, necessary for interactions and internal calculations, is exceeded [1]. Furthermore, the problem arises that subjects have less attention for relevant information, which further limits the effectiveness of processing information [2]. In addition to the reduction in efficiency, IO is a first-order problem for people's health. Being permanently exposed to an overabundance of information can lead to stress, illness and reduction of satisfaction at work or in private life [3]. Furthermore, IO causes considerable damage from an economic perspective. It is estimated that IO, or more precisely its effects, costs companies around $650 billion per year [4]. Research in the field of IO has taken on an enormously broad spectrum in recent decades, addressing a wide range of problems in different disciplines [5]. Despite of this intensive research during the last decades this complex scientific discipline lacks comprehensive methods for its evaluation and improvement. Based on an extensive literature review this paper introduces some conceptual models and frameworks that offers the opportunity to investigate the influences of different causes to the IO phenomenon. Such models are essential to design better information flows.

Keywords: Information overload, information processing, cognitive load, cognitive demand, decision making, problem solving

1. INTRODUCTION

IO is an often mentioned phenomenon in our globalized society. Most people use the term IO and mean that they just get too much information. However, the term IO is by far more complex. Several scientific disciplines and circles are researching and discussing IO. Therefore, it is not surprising that there is an overload of words, which describe IO (Information flood, information smog, sensory overload, information explosion, cognitive overload, information load, information glut, knowledge overload, information fatigue syndrome, data overload, data explosion, cognitive load, etc.). Within the current publications of the last years the term IO prevail, but without ousting the other ones. Because of the immense number of existing terms and publications and the so included definitions, it is complicated to define the term IO properly. Like Edmunds and Morris [3] already described in one of the first literature reviews about IO, there is no universal definition identifiable in spite of all the publications. This is reasoned in the fact that IO can describe different situations, for example, an accumulation of information, which cannot be processed because of the limited possibilities of the human brain. An opposite meaning would have an overflow of information from which just small amounts are relevant. IO as a special kind of overload means an overload in consequence of information. The

* Corresponding author.

term contains negative aspects for individuals and/ or organizations. To put what has already been written into context, everybody must assume that humans live in a world where so much emphasis is placed on efficiency and productivity that we may have lost the ability to focus on useless knowledge or pastimes. Maybe this shows the loss for creativity and the ability to develop new ideas. It is ultimately unanswerable whether the information society's sense of efficiency suppresses creativity or also promotes it.

2. DEFINITION OF INFORMATION OVERLOAD

In 1988, Kroeber-Riel gave a very concise and precise definition of the concept of information overload in a journal in the field of marketing: "Information overload is the proportion of the information supply that is not needed by recipients." [6]. The business economist Arnold describes the effect of the information overload as an imbalance between information offers of products and the possibility of the information admission and/or - processing of consumers [7]. However, information overload can also occur within a communication process. This means that a person is confronted with an overloading number of insignificant information. As a result, the person can only process absorption of the information presented with difficulty or, in some cases, not at all. Jacob Jacoby [2], who is considered a pioneer of the topic of information overload, related the findings and statements of his time to the situation of people shopping in a supermarket. He assumed that an information overload of the people was accompanied by the large selection of similar products and different brands [7]. However, this paper tries to find a suitable definition, which can be used as a basement for further investigations.

One of the first general definitions was established by Milford et al. [8]:

"Information overload occurs when the amount of input to a system exceeds its processing capacity."

This classic definition was then expanded by Tushman and Nadler [9] and explained in this formula:

information processing requirements (IPR) > information processing capacities (IPC)

This two terms can be explained as follows:

- Information processing capacity: Individual information processing can be characterized by individual aspects. The core question is: How large is the individual cognitive capacity?
- Information processing requirements: Information processing can also be characterized by non individual aspects. The core question is: How much capacity is needed to solve the problem / make a decision?

Thereby the terms requirement and capacity can be measured under the variable: available time [10]. IO indicates therefore a capacity and requirement problem as well as a time problem. Therefore, this paper subsequently refers also to the definition of Bork [11]:

"IO exists, if the given time under consideration of the systems period capacity, does not last out to process the accruing information properly during the decision making process/ task completion."

This definition offers consciously a range, because the exact moment on which IO occurs is hardly to determine. The transition from underload to overload is fluent because the dysfunctional effect increases continuously [11]. Accordingly, it is possible to define for example an economic IO if the cost optimal information load is exceeded or a psychological IO if the system breaks down.[1]

3. DIFFERENT FRAMEWORKS AND MODELS WITHIN INFORMATION OVERLOAD RESEARCH

The review of interdisciplinary literature has detected gaps in IO research. Some existing models either offer a general description of IO or serve as a basis for recommendations to improve the conditions. Other models exist that deal with causes. This paper presents, two of the most quoted approaches from Moser et al. [12] and Eppler and Mengis [10] to explain IO. These models were chosen because they influenced IO research sustainable. However, both models cannot test or analyse single variables or influence factors.

[1] For a more detailed collection of definitions please see Bork [11] or Eppler and Mengis [10].

