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Education as a Value in the Pregraduate Studies of Education in Ukraine

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Abstract

The paper focuses on the description of the value of education in pregraduate preparation of students of teaching disciplines in Ukraine. The aim of the text is to specify the course of preparation for the profession of teacher in the context of values from the perspective of students of selected pedagogical faculties in Ukraine. The issue of values in the pregraduate preparation of Ukrainian students of teaching is a partial part of the authors' long-term interest in the issue of education and the values of Ukrainian pupils in schools in the Czech Republic. The research is carried out using a mixed QVAN - qval design. A Likert-type scale questionnaire supplemented with semi-closed and open items was chosen as the research tool. The data are analyzed with the predominance of a simple statistical analysis with additional analysis using grounded theory.

Keywords: value, education, pregraduate preparation, students of teaching, Ukraine

Introduction

Pregraduate teacher education, wherever in the world it is implemented, should be based on a broad and thorough general education. However, we also see the importance of the role of the teacher in understanding the goals, meaning and values of education and in their further mediation in the educational process. All the more so, values are necessary equipment for the future teacher, who participates in the education of pupils and the formation of their profile and value orientation. In our research, we ask ourselves what values do students encounter in pregraduate study? Are there values present at all? How do students perceive the issue of values within education? At the same time, what values do they think should not be missing in the education of pupils in the school environment? We tried to answer these questions in the presented paper.

Literature Review

Educational experts, teachers and the public wonder what is the main goal of teacher education? What professional knowledge and skills, values and attitudes should a teacher graduate be equipped to become a competent teacher in the conditions of modern education? Today's society places high demands on teachers.

According to Mikešová (2005), the uniqueness of the profession of teacher lies in the fact that it is based on relationships, love for children, which teachers take care of from an educational point of view. The profession of teacher is a mission therefore it contains a significant personal contribution of teaching adepts. Much more than any other profession, it requires a high degree of self-control, responsibility and patience. One of the goals of teachers' educational activities is to pass on to students the basic values widely accepted and recognized not only in the Czech, resp. European society, but in today's society, built on a Christian basis in the past, which clearly includes the values of responsibility, diligence, patience, decency, honesty, justice, truthfulness and integrity.

The same values are mentioned in Ukrainian curricular documents, such as the Law of Ukraine on Education, which declares values influencing the all-round development of a person's personality, his right to education and the importance of universal education for society. An integral part of teaching in Ukrainian schools is the incorporation of the values of patriotism, respect for the homeland and the emphasis on spiritual and moral aspects in education (Kobzová, 2018).

Preparation for the profession of teacher is a crucial point in the future professional career of a teacher. Although there are currently tendencies that diminish the importance of the teacher and his perception as a pupil's guide to the educational process, we believe that the role of the teacher remains crucial and irreplaceable for the pupil's development.

According to Šimoník (2004, pp. 13-14), pregraduate preparation can be defined as the unity of theory and practice. However, pregraduate preparation cannot produce a ready-made teacher. It is necessary to complete the pedagogical mastery through years of systematic work on oneself, constant self-reflection and further education. Students can achieve real pedagogical perfection by not only concentrating all their skills on passing on knowledge, but by teaching their pupils to think independently and to think critically. They will be teachers who encourage themselves and their pupils to improve.

One of the key tasks in pregraduate preparation is to accompany future teachers to take professional responsibility for the full development of the pupil's personality and, of course, for their own education and professional growth. It is not enough to be professionally trained in the modern concept of education, but the emphasis should be on internal motivation, willingness to engage in the educational process and the development of attitudes and values in future teachers (Spilková, 2007, pp. 12-13). Emphasis in pregraduate studies should therefore also be placed on improving and increasing the level of the ethical aspect of the teacher's personality. It also seems desirable to include subjects dealing with ethical and value dilemmas and problems in the current school. However, this requires certain ideals and personality patterns that the present time is painfully lacking.

This condition was described by Blížkovský et al. (2000), who already twenty years ago carried out a detailed analysis of the pedagogical preparation of students for the future

profession, which proved to be insufficient. Due to previous social conditions, the following has increased in teacher education:

1) scientism, which manifested itself in the prevailing scientific approach to education,

2) value antinomism, which may be characterized by absolute non-commitment and resignation to the ability to shape a new system of values and goals in education.

We believe that a similar situation prevailed and still survives also in the Ukrainian education system.

The quality of the pupils' educational process and everything that takes place in teaching therefore depends not only on the thorough preparation of the teacher, but is deeply connected with the teacher's personalities, with his self-understanding. The teacher is a very important variable in the teaching process and in the relationship with students and parents. Lukášová (2015, p. 26) considers that the most important thing is "how the teacher internally understands his profession, how he understands it and how he evaluates it and on the basis of what values he approaches the profession." This dimension of teaching is also perceived by Spilková (2015) who states that the teacher's task is not only to develop the cognitive level of pupils, but the teacher should also be able to pass on the love of knowledge, learning and cognition. However, it is born only through the teacher's relationship with students and his "commitment to the profession" (2015, p. 165).

We will also think about the process of education from the point of view of teacher virtues. Behind the moral qualities of a teacher, Helus (2004, pp. 222-223) perceives the goal of pedagogical effort, which is effort to "be a reliable support for pupils in their personal development". According to the author, the favorable development of the teacher's character is related to several pedagogical virtues, including pedagogical love, pedagogical mind, pedagogical courage and pedagogical credibility.

Although pedagogical preparation within Europe, including Ukraine, has many features in common, especially when it comes to the compulsory combination of general, special, psycho-pedagogical education, practical training (Kocan, 2013), each country has its own specifics within its own educational system, linguistic and cultural diversity, and educational traditions in general. With regard to the value issues in pregraduate study in Ukraine, continuous education is currently becoming one of the main principles of pedagogical efforts, which is becoming an integral part of human existence in general (Kocan, 2013).

Fundamental principle of modern education to redirect pregraduate study to the personality of a student teacher. The approach is known as a personality-oriented model of preparation of future teachers and involves a deep psychologization of teacher training, the development of pedagogical thinking and the formation of skills such as setting educational goals, analyzing pedagogical situations, making decisions in the best interests of the child and relying on strength rather than weakness. Volynecka (2013) states the priority of personality-oriented learning are both the character of the teacher and his preparation. An important starting point for the preparation of future teachers is the art of respecting the development of the student as a person who is constantly changing with age, has its own characteristics, specifics of development.

The values in the pregraduate preparation of future teachers, which are increasingly focused on, are communication culture and competencies, empathy, tolerance, in other words -"the

search for ways of mutual understanding between teachers and students is the key to positive change in a period of social anomie and the devaluation of a number of moral principles-decency, kindness, devotion, mutual help"(Kocan, 2013, p. 189). The relationship between teacher and student should be filled with respect and empathy. And this is a difficult task in a situation of polyethnicity, social differentiation and different intellectual abilities and talents of each individual pupil. The belief that none of the students, regardless of background, ability or performance, can be limited in their personal development begins in the period of pregraduate education of students as future teachers.

Methodology

The research was carried out by means of an electronic questionnaire survey among respondents - students of teaching of pedagogical faculties in Ukraine in the cities of Ivano-Frankivsk, Brody and Ternopyl. The administration of the online questionnaires took place during December 2019 to May 2020. A total of 120 completed questionnaires were obtained with all the data necessary for the analysis. The research involved Ukrainian pregraduate students of the 2nd - 7th year of study with specialization mainly for teaching primary and lower secondary level of education. The most frequent length of studies was stated by the participants at:

- 4 years (56% of participants)

- 3 years (29% of participants)

The sample of respondents consisted of 87.5% women (total number 105) and 12.5% men (total number 15) aged 18-22 years.

As a research tool, a 5-degree Likert-type questionnaire was chosen, supplemented by semi-closed and open items, which were analyzed within the grounded theory. The questionnaire consisted of a total of 20 items. For the scale items, the respondents recorded on the scale the degree of their agreement or disagreement with the given statement, while 3 types of scales were used in the questionnaire:

1) *1 least important, 2 unimportant, 3 intermediate, 4 very important, 5 most important,*

2) *1 strongly disagree, 2 rather disagree, 3 don't know, 4 rather agree, 5 strongly agree*,

3) *1 least, 2 less, 3 medium, 4 more, 5 most,*

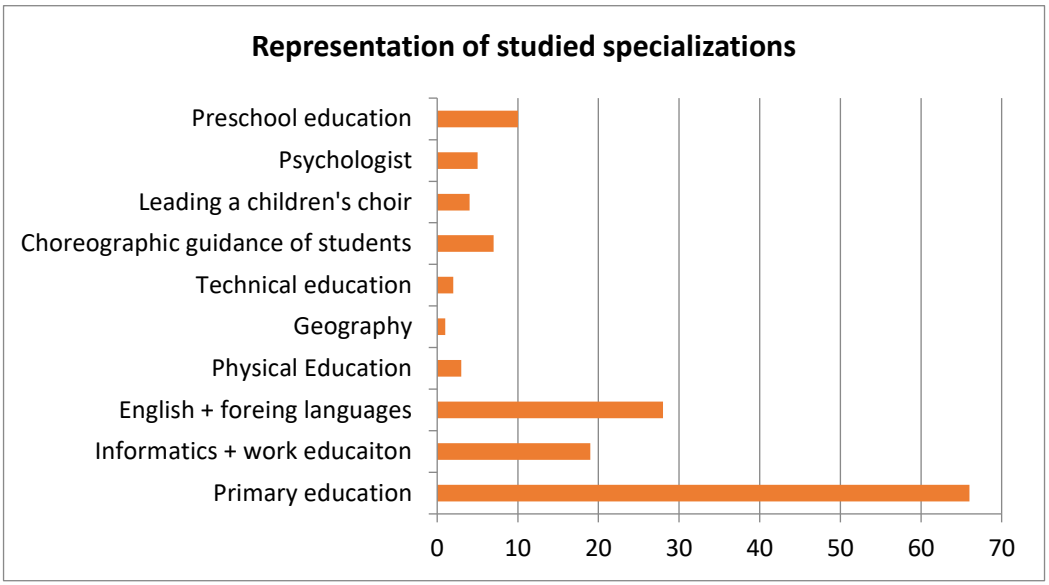
Analysis

The research tool was divided into two basic parts:

I. Introductory questions

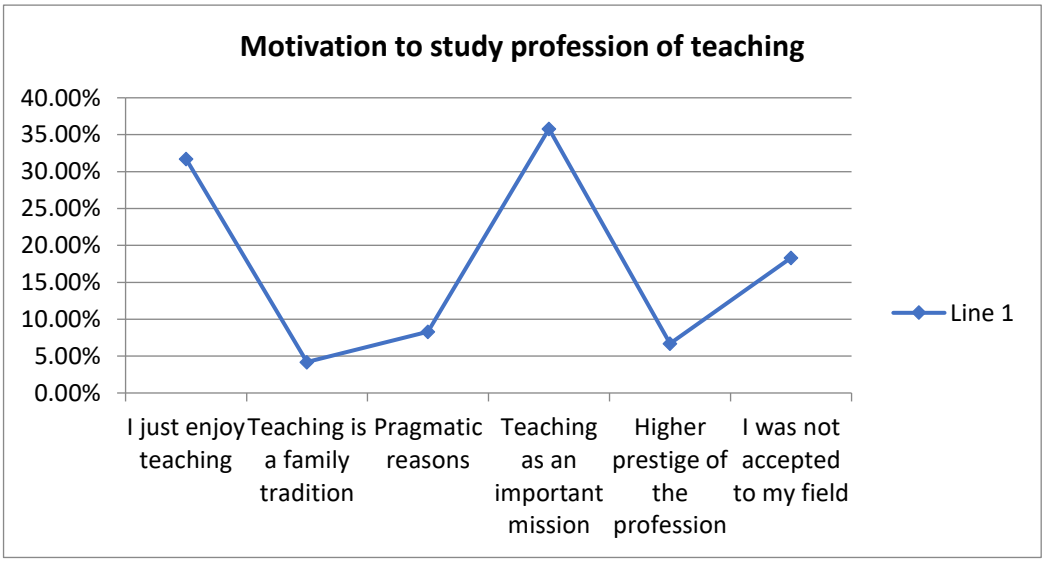
The first part of the questionnaire consisted of introductory questions focused on demographic data including gender, age of respondents, length of study which were already mentioned above. In this part, the specialization of study participants, their motivation to study and the pattern in education were ascertained (see Graphs below).

Graph 1. Representation of studied specializations



Among the most numerous specializations in the study among the respondents were clearly teachers of primary education, ie 1st - 4th class (66 respondents). The second most frequently studied specialization was English and other foreign languages (28). In third place in the number of selected answers is informatics and work education (19).

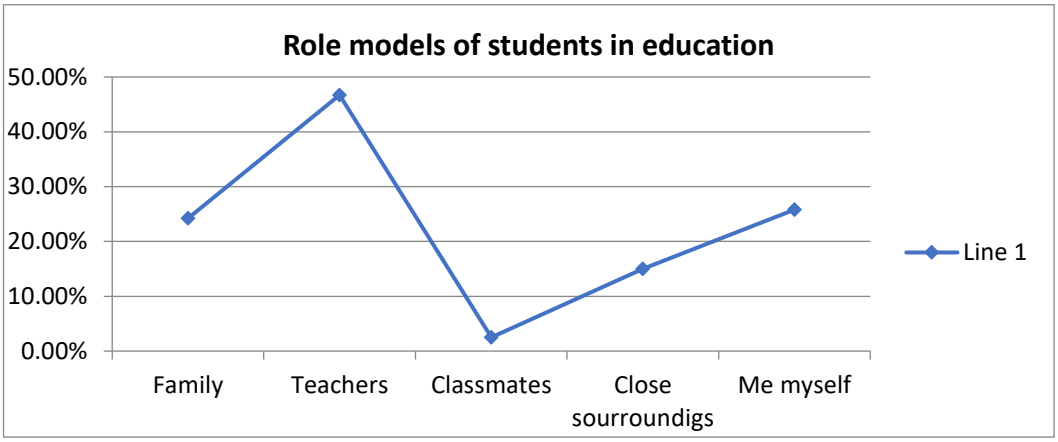
Graph 2. Motivation of students to study profession of teaching



The attached graph shows that the highest number of respondents (35.8%) perceive the teaching profession as key as their motivation was "teaching as an important mission". The contrast of this motivation with the low percentage of motivation of "higher prestige of the profession" is interesting. Thus, most students do not consider the profession to be prestigious

and important before society, and at the same time they understand it as an important social mission. The second highest representation in the number of elections gained the motivation "I enjoy teaching" (31.7%), which can be described as a motivation to study for self-realization.

Graph 3. Role models of students in education



Looking at the graphical representation of the data, we find that for the most part the examined students were role models in education, primarily teachers (46.7%). Here we see how much the example of a teacher and the way he/she performs profession affect students. The second most common example in the field of study are respondents for themselves (25.8%) and in close proximity to them is their family's inspiration for education (24.2%).

II. Statistical analysis supplemented by qualitative analysis

In the second part of the questionnaire, the attitudes and values of students scale are identified. For the purpose of quantitative evaluation of the research tool, the frequency of choice of respondents' answers for individual statements was determined and subsequently these frequencies were converted into numerical form. Another necessary step was the assignment of numerical values to individual scale items and the calculation of the coefficient (Gavora, 2010). The individual frequencies were then multiplied by these coefficients. The resulting sum of all multiples was divided by the number of respondents, and the resulting value showed the average distribution of answers (Chráska, 2016). A low overall score identified an average overall negative attitude toward the statement, and a high overall score represented a positive attitude.

Tab. 1. Total coefficient of choice of answers

1. Which pedagogical disciplines are most important in the study (according to the hourly subsidy)	Coefficient
General education subjects	3,12
General didactics	3,16
Field didactics	3,05
Pedagogical-psychological disciplines	3,18
Professional training (in the chosen field)	3,2
Pedagogical practice	3,18

2. Which pedagogical disciplines formed your personality the most?	
General education subjects	3,12
General didactics	2,94
Field didactics	3,02
Pedagogical-psychological disciplines	3,04
Professional training (in the chosen field)	3,29
Pedagogical practice	3,16

In the first item respondents rated Pedagogical-Psychological disciplines (3.18) as moderately to very important (on a scale of 1 to 5), which provide students with a basis for reflection on educational processes at school. They make it possible to acquire knowledge about the entrusted pupils, skills and attitudes necessary for the appropriate direction of the actors of education, to get to know the world of the pupil better. The respondents also attached the same importance to pedagogical practices (3.18), which mediate students' contact with the educational reality and where the knowledge and skills of all the above-mentioned components of teacher preparation are integrated.

The coefficients of the second item indicate that respondents consider the most formative subject to be training in the chosen field (3.29) and pedagogical practice (3.16), both coefficients again lying between medium to very important values. It turns out that especially professionally and practically oriented subjects of teacher training have a more intense influence on the formation of students' personal qualities than other subjects. The statement is also proved by the analysis of open answers, in which the respondents agree that the training in the chosen approval allows to focus on the core of specialization, ie the education of younger pupils and everything related to it. Pedagogical practice will allow respondents to critically evaluate their impact, test their knowledge in practice and find out where their weaknesses are, what to work on. In addition, school practice encourages the development of a sense of responsibility, patience and the ability to accept children as they are.