Above all, Moser et al. [12] detail the causes of IO in their research. They categorize them into two main areas: barriers and overextension. Barriers are thereby understood as external influence factors that handicap the processing of information. Affected individuals cannot handle this handicap and suffer IO. Barriers are then again sub classified in interruptions and obstructions. Interruption means that individuals cannot be concentrated on their tasks because of persistent incoming information (for example through incoming calls or emails). Obstructions can be separated into diversions, planning insecurity, functional disorders (technological problems with ICT; for example a too slow appearance of emails because of too big appendixes) and too much information. They all compete about attention and lead so to a diversion from the primary task. Overextensions are the effects of IO which result in qualitative bad or too much information. They influence the employee's performance. According to Moser et al. [12] this kind of IO is not new but is boosted by the development of ICT. Quantitative overextension can be on one hand the pure amount of, for example, emails and on the other hand, the circumstance of emails (for example because of large appendices). Another focus is extensive research. The overextension because of the amount leads to overload if the time to process the tasks is not sufficient. The phenomenon is enhanced by monotone tasks. Qualitative overextension leads to IO because of the absence of transparency, obscurity about the quality of information and unpredictability of tasks. All these factors appear especially under time pressure. Another qualitative point is the insecurity users feel with ICT due to its continuous development. Above all old people have an underlying fear to use new technology.

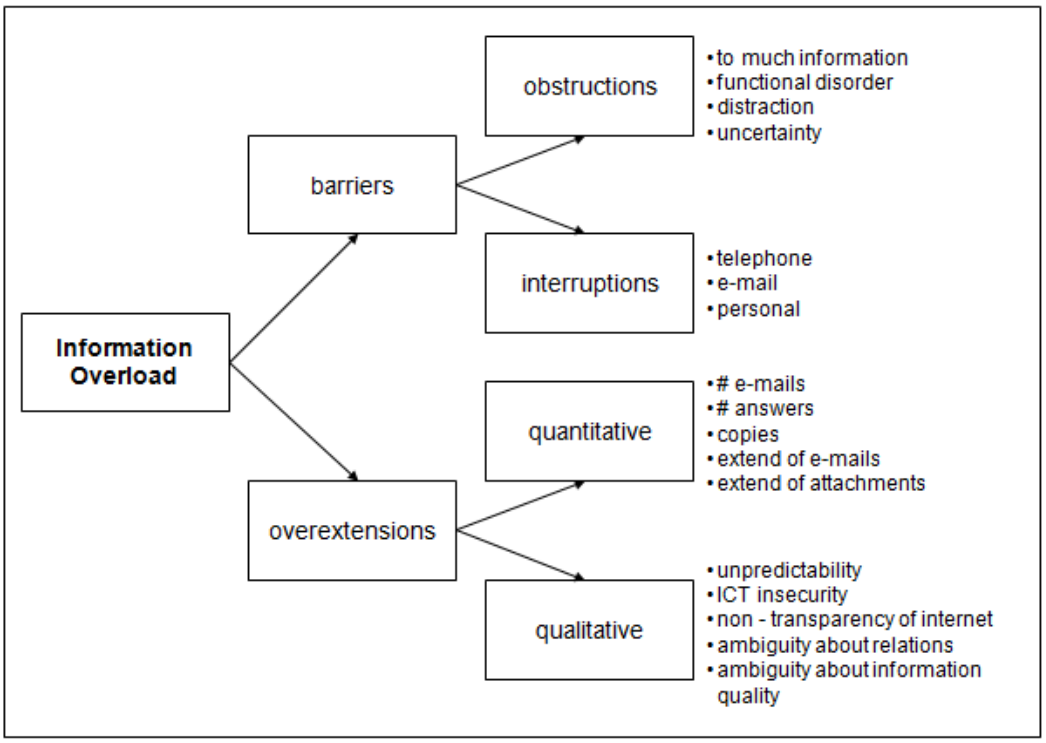

Figure 1: Information Overload model by Moser et al. [12]

In contrast to Moser et al., Eppler and Mengis [10] intention was to offer a more complete and less fragmented picture of IO. Therefore, they build up a model within there extensive literature review on the well accepted scientific approach of causes and effects (symptoms). The framework differs from the linear logic of Moser et al. and emphasizes "a system of circular, interdependent relationships". Additional Eppler and Mengis refer to the fact that this model cannot have a definitive solution for IO. "There will always be a need for a continuous cycle of improvement and refinement" [10]. The three components of the model are causes, symptoms and countermeasures. Causes: Eppler and Mengis [10] relates IO at organizational and interpersonal level to five different causes (organizational design, person, task and processes, information and IT). This holistic approach combines several of the mentioned causes of IO. Furthermore they indicate that IO does not occur because one of these factors, but because of a mix of them. All causes influence the two mentioned variables of IO information processing requirements (IPR) and information processing capacities (IPC). Symptoms: The effects of IO are divers. Described symptoms are among others a general lack of perspective, cognitive strain and stress, rising errors, lower job satisfaction and the inability to use information to make decisions. Today it is widely accepted that IO affect the performance negatively. Countermeasures: In there model Eppler and Mengis [10] consist also the numerous published countermeasures. He point out that the

countermeasure has often positive effects on several causes. Thereby the same organizational schema is used that classified the causes.