3. What is the focus of the study of teaching at your faculty?	
At us, student and for better professional readiness	3,59
On the study program of teaching (on subjects) and its improvement	3,33
On interpersonal relationships, collegiality and the overall atmosphere	3,21

In this item, it was found out in which direction the study of future teachers is oriented. According to the results, we see that students perceive the greatest focus of their study program on them, as on students and on their professional development and training. The calculated coefficient of 3.59 is the highest in comparison with the other two and approaches the overall rating of 4, which states the value as very important. An interesting finding, however, is that the statement regarding interpersonal relationships and the overall atmosphere in the school was less chosen by the respondents. However, this is not a big difference.

4. In your opinion, in what way does the teacher contribute the most to the quality of pupils' education?	
A clear vision of the educational process and specifically formulated goals of teaching, with which he/she acquaints students.	3,45
With his personality, ie natural authority and the right educational effect on the pupils.	3,79

Perfect knowledge of the subject matter and its interpretation, which will inspire pupils for the subject.	3,71
Teacher-pupil interaction, ie by providing space for pupils to actively participate in teaching.	3,8

In the given item, the students assessed the way the teacher influenced the quality of education on a scale from 1 to 5 with an evaluation, which is again close to point 4. It can be stated that students consider a very important way of the teacher and how to behave in relation to pupils with emphasis on the support of pupils' activity by the teacher in teaching (3.8). Respondents also assessed the position of the teacher and his personality by almost the same coefficient (3.79), whom, if he/she is a role model and has natural authority, they perceive as a fundamental factor in the educational process. However, they also perceive as an integral part the excellent knowledge of the subject matter, including didactic and professional knowledge (3.71), without which the performance of the profession of teacher cannot be imagined.

5. What values (attitudes) did you acquire in connection with the profession of teacher within the study?	
Love to the profession of teacher, the concept of the profession as a mission,	3,75
Subject matter orientation - to transfer knowledge to pupils,	3,56
Focus on the pupil, on his individual development and perception of his needs,	3,74
Emphasis on good organization of teaching, mastery of discipline in the classroom,	3,63
Ability to communicate and cooperate with each other in the teaching community and with pupils' parents,	3,80
Emphasis on prestige and the status of teachers in society.	3, 38

Given the values and attitudes that respondents have gained so far in the study of teaching, the highest number of choices gained the ability to communicate and cooperate with teachers' colleagues (3.80), which means that it influences pedagogical practice, which students evaluated at most in 1st and 2nd items. However, the respondents gave an important place to the fact that during their studies they gained a stronger relationship with the profession of teaching, which they perceive as a mission and which represents a very important value for them (3.75). The focus on pupils, the development of their personality, the ability to perceive their needs and requirements gained a similar importance (3.74). Of all the least, future teachers value the prestige of the profession of teaching in front of society, which is largely related to the low salary of teachers in Ukraine and the overall unfavorable economic situation in the country.

6. Which values do you prefer and which are the least important for you?	
Professional success, prestige, good salary, material gain,	3,55
Education, self-development, professional success and work that makes sense,	3,87
Family, children, love, life partner,	3,79
Health, world peace, healthy environment, ecology,	3,85
Freedom, democracy, the idea of private enterprise, participation in the economic life of society,	3,44
Altruism, helping people, solidarity, participation in political events through a public benefit function,	3,45
Friendship, love, hobbies, interests, social relationships that do not require responsibility.	3,53

The question on the preference of values was used to find out which of them future teachers prefer and which they neglect. However, the achieved coefficients of individual statements show very balanced scores in all areas of values and range from medium to more preferred values (3-4). Respondents appreciate the most the values of education, personal growth and the profession in which they can be realized, which at the same time goes beyond their own satisfaction and benefit (3.87). Second in line is health and peace in the world, the choice can be partly attributed to the current security situation in Ukraine. The statement family, children, love received a surprisingly lower rating, despite the fact that this value is the highest among Ukrainians according to the author's long-term study of the Ukrainian national minority in the Czech Republic.

7. What (national and cultural) values are, in your opinion, passed on to current primary school pupils in Ukraine?	
Emphasis on professional success, prestige, good salary in the future profession,	3,32
Education, self-development, creativity,	3,6
Family, children, love,	3,49
Health, world peace, healthy environment, ecology,	3,8
The idea of freedom, independence and democracy,	3,52
Altruism, helping people, solidarity,	3,55
Friendship, love, hobbies, interests, social relationships that do not require responsibility.	3,6

With slightly modified statements, we found out what values, in the opinion of the respondents, are passed on and formed by contemporary Ukrainian education. The students attributed the highest level of consent to the health, world peace and interest in a healthy environment (3.8), to which they also gave a higher value in their personal value orientations. Another important value formed in the Ukrainian pupils generation is friendship, interests, love and relationships (3.6) which, however, are not based on responsibility for others. The students also evaluated the area of education, creativity and emphasis on pupils' personal development with the same coefficient. Based on a qualitative analysis, it should be added that many values promoted in education, such as patriotism, friendship, tradition or competence in the field of the environment, some respondents consider as purely formally formed. These values and attitudes are presented only externally, they have no deeper anchorage and they lack a moral basis.

8. Which of the following values would you like to form at the pupils as a future teacher?	
Emphasis on professional success, prestige, good salary in the future profession,	3,55
Education, self-development, creativity,	4,14
Family, children, love,	3,71
Health, world peace, healthy environment, ecology,	4
The idea of freedom, independence and democracy,	3,64
Altruism, helping people, solidarity,	3,89
Friendship, love, hobbies, interests, social relationships that do not require responsibility.	3,79

We were interested in which of the mentioned areas of values teacher students would like to form with their pupils and to what extent their answers coincide with their preferred values (item 6). In this case, the response rate coefficient ranged from 3.55 to 4.14. The highest frequency of elections was again recorded in the value of education, self-development and creativity (4.14), which future teachers would like to form the most among pupils. Their choice here also agrees with their choice of personal value No. 1. A possible explanation for why students value education and self-development the highest may be the desire to pass on education to pupils, thanks to which they can get later on the opportunity to study abroad. The belief that in a Western democratic society, education and work effort will be better appreciated than in their own country may also play a role here. However, a completely opposite reason cannot be ruled out, namely to have an educated population that is better able to lead a country that is plagued by economic instability and war. Last but not least, the respondents would like to pass on to the pupils the previously mentioned value of health care (4) and the pattern of altruistic behavior and the ability to help those in need (3.89). These values are perceived by students as key to the future development of Ukrainian society.

9. What values and attitudes are needed to educate the current generation of Ukrainian pupils with regard to their future personal, professional and social application?	
to self-realization, self-awareness and the ability to assert oneself in life,	3,94
to national awareness and loyalty to the Ukrainian nation,	3,63
to broader knowledge, lifelong learning,	3,85
to the love of democracy, freedom and independence,	3,68
to justice, truthfulness, morality and honesty,	4,2
to faith, to respect for God and for man.	4,4

The results of the frequency of choice of answers clearly show the need to take root in faith and respect for God, which is then automatically be reflected in greater respect for man (4,4). In the case of Ukraine as a Christian-based country, it is not surprising that students demand that the next generation of Ukrainian pupils learn not only the Christian faith, but also Christian behavior and virtues, including truthfulness, honesty, justice and moral principles in general (4,2). Respondents perceived that it is a necessary basis on which other values can be built, such as self-awareness, the ability to assert oneself, lifelong learning.

10. Should the teacher try to influence the values and attitudes of pupils he/she teaches?	
Moral values (respect for truth, justice, man ...)	4,01
Values of civic life (respecting one's homeland, showing respect for law and law, civil liberties ...)	3,8
Values of individual and social life (self-esteem, responsibility, cooperation, respect for oneself and others..)	4,06
Values associated with education (responsibility for own education, for school results...)	3,91

In the case of this item, the respondents are strongly inclined to agree with all the above statements, all of which have similarly high scores. The respondents see the highest position in terms of very important values not only in the teacher's influence on pupils in individual and social life (4.06), but also in the field of ethics and moral values (4.01). Respondents agree

with the need for an adequate effect of the teacher on the entrusted pupils. The teacher should form the desired values of self-esteem, responsibility, respect for the truth, for the person, not only in a verbal form, but above all he needs to be a personal example. According to the respondents, the profession of teacher is associated with a great responsibility for education of the new generation. The statement corresponds with the statement of the respondents concerning the motivation to study (Graph 2), in which the motivation for the teaching profession as a significant mission significantly prevails.