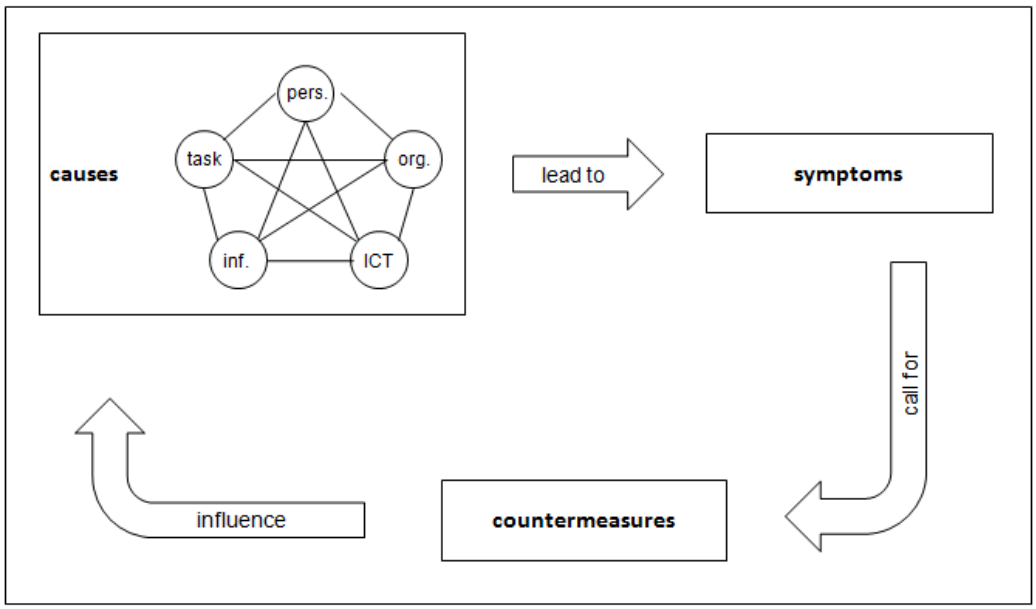

Figure 2: Information Overload model by Eppler and Mengis [10]

Beneath these two mentioned models a lot of other researchers influenced the IO research. As stated during the definition section Tushman and Nadler [9] laid the foundation for further IO research. They compared IPC and IPR and determined if IO exists in a specific situation. This model and the related definition of IO serve several scientists as a basis for their research. After this initial approach was published several papers about numerous variables were published which are involved in the IO process. Most of these published works are related to each other and are often even based on each other as it is shown in figure three.

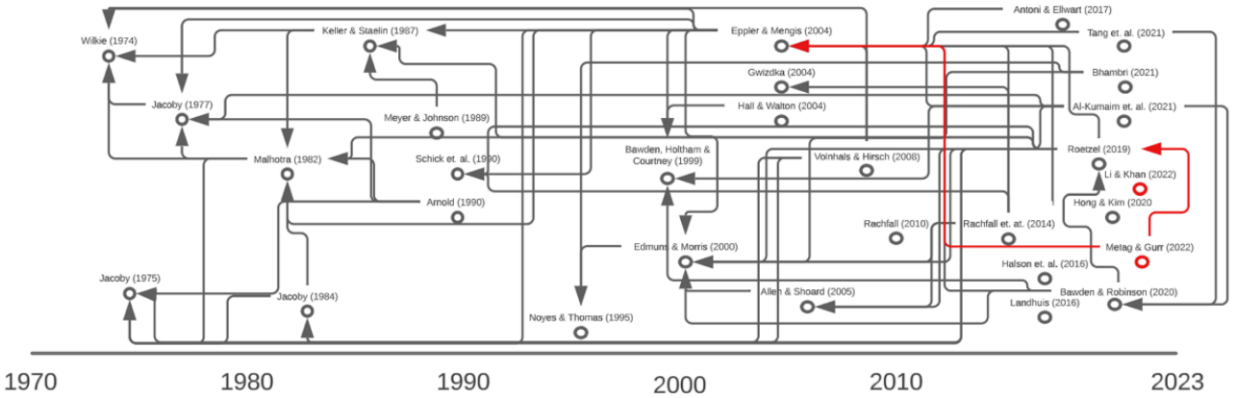

Figure 3: Timeline of IO publications and there relations to each other

It is important to recognize that most of the presented authors in figure three researched, which variables are influencing the IO phenomenon. Thereby all the considered approaches have in common that they are related to the SOR model by Braun and Pfohl [13]. This is also the main reason why they were chosen for this investigation. The scientists threat individuals as system, which receives stimulus (S) from the environment. Additional they have internal influence factors (organism=O), which together lead to a reaction (R). Figure four shows some of the most important approaches and there link to the SOR model.

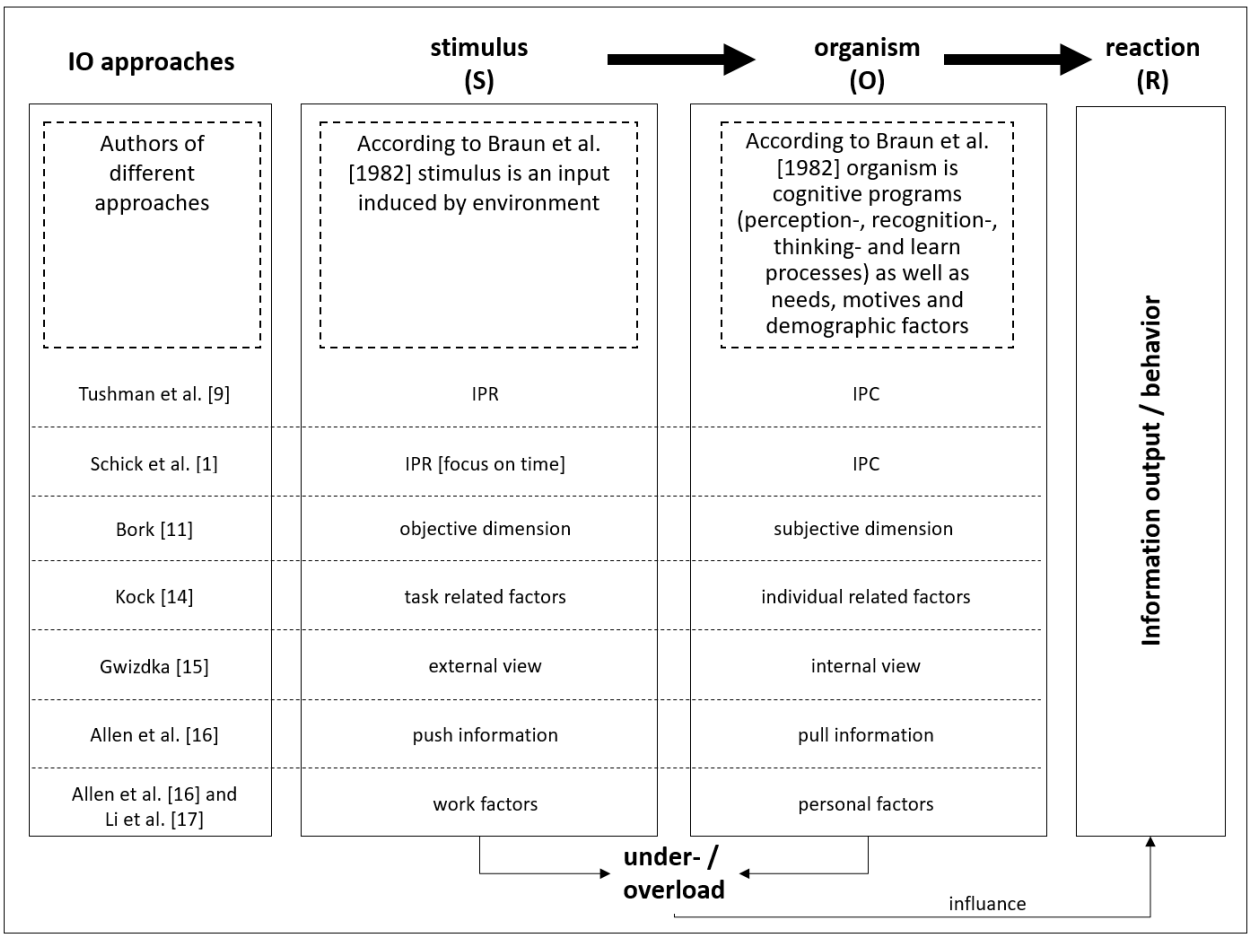

Figure 4: A Selection of IO approaches and there link to the SOR model

Both dimensions, the stimulus and the organism part, have again different influence factors, which have their roots in different scientific disciplines and methods of research. One of the most important and most reflected aspects is the complexity of a task. Complexity is thereby a task attribute and influences the stimulus. Furthermore, IO is connected with the topic of knowledge and some studies show that the individual and his or her willingness, interaction as well as the relevance of the task are other important factors. Another relevant aspect for an analysis of information overload is the amount of information and the preparation of information. All these factors influence the individual capacity or the requirements. The already presented references as well as their approaches are summarized the following table.

Table 1: Information Overload research

References	Presented model and research focus
Tushman and Nadler [9]	The information processing model compares IPC and IPR and determines if IO exists in a specific situation. This model and the related definition of IO serve several scientists as a basis for their research.
Jacoby [2]	Jacoby's information processing model postulates that consumers engage in a number of cognitive processes when making purchase decisions, including attention, comprehension, and memory retrieval. He justifies this with the invented U-curve.
Pfohl et al. [13]	The SOR model constitutes how external input is processed by humans and which variables influence this process.
Rassmussen [18]	Rasmussen expands the SOR model by several important connections within the variables.