Conclusion

In the eyes of students, the preparation of future teachers is focused primarily on themselves and their professional preparation. Pregraduate preparation includes all components of study necessary for adequate education of the future teacher and all of them bring great benefit to respondents. The most intense influence is perceived from practically oriented disciplines and practice, which allow students to penetrate to the essence of teaching probably the most. Especially the direct contact of students with their teachers during their studies and with their pupils within pedagogical practices most strongly forms their values and attitudes.

It can be stated that undergraduate study forms the values and attitudes of future teachers, because through the individual components of the study they acquire both the necessary knowledge and the ability to understand the difficulty and usefulness of profession of teaching. They help to form knowledge in the chosen specialization, change the initial vision of pedagogical activities of students, form their professional beliefs (Ševčíková, 2020) and develop their worldview. It often forms a completely new view of life and makes it possible to find starting points in various pedagogical situations. Students gain a closer relationship with teaching and the love for pupils deepens thanks to competencies, how to work with pupils, how to communicate with them and to lead them properly. The motivation to study the majority of respondents and their independent thinking about the deeper meaning of the profession of teaching also significantly contributed to this professional formation during their studies. Many desire to be role models for their pupils and thanks to their own role models - teachers who have been a real example, students want to become even better.

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Pupils with different mother tongue and the influence of school and family on their perception of value of education.

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Mobile Assisted Language Learning (MALL): Trends from 2010 to 2020 Using Text Analysis Techniques

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Abstract

Throughout the decade of 2010-2020, the widespread use of mobile devices of any type (smartphones, tablets) has encouraged and strengthened their use in different learning processes and in different ways. Latest improvements in devices' processing power, in storage capacity, in memory allocation, in wireless connectivity, in GPS and in Bluetooth capabilities, has led to their wider integration and smoother use in the field of learning and in the field of language learning as well. This study examined the trend of a large number of academic studies concerning Mobile Assisted Language Learning (MALL) using text analysis techniques and tools, published in the decade 2010-2020. Over three hundred and forty (340) publications such as journal articles, conferences proceedings papers, books chapters and books were retrieved and analyzed. The preliminary analysis presents the main characteristics and the research trends of this decade and discuss how the field of mobile assisted language learning has evolved in these years.

Keywords: mobile language learning, MALL, technology enhanced language learning, mobile devices, language learning

Introduction

The era of Mobile Learning

The ever-increasing use of portable and wireless devices and technologies, such as mobile phones, laptops and tablet PCs, Wi-Fi, Bluetooth, wireless LAN, GPS, iPODs, 3G - 5G and satellite systems, enable today's user to access any type of educational material from anywhere and at any time. From the first mobile phone (Motorola DynaTAC 8000X), built in 1973 to the present day, both the cost and shape of mobile devices have been reduced while their power, speed, memory and functionality have been increased. Thanks to these features, mobile devices offer unique possibilities for student-centered approaches to teaching.

Furthermore, mobile devices allow the implementation of innovative teaching practices that we cannot usually experience with other learning tools. They give teachers and learners the opportunity to access educational resources anywhere and anytime, and to participate in new learning situations in different spaces and not just in a frozen school space. Certainly, as Crompton (2013) points out, wireless communication technologies have played an important

role, without which, mobile learning (m-learning) would not exist. The characteristics of mobile devices that Klopfer et al. (2002) believe may be beneficial for education are portability, social interactivity, context sensitivity, connectivity, and personalization. Indeed, mobile devices, thanks to their portability, offer the possibility of learning without spatiotemporal limitations, use the possibilities offered by mobile wireless technologies for easy access to information, promote the development of digital literacy and offer possibilities. for independent learning (Zaranis et al., 2013).

Defining m-Learning is not an easy task to do, as different terms and concepts are involved. Initially, MA was primarily described as the use of mobile devices in learning such as mobile phones, tablet computers, handhelds and personal digital assistants. was primarily described as the use of mobile devices in learning such as mobile phones, tablet computers, handhelds, and personal digital assistants. In the literature, definitions have been formulated that emphasize technology, others that compare traditional to m-learning, and others that focus on the student. As Taylor (2006) pointed out m-Learning can be understood in a variety of ways, depending on the element that we focus on: learning through mobile terminals, learning with students that are on the move and learning through mobile content. Therefore we can find definitions which focus on the technological, educational component or combination of both of them such as El-Hussein's & Cronje's (2010) definition : "any type of learning that takes place in learning environments and spaces that take account of the mobility of technology, mobility of learners and mobility of learning" .

O'Malley et al. (2005), have defined m-Learning from the learner's perspective as "any sort of learning that happens when the learner is not at a fixed, predetermined location, or learning that happens when the learner takes advantage of learning opportunities offered by mobile technologies". Conde et al.(2008) have defined m-learning by situating it between e-Learning and ubiquitous learning (u-Learning): "m-Learning" can be understood as an evolution of e-Learning which allows students to exploit the advantages of mobile technologies in order to support their learning process and constitutes the first step towards the creation of ubiquitous learning". Although the definitions differ, researchers agree on the basic characteristics of m-learning, considering that it is characterized by the ability to learn (Devaud & Burton, 2012), to be spontaneous, personalized (Karsenti et al., 2013) and ubiquitous (Miangah & Nezarat, 2012).

Empirical research conducted at all three levels of education has also found that mobile learning contributes to the development of critical thinking and initiative, increases collaboration between students as well as between teachers and students, enables the teacher for immediate feedback. and assessment, gives access to information everywhere and at any time, prepares students for professional reality, promotes the creation of student communities around the world, personalizes learning, gives educational opportunities to those who cannot access good quality education, and reduces school costs (UNESCO, 2013).

The era of Mobile Assisted Language Learning

The term Mobile Assisted Language Learning (MALL) was coined by Chinnery (2006), who argued that mobile devices could be used as pedagogical tools for language learning. However, research and publications related to the use of mobile devices in foreign language teaching / learning have been recorded since 1994 (Burston, 2013).

The main advantages of MALL that have been recorded in the literature can be summarized as follows: it enables students to create their own learning framework in terms of time, place and how they will use online information and learning material with the consequence that their education is independent, self-directed and autonomous (Burston, 2013). It has also been found that the use of mobile devices in foreign language teaching / learning enhances the motivation for learning as it facilitates alternative non-traditional teaching methods (Kukulska-Hulme, 2009; Karsenti et al., 2013). According to the researchers, MALL can be used in order to:

- enhance the motivation for learning through the use of technology familiar to students such as smartphones and tablets.
- give more opportunities to students to develop all six communication skills: comprehension and production of written speech, comprehension and production of spoken language, aural interaction and aural and written mediation
- encourage the use of the target language as a unique means of communication
- facilitate the teaching process through exploring, analyzing, discovering and choosing activities that make sense in the real world
- enhance any type of interaction between real and virtual environments, between students in the same classroom but also with students in another classroom inside and outside school boundaries
- promote learning in a pleasant way.

The model that is commonly applied is the BYOD model (acronym for "Bring Your Own Device"), that comes to provide solutions to schools that face logistical infrastructure problems and do not have the ability to purchase mobile devices. Students are required to bring their own devices and all that is required to implement it is a high-speed internet connection. This model has significant advantages for the school unit: it reduces the purchase costs of the devices and their maintenance costs. It has also been observed that students are very careful in the way they handle technology as it is their own device.

Research methodology

The present study examined the decade's 2010-2020 trends of substantial number of academic publications in Mobile Assisted Language Learning (MALL) using a set of text analysis techniques and tools. More specifically the study aims to find out: what are the main topics that have been discussed and analyzed during the last decade; what topics seem to be of concern to research today and if the focus of research in MALL has shifted to some specific issues.

In the past years, several researchers have provided very important annotated bibliographies, literature reviews or other analytic studies of MALL and tried to explore the boundaries of this field. To mention a few: Kukulska-Hulme and Shield (2008), Burston (2013, 2014a, 2014b), Hwang & Tsai (2011), Hung & Zhang (2011), Viberg & Grönland (2012) and Duman et al. (2015).

For the purposes of the study, over three hundred and forty (340) published studies such as journal articles, conferences' proceedings papers, book chapters, and books were retrieved and analyzed by their year of publication, title, and topic. Furthermore, in order to limit the results of the research, we had the following criteria:

academic studies that were published between 2010 and 2020 (until August 2020),

academic studies that were written in English language,

academic studies that contained only the terms "mobile language learning", "MALL", "mobile devices and language learning",

academic studies belonging to a specific publication type such as journal paper, article in conference proceedings, book chapter or book. Any other type of publication such as phd thesis, book, journal or software reviews or other editorial texts were all excluded from this study.