Keller and Staelin [19]	Decision effectiveness is affected by the quantity and quality of information, with increasing quantity initially increasing effectiveness but eventually leading to decreased effectiveness due to information overload.
Schick et al. [1]	The research focuses on the variable time and exemplify that IO occurs, when the demand on an entity for information processing exceed its supply of time. Schick et al. defined the variable time as one of the major causes of IO.
Bork [11]	Bork showed that both subjective and objective dimensions influence the relation between IPC and IPR.
Hecker [20]	Hecker [1998, p. 31] explains in his model that personal barriers influence the problem solving process.
Edmunds and Morris [3]	It is possible to be exposed to an overflow of data. However, this is not necessarily the same as an information overload. In order for an information overload to occur, all data must first be processed into information. If this does not happen, there is not necessarily an information overload, but a data overload.
Kock [14]	The model by Kock shows the impact of individual and task related factors to IO. He uses a process centered view of IO that focuses on five different groups of causes.
Moser et al. [12]	The model determines the causes of IO and categorizes them in barriers and overextension. This comprehensive model showed how the different causes of IO lead to typical symptoms.
Eppler and Mengis [10]	The model lays out important topic clusters in IO and their Relationships (main causes of information overload, the symptoms, and appropriate countermeasures). Within their extensive literature review about IO, Eppler and Mengis developed a holistic model based on the scientific principle of causes and symptoms.
Gwizdka [15]	The research discusses internal and external factors. The approach focuses on constant and changing variables.
Allen and Shoard [16]	The model deals with the information behavior of managers (work patterns and personal interactions) and the modes of communication (information environment). They show the effects of the information pull and information push problematic.
Jungermann et al. [21]	Jungermann et al. differ in their research between the complexity of a problem and the type of informationsupplied as a driver for cognitive demand.
Li et al. [17]	The conceptual model compares individual and work factors. Furthermore, the impact of IO to work efficiency and quality issues is explained. Li et al. use five different dimensions of causes to determine the IO phenomenon
Rachfall et al. [22]	The influence of bad and (ir)relevant information on the information processing capacity and information processing requirements.
Antoni and Ellwart [23]	The model deals with the dysfunctional processes in information transfer in virtual teams and the resulting information processing overload. Information overload causes effects on information processing capacity (IPC) and information processing requirements (IPR).
Roetzel [4]	The research model addresses the concept of information overload, in which decision makers are confronted with a volume of information that exceeds limited cognitive capacity and thus can impair the effectiveness and efficiency of decisions. The inverted U-curve shows that as the amount of information increases, human performance first improves, then reaches a maximum, and finally declines.
Hong and Kim [24]	In their study, the authors refer to the quality of information as well as the sociodemographic and health status of the people involved.
Bawden and	Relationship of variety and complexity to the amount of information. Information overload can occur when efficiency and effectiveness in the use of information is hindered by the

Robinson [25]	amount of relevant and potentially useful information available.

4. DISCUSSION AND CONCLUSIONS

In recent decades, information overload has become an important topic in a variety of research areas, including the world of news and health care. There is overlapping knowledge in these fields, indicating a broad research foundation. Since the outbreak of the Covid 19 pandemic in 2020, the number of publications has increased significantly, as the public has been exposed to information overload. Prior to the Covid 19 pandemic, information overload was more a problem at work but less common in the private sphere. Furthermore, more and more normal people try to avoid a critical review of information. Metag & Gurr [5] provide an interesting insight. Their results showed that people who felt overwhelmed by information tended to distance themselves more quickly from information in the form of reports. This was particularly evident in Germany in 2020, when many people turned away from reporting and scientific findings within the Covid-19 pandemic due to a day-to-day overload of information in any form.

These changing influence factors are also mirrored in research. Research topics have changed significantly over the years. There were, from 1970 to 1990, mainly attempts to provide general evidence of information overload and to prove it. This was followed by intense criticism of the methods of the research and counterarguments. Between 1990 and 1995, however, information overload was fully addressed by new communication channels such as e-mail and the Internet, as the problem seemed to worsen. Information overload is considered at different levels, closely related to the social level and specific professional activities. Since 2010, social media has also been considered in research and concretized as a driver of information overload.

There has been a broad mass of literature reflecting the rapidly changing environment over the past several decades. Although the authors made an effort to conduct a comprehensive literature review, they did not succeed in including all major sources of information. For example, as Eppler & Menges [10] and Roetzel [4] showed, the sheer number of possible papers on this topic made selection difficult. In Roetzel's research alone, over 1500 works were considered for consideration.

However, despite calls from scholars in the research and literature, there is still no concrete intervention from higher-level actors such as business leaders and governments to address information overload. There are many approaches to do so, but there is a lack of common ground. Therefore, multidisciplinary approaches are essential for the future. From the authors' point of view, it would be necessary to bring together the already established findings.

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The Effects of Neoliberalism on Immigrants in Terms of Educational Issues

Fethi KAYALAR[a*]

[a] *Prof. Dr., (Erzincan B. Y. University), Faculty of Education,, Erzincan, TURKEY fkayalar@erzincan.edu.tr)*

Abstract

Migration as a social phenomenon is as old as human history in its various forms and will continue to exist in the future with people. Migration, which is the inevitable result of various natural, economic, social or political factors, is a social and global problem whose effects should be minimized. In some cases, migration, which results from the desire to achieve better living conditions, is mostly based on involuntary, compulsory and dramatic reasons such as wars, natural disasters, hunger, famine and discrimination. Regardless of the reason or direction, all involuntary migrations represent a break from personal history, life story, culture, memories and hopes for immigrants. It expresses homelessness, lack of identity, statelessness, lack of belonging, victimization and oppression. It also expresses loneliness, alienation, indifference, poverty and misery, exclusion in the place where they migrate. Therefore, immigration includes traumatic situations both psychologically and socially. All over the world, it takes a long time, great effort and heavy costs for immigrants to adapt to the society they migrated due to reasons such as language, culture, belief, lifestyle, geographical and spatial habits and education. In the study, we aimed to determine the effects of Neoliberalism on immigrants' access to educational opportunities in Turkey.

Keywords: Educational management, Immigrant education, Educational issues, Neoliberalism

1. INTRODUCTION

Throughout history, people have felt the need to settle in different geographical areas by leaving the regions where they were born, raised or lived for various reasons. These relocation movements, in which people participate voluntarily or compulsorily, sometimes individually and sometimes collectively, have prepared the environment for some changes both in abandoned areas and in newly settled areas. Within the framework of these changes, the existence of cause-effect relations in many political, economic, social and cultural issues, depending on the geographical displacement of people, allows migration to be evaluated as both a positive and negative phenomenon. Although the details vary, these individual or mass displacement events allow the interpretation of historical and current issues by considering the phenomenon of migration.

With wars, environmental disasters, poverty and famine, neoliberalism has led to the displacement of millions of workers and small peasants. According to the immigration policies of the neoliberal state, the doors are open to immigrants as long as they are "useful human resources" and barriers are built against unwanted entry. The structural transformation of the state in Europe has led to a large participation of private capital. While this means that immigration control and enforcement is done by private institutions, it is necessary to mention a much closer cooperation between employers and lawmakers on economic migration policy. The state has delegated certain supervisory functions to the private sector and thus also provides inputs to businesses.

Unless there is a change in global economic policies aimed at increasing corporate profits at the expense of the social and economic development of the world's workers, any immigration reform will not prevent the migration of poor and displaced people to rich countries. Developed capitalist countries not only accept immigrants from

* Corresponding author.

underdeveloped countries, but also encourage this immigration policy in the context of protecting the rights and interests of the natives and immigration policies. Because the increase in the supply of all kinds of production factors will reduce the average cost of the same factor of production and therefore the cost of production. The increase in the labor supply will also increase the return to capital. The increase in the number of immigrants will cause a decrease in the wages of domestic workers in some sectors, despite the increase in the gross national product. Marx interpreted migration as both creating a 'surplus population' under the pressure of displacement in order to exist and using this population by capital to increase profitability (Hayduk, 2009). Marx said that the immigration caused by the potato famine in Ireland was supported by both landowners and big entrepreneurs.

As a result, migration policies are fed by capital-friendly evaluations of macroeconomic human resources planning. Thus, migration can be thought of as part of a much more general framework for maintaining the neoliberal state.
From past to present, it is known that people are in motion to meet their needs. It can be said that these movements have an aspect that contributes to the interaction of societies and their development by being influenced by each other. When the historical and cultural heritages conveyed by various civilization basins are examined, it can be clearly seen that societies are influenced by each other. Trade relations established between regions, travels or migrations for science education are among the most prominent elements of this interaction process. Today, there are studies that refer to the benefits of human mobility and migration in terms of economic development of societies, enrichment of human resources, cultural diversity and demographic richness (Vidal, 1998; Kocabaş and Alpaydın, 2021).

It is seen that optimistic and pessimistic perspectives towards immigration have been developed in different regions in different time periods. For example, it is stated that from the Second World War to the beginning of the 1970s and with the strengthening of the neoliberal understanding of development, migration optimism has been dominant since the 1990s. Today, there are studies of international institutions and organizations emphasizing the positive relations between the phenomenon of migration and economic and social development (Aktaş, 2015). In some countries, on the one hand, the understanding of the nation-state is desired to be preserved, on the other hand, issues such as multilingualism and multiculturalism continue to be discussed. From the perspective of securitization theory, the perception of migration as a threat and risk in the host society raises the possibility of developing attitudes against immigrants. Therefore, in today's conditions, the need to adapt to these changes related to migration has emerged in many areas. In particular, education systems are expected to produce a reaction against the phenomenon of migration. It is known that throughout history, people have been on the move to meet their needs. It can be said that these movements have an aspect that contributes to the interaction of societies and their development by being influenced by each other. When the historical and cultural heritages conveyed by various civilization basins are examined, it can be clearly seen that societies are influenced by each other. Trade relations established between regions, travels or migrations for science education are among the most prominent elements of this interaction process. Today, there are studies that refer to the benefits of human mobility and migration in terms of economic development of societies, enrichment of human resources, cultural diversity and demographic richness.