The process followed was designed to be as simple as possible and had some basic steps. Utilizing the Google scholar, a systematic search was made for each year using only the searching terms, mentioned above. Then, for each search, all the results that had at least a "cited by 5" indicator were marked. Then, the full citation's information both in APA style and Bibtext format extracted using the "Cite" feature provided by Google Scholar. All citations were stored in detail in excel files and after that their title extracted by year.

All the collected titles stored in 11 separated text/documents files (one for each year) and then inserted as corpus, both in voyant-tools, a web-based reading and analysis environment for digital texts (http://voyant-tools.org), and in wordsmith tools, a text analysis software tool (https://lexically.net/wordsmith), for further processing. All titles were classified by their topic using the seventeen topics proposed by Dunan et al. (2015), with an addition of three more (noted 18, 19, 20) as shown below.

1. Vocabulary	**11. Instructional design**
2. Grammar	12. Identity/Sense of community
3. Listening	13. Usability
4. Speaking/Pronunciation	14. Potential uses/Drawbacks
5. Reading	15. Interaction/Collaboration
6. Writing	16. Perception/Attitude
7. Integrated skills	17. Academic achievement
8. Dictionary use	18. Apps overview
9. Assessment-evaluation	19. Learner motivation/autonomy
10. Multimedia use/Design	20. Literature Overview/Implementation Studies

Data collected analysis

A preliminary analysis of data collected shows some important findings. Figure 1 shows the total number of published titles, their types, and their distribution over each year.

Based on figure we can easily mention a constant interest and research production of researchers about MALL issues.

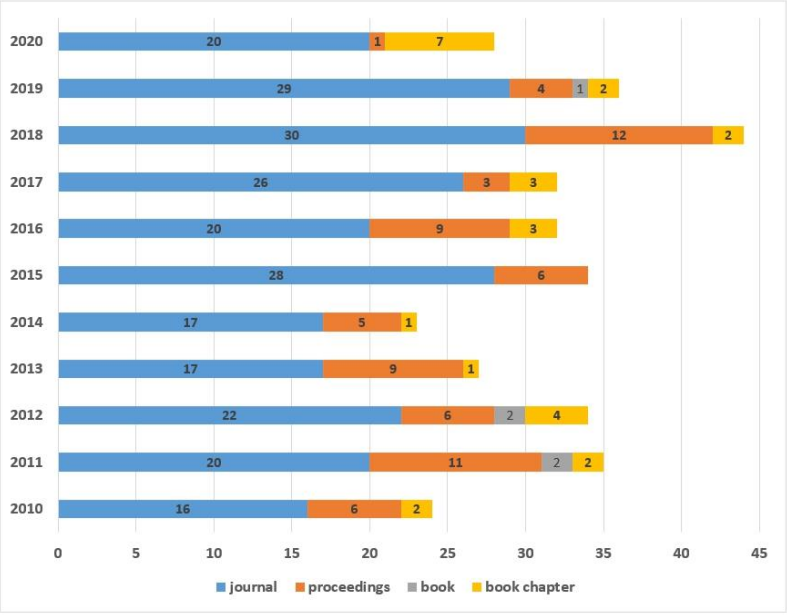

Figure 1 : Published titles, and their research types by year.

Figure 2 shows the types of published studies and their appearance over years.

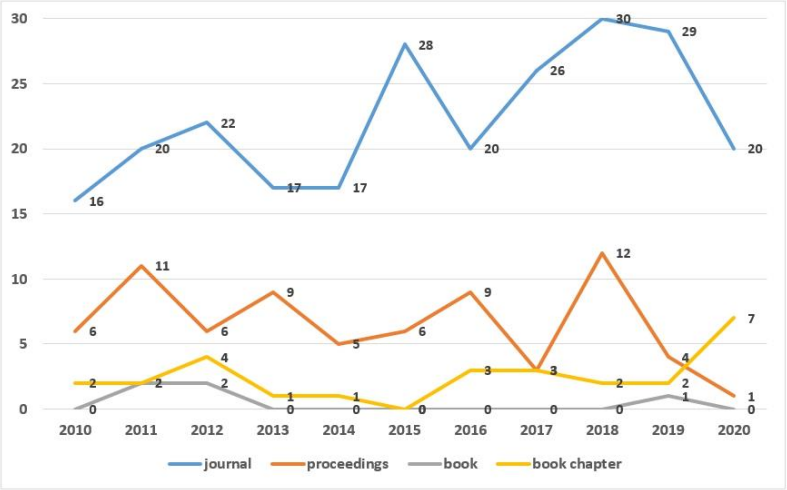

Figure 2 : Studies' types by year

Table 1 below, demonstrate the 20 topics covered and how they are varied among years.

Table 1. Distribution of topics in the published titles from 2010 to 2020

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Literature Overview/ Implementation Studies	-	1	4	2	2	1	4	4	7	12	2
Learner engagement/motivation/ autonomy	-	-	-	-	-	3	3	-	1	3	3
Software/app Review	-	-	-	1	-	4	6	2	9	3	3
Academic achievement	-	1	1	-	-	-	1	1	1	-	-
Perception/Attitude	2	3	2	8	3	3	4	2	10	4	7
Interaction/Collaboration	-	-	2	1	2	2	-	-	1	-	-
Potential uses/Drawbacks	2	4	2	3	1	5	1	4	1	-	-
Usability	4	5	-	3	2	4	2	1	3	-	-
Identity/Sense of community	-	-	-	1	2	-	-	-	-	-	-
Instructional design	1	1	1	-	2	3	2	-	-	1	-
Multimedia use/Design	-	3	6	3	3	-	-	3	1	2	3
Assessment/evaluation	1	-	3	-	1	1	2	1	1	-	-
Dictionary use	-	-	-	-	2	-	-	-	-	-	-
Integrated skills	4	6	3	1	1	1	2	4	3	1	4
Writing	-	1	3	g-	-	2	-	2	-	-	1
Reading	-	2	1	1	1	-	-	1	1	1	-
Speaking / Pronunciation	-	-	1	-	-	2	4	3	-	5	2
Listening	2	3	1	2	1	-	1	-	1	-	-
Grammar	3	-	-	-	-	-	-	-	-	1	2
Vocabulary	5	5	4	1	-	3	-	4	4	2	1

A textual overview of the current corpus with text analysis tools reveals the followed information. The corpus contains 11 text files/documents with 4,321 total words and 810 unique word forms. Most frequent words in the corpus were: "learning" (347), "mobile" (305),

"language" (281), "assisted" (205), "english" (52), "students" (47), "mall" (46), "efl (41), "learners" (38), "vocabulary" (33) as shown in table 2.

Table 2 : Most frequent words

Term	Count	Term	Count	Term	Count
learning	347	education	15	effect	10
mobile	305	phones	15	higher	10
language	281	teaching	15	perspectives	10
assisted	205	attitudes	14	phone	10
english	52	based	14	self	10
students	47	chinese	14	student	10
mall	46	context	14	trends	10
efl	41	learner	14	writing	10
learners	38	classroom	13	application	9
vocabulary	33	devices	13	approach	9
using	28	applications	12	listening	9
use	26	college	12	perspective	9
study	25	effects	12	social	9
review	23	perceptions	12	speaking	9
technology	20	skills	12	tool	9
foreign	17	esl	11		
analysis	16	reading	11		
apps	16	second	11		
research	16	computer	10		
case	15	design	10		

Table 3, shows other distinctive words, compared to the rest of the corpus, for each examined year.

Table 3 : Distinctive words by year.

2010	supporting (2), meaning (2), lms (2), phones (5), cell (3), taught (2), recording (2), making (2), commonly (2), effective (2)
2011	podcast (4), podcasting (3), networking (2), familiar (2), contexts (2), phones (4), literature (2), elementary (2), designing (2)
2012	japanese (2), trends (5), analysis (6), video (2), phones (4), podcasting (2), educational (2)
2013	reuse (2), implementing (2), usage (2), facebook (2), challenges (2), resources (2), informal (2), cross (2)
2014	needs (2), l2 (2), framework (2)
2015	smartphones (4), task (3), sociocultural (2), pp (2), ecological (2), skill (3), engineering (2), effective (2)
2016	field (2), strategies (2), model (2), iranian (4), teachers (3)

2017	wechat (2), success (2), teaching (4), perspectives (4)
2018	usage (3), memrise (2), wechat (2), smartphones (2), application (4), teaching (5), systematic (2), smart (2), l2 (2)
2019	class (4), knowledge (2), experimental (2), perception (3), systematic (2), literature (2), implementation (2)
2020	understanding (2), engaging (2), exploring (3), whatsapp (2), students'attitudes (2)

Figures 3 and 4 demonstrate line graphs depicting the word's occurrence across the corpus. As mentioned above the most frequent words contained in the published titles are : "learning; "mobile"; "language"; "assisted", "english", "students", "mall", "efl"; l"earners"; "vocabulary".