In terms of the current demographic situation in history and today, there is a large segment of society with a migration background in Turkey. In addition to those living in Turkey with different statuses such as immigrants, refugees, asylum seekers and temporary protection from different places, the children of the Turkish diaspora who are in the education process also constitute an important migration-related population. In order to provide an education suitable for the needs of people with a migration background, first of all, it is necessary to recognize, understand, recognize and accept these people as a part of the society they come from in the legislation and law. In this context, it is important to discuss the Turkish education system and paradigm in the context of migration.

When the acquis regarding migration and human mobility in the history of the Republic of Turkey is examined, we first encounter the Settlement Law of 1934. Since a population formed by the Turkish race and culture is desired with this law, it can be said that the immigration, immigration and settlement movements that will result in favor of the idea of the nation-state are realized by the coercive attitude of the state itself. In the following years, the 1951 Convention Relating to the Status of Refugees and its additional protocol in 1967 came to the fore. It is seen that a strict stance is exhibited in terms of immigration and immigration policies, since the "geographical reservation" condition is in force within the scope of this contract. Nor can it be said that it draws a framework for the education of those with a migration background. In the 80s and early 90s, however, there was no significant policy concern about immigration and immigrants (İçduygu and Aksel, 2013). Therefore, there are not enough studies on how the Turkish education system should handle the immigration issue in the recent past. However, when we look at the demographics, Turkey is constantly exposed to migration movements. Despite this, it is not very possible to encounter any content in the education system or education curriculum related to these migrations.

When the Turkish education system is considered in the context of migration, first of all, five different groups with different needs emerge within the system. International students are the first group, refugees and asylum seekers are the second group, the third group is the Turkish diaspora, the fourth group is the internal migration population, and

the last group is those who immigrated to Turkey after becoming a minority outside the border after the Republic. For all these groups, it can be said that national education is not structured in a structure that is inclusive, embracing, and represents ethnic and cultural richness. Because when we look at the basic laws, aims or basic texts of the National Education such as the constitution, it is seen that it reflects a perspective that can be called totalitarian, reflecting the dominant understanding of the years when the Republic was founded and the aim of building a nation-state, which is still the general trend of those days.

2. NEOLIBERALISM AND MIGRATION

Today, although the nation-state encounters many problems within itself, it seems doomed to remain as a never-ending project with the deepening structural contradictions as a result of globalization. Many key elements such as revolutions, national revolts, separatist movements, population transfers, class conflicts, civil wars hinder or support the nation-building process. The establishment of nation-states also constitutes the state apparatus with their national identities, foreign policies, and ever-increasing social and economic function.

Although the literature on European migration is state-centered and portrays the state as a homogeneous entity, the nature of the European state has undergone significant structural changes over the past two decades, creating divergences in migration management. This transformation has two important consequences: First, the state has transferred the detention, prohibition and control part of the migrant flow to private sector actors. Control at certain points has been outsourced, transport companies have been involved in directing the flow of migrants, and in some cases private security companies have begun to carry out detentions. This is a kind of remote control of immigrants. latter; companies began to jointly manage migration by shaping labor migration policies with non-state actors. In Italy, quota management is carried out in consultation with employers, while private institutions in England and Germany play an important role in designing immigration policy. So much so that interest groups adapt their demands to the demands of human resources in order to ensure and protect competition. Therefore, the migration policy of the neoliberal economy has been important in providing flexibility and economic growth (Menz, 2009).

The immigration-related sanctions of state sovereignty portray immigration as a zero-sum game; it ignores the much more complex dynamics involving private actors in migration control while opening up the demands of the business world to facilitate access for labor. All these developments are closely related to the structural transformation of the neoliberal bourgeois state.

3. RELATIONSHIP BETWEEN MIGRATION AND EDUCATION

As a result of forced migration, children are those who need protection and support the most. Countries should carry out important studies on education and prepare infrastructure so that children are not affected by this process. However, the sudden development of the migration process and the prolongation of the process for the formation and implementation of these policies bring along some problems. The problems experienced due to migrations manifest themselves in the form of physical infrastructure, classrooms, equipment and teacher shortages required for education. When the rapid population growth is added to this, it takes years for investments in education to comply with EU standards. Although countries implement policies to ensure rapid adaptation, children are undoubtedly the group most affected by the migration process. The social injustice, lack of sense of belonging, alienation, marginalization, and changes in living standards in the country of refuge cause damage to the mental world of children and lead to developmental disorders in many respects. The destructions experienced cause children and young people to experience adaptation problems towards their environment and educational institutions and delay their integration. This situation is also reflected in the education of children. The deprivation of education of children causes them to face many problems such as early marriage, working at a young age, joining terrorist organizations and creating a lost generation. Children who cannot develop themselves because they cannot receive education have the potential to pose a threat to the country they migrated to when they grow up. It becomes a necessity for migrant children to learn the mother tongue of the country they immigrate to in order to understand the lessons at school, socialize with their classmates, and adapt to the society.