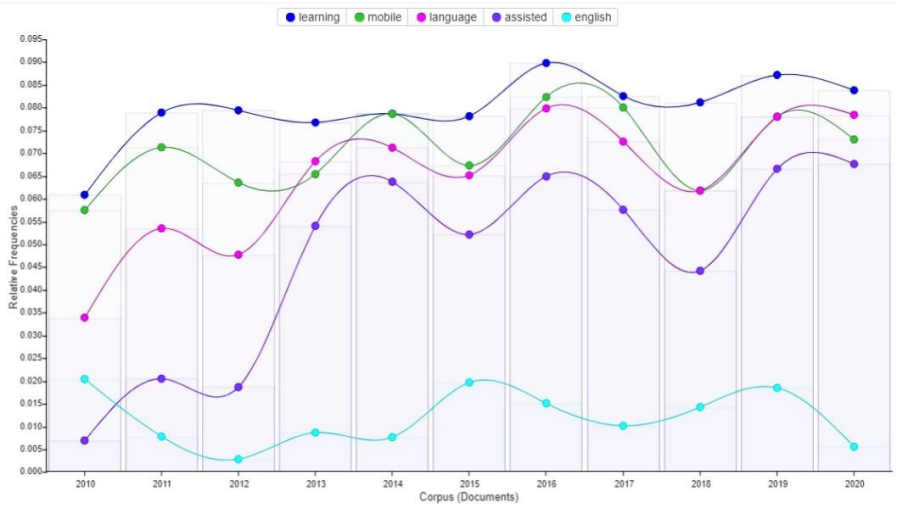

Figure 3 : Trends of a word's occurrence across the corpus

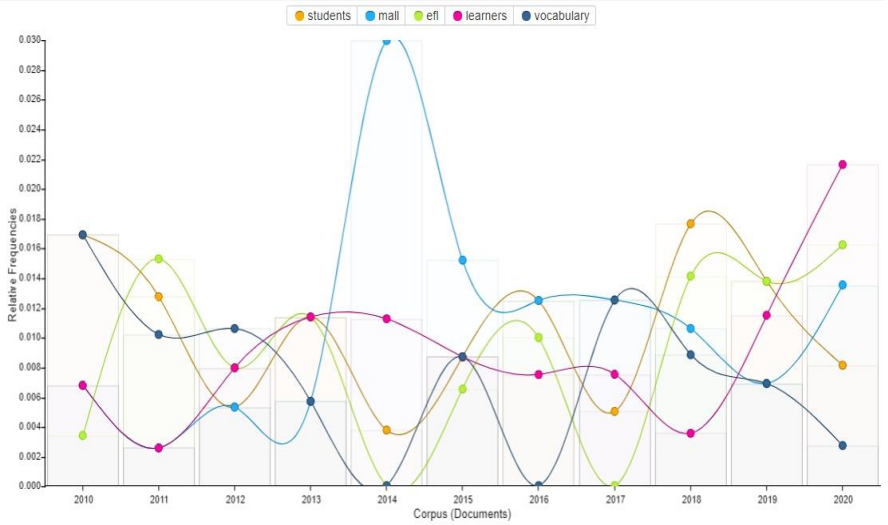

Figure 4 : Trends of a word's occurrence across the corpus

Conclusion

It becomes obvious that a short analysis based only on the published titles which does not include the abstracts, or the main texts of these studies is not complete. But it can give us some important clues as to the questions we have asked. All the preliminary findings of this study highlighted a great interest and a steady preoccupation of researchers about MALL issues over these ten years.

The main topics that Duman et al. (2015) identified in their research years ago, remain the same with minor changes. Topics such as Speaking/Pronunciation skills, Listening skills, Vocabulary skills, Perception/Attitude still remains vibrant with the addition of newer topics such as Learner engagement/motivation/autonomy.

Topics related to software and apps overview and presentation or their experimental implementation in specific language teaching conditions also played an important role. This can be easily explained by taking into consideration the large number of mobile apps that have emerged in the last decade dealing with language learning. Terms such as: "mobile", "students", "learners", "technology", "apps", "education", "teaching", "attitudes", "context", "classroom", "devices", "perceptions", "skills, "design", seem to be at the center of researchers' interest. A more detailed research and analysis will be conducted in the near future, and will concern the abstracts of these published studies as well.

in conclusion faced in a digitally globalized world, "… an increasing number of learners are learning foreign languages outside a formal and structural classroom-based education" (Arvanitis, 2019). This significantly affects the research and implementation studies of MALL and leads us to better explore and understand the learners/users' needs.

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Cultural Diversity and Its Influence on Role Players in a Full-Service School in Soshanguve: A Wellness Perspective

Ute Steenkamp

Abstract

The purpose of the study was to explore the role cultural diversity plays in a Full-Service School in Soshanguve by means of a wellness perspective lens. The phenomenon at hand was the way that cultural diversity influences role players within a Full-Service School. The study was underpinned by three theories, namely Hettler's Wellness Theory, Cultural-Historical Activity Theory and Ubuntu to generate a comprehensive insight into the role of cultural diversity on role players within a Full-Service School in Soshanguve. The study was premised on a qualitative philosophy using an interpretive paradigm, an ethnographic case study and using various qualitative methods of data collection, analysis and interpretation of data. Only one school participated in this research study as the goal of this research study was understanding the phenomenon from the participants' perspective. The study employed a purposive sampling approach to select diary entries from educators who participated in the semi-structured interviews. Data collection and analysis were precise as the data was collected and transcribed as soon as it was recorded. The researcher consequently decided to use thematic analysis to draw on the theoretical framework of this study. Thematic analysis refers to the identification of themes and patterns of meaning throughout the data in correlation to the research question. Thus, the researcher analysed content by coding specific themes as directed by the research project's theoretical framework. Among the findings was that role players identified that cultural diversity influences the wellness dimensions holistically. One of the recommendations is to establish a cultural awareness model in collaboration with the community within a Full-service school.

Keywords: full-service school, school governing bodies, cultural-historical activity theory, education management, culture, ubuntu, inclusive education

Introduction

This study explored cultural diversity and its role in a Full-Service School. The increasing cultural diversity in educational institutions forces that role players teach and manage learners and teachers with cultures, languages and backgrounds that are unknown to them. This study focused on the role cultural diversity might play on role players within a Full-Service School.

To understand cultural diversity, the researcher first defined culture and how theorists who studied culture define its many forms. Cultural diversity was then discussed, and the researcher looked at various studies to explore the role it may/may not play in educational environments. Culture is defined as distinct behavioural and social traits related to a certain

group of people with their own religion, values, beliefs, and norms (Arnolds 2003). Matthew Arnolds (2003), who postulated that culture is not a homogenous social phenomenon, but divisible into numerous aspects emphasised the multifaceted, complex, and diverse nature of culture.

Cultural diversity is defined by Danso (2018) as the reality of a diversity of cultural or ethnic groups within a group and/or society. Cultural diversity has a correspondingly diverse impact on different aspects of the functionality of a school, firstly the teaching and learning process. According to Danso (2018) culture can influence the way in which the teachers teach and address cultural issues. In South Africa, teachers must teach and develop the learner as a whole, without considering their cultural heritage (South African Government 2009). Motitswe (2011) suggests that teachers might lead learners to feel excluded when an educator only focuses on one culture or cultural life experiences. Secondly, Motitswe (2011) concluded that culture may also lead to language barriers in the learning process. McMahon et al. (2000) also stated that Full-Service Schools value the concept of cultural sensitivity whereas little progress has been made on devised culture-specific programmes to target ethnic minority learners. McMahon et al.'s study focused on Latin American learners. McMahon et al.'s (2000) study was significant to this research study as it is recognised that the education system should be culture-specific but there seems to be little progress on developing these programmes to target ethnic minority learners.

Harmon and Schafft (2018) stated that to promote the success of each learner, a school must develop a school culture and instructional plan beneficial to student learning and staff proficient growth (Harmon & Schafft, 2018). Burton (1980) identified four types of academic culture as a worldwide establishment: the culture of the profession, the culture of the enterprise, the culture of discipline and finally the culture of the system. As stated by Burton (1980), the researcher focused on the cultural diversity in a school's context and the role thereof. Therefore, the following research question was posed:

Cultural diversity and its influence on role players in a Full-service School in Soshanguve: A Wellness Perspective?

In answering this question, the study contributes knowledge towards the understanding of cultural diversity and its influence on role players within a Full-service school. The findings of the study will have positive implications for both policy and practice on cultural diversity in schools and how, if necessary, could be improved or maintained.