Studies show that Syrian children in Turkey, who had to immigrate from their country, experience many problems in the education process. According to Coşkun et al (2017), considering that 41% of school-age Syrian children in Turkey are still not included in the education process, the lack of education will lead to the formation of lost generations.61 Therefore, it is important to identify the needs of Syrian children, the barriers in accessing resources, and service mechanisms.

Compatibility Issues

Adaptation is the ability of an individual to establish and maintain a socially and structurally balanced relationship between his/her self and the society he/she lives in. Immigrants have difficulty in establishing a balanced relationship with the society they migrated to because their connection with the place they came from is not cut off. One of the most basic needs of children living in a country as immigrants is to adapt socially and culturally to the country they immigrated to. The place where this harmony will take place in a planned and controlled way is the school. Children are provided with social and emotional self-confidence at school, and it is easier for them to get to know their environment. Ensuring this harmony also contributes to the academic success of the student. Research on learning has shown that the brain is born with a randomly interrelated neural network; This shows that this neural network is formed in childhood, and in adulthood, these cell clusters, which are formed in childhood, are used. Adapting to the social and cultural environment of children and having a good education period frame their future learning and enrich them. Academic adjustment is a comprehensive concept that includes social adjustment, which includes the relationships that the child establishes with individuals at school, and behavioral adjustment, which includes behaviors such as obeying social rules. A child's adjustment to school is determined by his level of success, attendance, good relations with friends, and attitudes towards teachers. In addition to these, harmony in multicultural schools can be achieved with education programs that allow interaction between different cultures and reveal the positive aspects of cultures. In cases where there are adjustment problems, many problematic behaviors such as violence, bullying and sexual abuse emerge. Psychologists working on Syrian children and youth stated that the students exhibited less traumatic attitudes compared to previous years in the observations made in the context of the pictures they drew in the classroom and composition assignments upon participation in education. He stated that the majority of children with conduct disorder were students who lost one or more of their family members in the war. In addition, psychologists stated that the most common problems seen in children are introversion, internalizing and tending to violence, and peer bullying. Many of the migrant families keep the education of their children in the background due to their economic difficulties. For this reason, the children of families who change homes frequently lose the school environment they can adapt to. In such a situation, the material and spiritual environment of the children changes and the child takes a break from his education by becoming alienated from school and courses (Gencer, 2017; Nar, 2008; Köknel, 1989; Oktik, 1997; Hergenhahn, 1988).

Learning Turkish is one of the basic conditions that will accelerate the integration process of Syrian students into education. Syrian students think that learning Turkish will lead them to cultural degeneration. The lack of self-confidence observed in the form of children's reluctance to sit in the back row and take the floor continues in their later years. Turkish parents also contribute to the adaptation problems of Syrian and Turkish students. Identity-based conflicts and humiliations between different ethnic students in schools cause Turkish parents to react to their children going to school with Syrian students. These attitudes of families are also reflected on Turkish children, making it difficult for them to socialize with Syrian students.

4. CONCLUSION AND SUGGESTION

The general and specific aims of education should be designed in a way that puts people in the focus and affirms that education as a human right cannot be at the disposal of a race or nation. Objectives and principles that will contribute to the creation of an environment of tolerance in terms of religion, language, race and culture should be included within the framework of rights-based approaches, where education is perceived as a service that can be accessed by every individual as a human right. Goals for the peaceful coexistence of different ethnic and cultural riches should be adopted.

The human model expected by the education system should be reconstructed by taking into account the phenomenon of migration. In this respect, skills such as cultural sensitivity, recognizing and respecting cultures, communicating, and looking at issues more universally should be focused on, and these skills should be acquired by both the host society and the immigrants. It should be analyzed what knowledge and skills a person living in a country subject to immigration should have. Information about the ethnic, cultural and geographical origins of both the host community and immigrants should be shared in a way that does not cause communities to develop prejudices against each other. The social policies necessary for the adaptation of the host society and immigrants should be supported in schools.

A curriculum should be created that will raise awareness of both local and immigrant students towards multiculturalism. While respecting differences and non-discrimination are fundamental, values such as solidarity, sharing, love and respect should be highlighted. In addition to the immigration management and immigrant education experiences of countries where a significant part of the school population consists of immigrant students, the experiences of those studying as immigrants should be taken into account. By analyzing how these countries construct

their education systems, lessons should be drawn from their positive and negative sides. Successful points should be adapted in a way that does not cause tissue incompatibility in the Turkish education system, and their experiences should be used in producing local solutions and policies.

It is very important to prefer effective approaches to the language education of immigrants. Applicability and adaptability of Immersion models, which have been shown to be more successful in language teaching in various academic studies, should be analyzed regionally and approaches that allow immigrants to preserve their culture and mother tongue should be preferred. Grade-level teaching principles and methods and pedagogical approaches are very important elements in the education of immigrant children. Therefore, teachers, who are the main actors of the education system, should be provided with the necessary awareness and pedagogical equipment for immigrant education through pre-service and in-service training. Theoretical and applied academic studies should be carried out to mature the intellectual accumulation that prepares the infrastructure for the realization of the new paradigm needed. Support should be given to research projects in which educational researchers and other disciplines can contribute.

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