Conceptualising Cultural Diversity

A Full-Service School is a school which has been developed to accommodate all learners from different backgrounds and cultures and its aim is to assist learners with special needs (Department of Education, 2001). Full-Service Schools are a relatively new phenomenon in South Africa but have gained significant traction and popularity since the 1994 elections (Department of Education, 2001). Apartheid had resulted in significant learner-deficits and great barriers to knowledge between respective cultures and although South Africa is now a free country, South Africans still deal with historical disadvantages that hamper learning.

The research in this study postulates that an individual's culture is the aggregate of everything acquired and experienced during his or her lifetime. Arnolds (1869), however, states that culture is innate to all human beings and something all people inherently possess. The two

theories underscore the contrasting views on how culture could be defined. The characteristics of culture, according to Schein (1984), are as follows: observable artefacts that are visible, values as a level of awareness and underlying assumptions that are usually taken for granted. Hinde's (2004) research aimed to answer the question of how the underlying assumptions of teachers could influence the culture of a school and how change is accepted or objected to culture, thus culture can be theoretically objected to change.

Gay (2013) stress the importance of cultural diversity in a school or educational institution, but they also state how its importance is not recognised and valued as much as it should be. A Full-Service School is established according to the culture of the community, the Department of Education and by educators in the classroom setting. This is informally manifested through people's actions, cooperation, problem-solving and these factors sub-consciously shape the values, culture and norms of a Full-Service School. Ortega-Williams, Crutchfield and Hall (2019) state that culture is identified and characterised by truly embedded values and beliefs – some of which are common across various schools, but some of which are unique and provide a diverse sense of what, how and why things are done at the particular school. These distinct practices and methodologies consequently impel a unique study since no two Full-Service Schools will have the same cultures or location.

Maraña (2010), whose research correlates with Hettler's Wellness Theory (1976), states that cultural diversity can have an impact on all developmental phases. Developmental phases refer to the development of all wellness dimensions within education. From as early as the 1970s, cultural diversity has had an impact on relationships, education, and various other phases of education. Moreover, Matarasso (2007) highlights that culture can grow and develop people in various areas of life and wellness. Matarasso (2007) noted, however, that cultural expressions are true to one's own culture and that culture can unite people and nations and could improve dwindling population figures. Peterson and Deal (1998) posited that culture could also enhance a positive outcome on various areas such as wellness. According to Weeks (2012), there are two ways of learning within a cultural setting of a South African school and old cultural ways of learning are now replaced with social interaction between classrooms, schools and communities. Thus, Full-Service Schools will be the focal point in revealing the culture of learning in a culturally diverse school since these schools are the ideal representation of cooperation among and within different schools (Steenkamp, 2012) and communities.

Research conducted by Lindström and Eriksson (2010) highlighted a case study done by Turnbull (1961,1972) on two different tribes in Africa which revealed a complete loss of cultural identity and rituals by the tribe forced into a modern society as it assimilated and adapted to the Western culture. This is also a pinnacle research point as to how cultural diversity might influence a Full-Service School. Furthermore, Taylor (2008) argue that one cannot discount the remnants of the Apartheid regime still fostered by certain cultures, educators, and learners within the school system in South Africa and how this influences the functionality of schools. Taylor also mentions that a culture of learning, truancy and disciplinary issues is still evident in South African schools, thus influencing the wellness of a school setting. Jenkins (1987), known for research on cultural influences in South African schools, clearly points out the cultural changes within South Africa over time. This cultural

evolution should be investigated to establish the reasoning behind the establishment of the Full-Service School by the Department of Education.

There is a noted gap in the research on cultural diversity within Full-Service Schools and how such diversity is promoted and fostered, which this research may seek to identify and establish.

Three Theories

The Wellness Theory (Hetter 1979) identified six dimensions to support and improve the future wellness of a school. Wellness is a dynamic awareness and teaching aiming for a longer and more successful existence. The model comprises of six dimensions that are physical, emotional, intellectual, social, occupational, and spiritual wellness (Hettler, 1979). The wellness theory seeks the development of the whole person. This is important to understand and to understand how cultural diversity might influence these dimensions of role players within a FSS. Currently, in FSS not enough emphasis is placed on wellness and/or all the wellness dimensions. Without looking at the all wellness dimensions one might leave out pivotal information regarding cultural diversity's role on the wellness of role players. Ubuntu is a widely known and practiced philosophy in South Africa. Ubuntu became popular amongst South Africans in the 1950s and is seen as a concept for enhancing the development of post-apartheid South Africa. Ubuntu as a theoretical framework will provide insight into how various cultures operate within a FSS. Ubuntu will also enhance the deciphering of interviews and observations with participants and it provides a basis for authentic research unique to the South African context. Unfortunately, the current position in schools regarding Ubuntu is seen as a political ideology which endorses equality and human rights for all. Ubuntu as a theory could be used to effectively develop a school culture of Ubuntu as it advocates for the inclusion of all races, diversities and cultures. The Cultural History Activity Theory (CHAT) (Vygotsky 1978) focused on the pivotal role it plays on individuals. This theory is important in this research as the research wants to understand the history of the role players' social culture and how it can be adjusted or improved and that it is the knowledge and familiarity with the culture itself which empowers the reinforcement of a positive cultural norm in a FSS.

Methodology

This qualitative study and the chosen research design was an Ethnographic case study. The aim of the ethnographic case study is to find and connect theory with practice, using one's own knowledge and research as a starting to point to understand people and learning about participants' role and work environment (Fairhurst and Good, 1991). Spradley (1979) stated that an ethnographic case study involves sourcing from participants' words and actions. Through an ethnographic case study the researcher wanted to understand the actions of participants by observing various cultures. According to Maree (2007), a case study can be defined as a first-hand experience of a contemporary phenomenon of the role cultural diversity plays within a FSS. Purposive sampling was used for this study. Only participants who were regarded as "data affluent" (Ames, Glenton and Lewin, 2019) were used. Purposive sampling has been identified by Ames et al. (2019) as selecting certain participants for a specific purpose, which streamlines ease of sampling. The researcher included teachers who have been teaching at the Full-Service School for more than five years. The researcher invited purposely selected participants to participate in the study and the researcher indicated that participation was voluntary. Data was collected through the use of semi-structured

interviews, open-ended questionnaires, documentation and diary entries. In an attempt to obtain rich data on how cultural diversity influences the Full-Service School, the researcher conducted conversational interviews (semi-structured) with teachers and SGB members, and a semi-structured interview was used for the principal. According to Bertram and Christiansen (2020), various African cultural diversities make use of intimate groups to address concerns found in the community. Thus this type of interview fit impeccably with the location of the Full-Service School. In addition to interviews, the researcher used open-ended questionnaires during the study. The open-ended questionnaires focused on uncovering demographic detail and questions relating to cultural diversity and how it is practised in a Full-Service School. An open-ended questionnaire is used to gain an understanding of underlying reasons, opinions, and motivations of role players. It can also provide insights into the research problem. Furthermore, Open-ended questions may yield more candid information and unique insight for researchers as participants may find them less intimidating than scaled questions. Documentation of the school will include the Code of Conduct and the Vision and Mission Statement of the school. Diary entries were used to understand the participants' initial feelings and expectations during the research process. Diaries involve the reader and provide them with a clear picture as to how the participants feel about cultural diversity in the Full-Service School as well as supporting the overall procession of the research.

According to Creswell, Hanson, Clark, and Morales (2007), diaries provide a researcher or reader with a clear picture of emotions during the research process. The diaries consisted of two entries per participant completed before and after the research. After each interview, the researcher transcribed all handwritten information into a final record of interviews. Each interview had details of both verbal and non-verbal responses (Creswell *et al*., 2007) Details of the interviewee included biographical data and a code assigned for each interviewee. The open-ended questionnaires were read in order to make sense of it. Units were then segmented to sentences and phrases using a marker to point then the units were labelled and the label was writing with an arrow. Possible grouping codes were identified and careful attention was given to make sure the codes were linked to the research questions (Henning, van Rensburg and Smith 2004). The documents were analysed to see whether the school's Code of Conduct reflects the acceptance of different cultures. Only relevant parts of the documents were used to enrich the research study. The researcher then looked for relevant themes by using Hettler's Wellness Dimension. After placing the data into themes, the researcher correlated the themes with the interviews to see whether the documents were implemented according to the participants. The diaries were structured under the headings, feelings and expectations. There were two entries, pre-interview and post-interview.

From the meaning attached to the interpretations of themes, logical conclusions were drawn.

All the ethical procedures were followed with participants informed of their right to voluntarily participate or stop the participation out of free will. The participants were assured

of the confidentiality of data collected and that no reference would be made to their names in the research report.

Findings

The analysis of research data yielded the following results. These results are discussed according to the themes harvested from the data.

Theme 1: Identity and belonging are influenced by cultural diversity on role players in an FSS school.

An initial objective of the research was to interpret the influence of cultural diversity on role players within a FSS. The findings revealed that teachers did not have a set definition for cultural diversity but rather their own interpretations. This was seen in all the participants' responses. The word "different" was mention in various instances and that teachers should customise their teaching to be equal to all. This finding is consistent with that of Hachfeld, Hahn, Schroeder, Anders and Kunter (2015) who revealed that cultural beliefs relate to aspects of learning and progress and that teachers should not focus on treating all students equally but rather focus on cultural differences and ensure that teachers are trained and encouraged to explore various cultural backgrounds. In this sense the findings showed that teachers at this Full-Service School valued cultural diversity and that it promotes a sense of belonging. Supporting literature highlights psychological benefits of experiencing psychological belongingness in school (Ryan and Deci, 2000; Anderman, 2002).

Themes 2: Educator's knowledge on cultural diversity is learning in a diverse world

A further theme that emerged from the findings is that educators' knowledge on cultural diversity is learning in a diverse world. This study found that the educators placed a lot of emphasis on creating the students to have a mindset of learning in a diverse world. As stated by Member 6, "I have taught the learner that they should respect each other's cultural beliefs". The research revealed that educators at this specific Full-Service School valued the teaching of the diverse world and preparing students to become actively involved in their immediate society. Haddix (2017) and Richmond, Bartell and Dunn (2016) highlight that regardless of the background of teachers, teachers struggle to understand and showcase culturally response practices. This was not the case with this Full-Service School. Role players understood the cultures, the way they behave, the way they act and how to effectively address cultural diversity it in their classrooms. Role players within a Full-Service School from this study view their way of delivering a diverse cultural curriculum subjectively, whether it is through sharing experiences, having cultural celebratory days and code switching as examples.

Theme 3: Cultural diversity influences all wellness dimensions holistically

This study found that educators placed a lot of emphasis on creating the students to have a mindset of learning in a diverse world. As stated by Member 6, "I have taught the learner that they should respect each other's cultural beliefs". The research revealed that educators at this specific Full-Service School valued the teaching of the diverse world and preparing students to become actively involved in their immediate society. The findings correlate with Haddix (2017), A strong relationship between Densmore-James and Macfarlane's work (2013) which showed that culture within a rural school setting should view the child in a holistic manner and educators should advocate for the learners holistically. Haddix (2017) and Richmond, Bartell and Dunn (2016) highlight that regardless of the background of teachers, teachers

struggle to understand and showcase culturally response practices. In reviewing the findings this was not the case. Role players understood the cultures, the way they behave, the way they act and effectively addressed it in their classrooms. Role players within a Full-Service School from this study view their way of delivering a diverse cultural curriculum subjectively, whether it is through sharing experiences, having cultural celebratory days and code switching as examples.

Theme 4: Teachers, SGB and the principal experience cultural diversity and its influences as hierarchal in an FSS.

The findings suggest that cultural diversity influences the hierarchal structure within a Full-Service School. The consensus of the findings revealed that role players felt an equal responsibility to address cultural diversity at various levels within a school setting. The findings showed how role players such as teachers adapt their teaching styles to address various cultures within their classrooms. As Member 4 states "I have Zulu speaking learners in my class by adapting and differentiating to be the same level with the learner". This is not seen as a hierarchal structure but rather as a shared vision within this Full-Service School. In agreeance with Letseka (2012) Culture in South Africa, according to Letseka (2012), is seen as a communalistic perspective and not individualistic which is seen as selfish and egocentric.

Theme 5: A community governance framework is proposed to address cultural diversity

An emphasis was placed on the importance of community diversity and Governance. From the findings it became clear that this specific Full-Service School valued the importance of community involvement and taking responsibility as a community to promote cultural awareness and diversity. Viscogliosi *et al*. (2020) researched the importance of participation of indigenous elders in the community. They concluded that indigenous elders contribute to the community by transmission of values, adding to education and contributing to the holistic wellness within a community. The findings agree with Viscogliosi *et al*. (2020) as all role players emphases the importance of the indigenous elders and their contributions to the cultural diversity within this Full-Service School.

Themes from Open-Ended Questionaire

Theme 1: Cultural diversity plays a role on the social acuity of role players in an FSS

According to the study, the behaviour of teachers influences the learners' behaviour. From the findings it became clear that role players within a Full-Service School are being affected in terms of their social wellness due to cultural diversity and the need to address cultural diversity within a Full-Service School. Johann Wolfgang van Goethe highlights this idea perfectly, "Those who know nothing of foreign languages know nothing of their own" (Goethe, 1998:6). In a study completed by Marcellino (2008) revealed that teaching an additional language like English in Indonesia played a huge role not only on the role players within the school but also on the students and in correlation with this study it became evident that there are still language barriers evident in this specific Full-Service School. Marcellino (2008) highlighted that there was a substantial unconstructive influence of the students' cultures and the non-conductive language environment affecting their language acquisition in their study, and this was also evident in this Full-Service School as role players referred to it as being a barrier in the teaching of learners from various languages but it leads to adapting and creative teaching. Interlinked with this findings is a study of Morcom (2017) that showed that social

awareness is significantly important to academic and social outcomes. This Full-Service School and role players within revealed the lack of funds influences the social outcomes to create and maintain different types of languages and cultural programs.

Theme 2: Educators' knowledge of cultural diversity is defined as 'multifaceted' and unique to each role player in an FSS

The findings show that role players subconsciously move away from rigid and structured ways of teaching. This is evident in the findings where participants stated that before they even follow specific guidelines they consider the attitude of others, then they discuss and interrogate before they blindly teach. This shows that cultural diversity enhances the freedom and flexibility as role players move away from rigid teaching methods.

The findings showed how role players adapt their curriculum to provide equal opportunity for all and how they promote freedom in this Full-Service School setting. One member commented on the freedom of religion and that students and various role-players were given the option to not attend religious practises if they didn't feel comfortable. The findings correlate with the findings of McGuire and Bagher (2010), Lee (1991) and Witmer and Thomas (1992) who posited that spiritual freedom in a school setting is pivotal to enhancing cultural diversity and creating a sense of belonging.

Theme 3: Cultural diversity influences the social wellness dimension

The findings revealed that cultural diversity influences the social wellness dimension within this specific Full-Service School. A study by Dukes (2016) highlights that cultural diversity is influenced by various aspects within the social wellness dimension. Longhi (2014) researched cultural diversity and subjective well-being in England and concluded that there is a correlation between social wellness and well-being.

Theme 4: Teachers, SBG and the principal experience cultural diversity and its influences as historically orientated

It was clear from the data analysis that teachers, SGB and the principal experience cultural diversity and its influences as historically. This was evident in the interviews and questionnaires that the members and participants felt the need to address historical influences as a means to address cultural diversity. It became clear that cultural diversity can't be addressed if one doesn't consider the historical context of the community culture. In a report by UNESCO (2009) it was suggested that that teachers view the material they have in classroom and analyse historical narratives to see which voices are missing. Nussbaumer stated that "not only can CHAT explain situations in terms of dynamic relationships but also reveal social resources as they influence changes in human endeavours and educational practice" (Nussbaumer, 2012:46). Moloney and Saltmarsh's (2016) study concluded that there was a knowledge of different types of diversity will lead to creative and holistic teaching and this correlates with the findings of this study. This means that the teachers in a school like this Full-Service School need to have the knowledge of what has happened historically in that specific context in order to effectively teach and know their own learners.

Theme 5: An equality framework is proposed to address cultural diversity

An equality framework is proposed where role players within this Full-Service school clearly valued equal opportunities for all. It was clear from the diary entries that participants felt a

need to make the researcher the researcher understand that equality was valued and promoted at this Full-Service school. The findings showed that role players felt that equality is interlinked with showing respect. These findings correlates with findings from Mahaye (2018), Du Toit-Brits *et al*. (2012) and Schoeman (2012) that equality in education is a defining element of conventional African existence and should therefor guide and direct education and how role players interact with each other.

Themes that Emerged from Document Analysis

Theme 1: The vision, mission and code of conducts show that policies and documents are influenced by cultural diversity on role players within an FSS

The findings revealed that the vision, mission and code of conduct have been adapted to showcase a cultural diverse approach to this Full-Service School. Meier (2009) argues that the decentralisation of education provided racially defined communities the legal means to preserve their privileges, that schools have been much more successful at meeting the demand for racial desegregation than achieving the ideal of social integration and that messages forthcoming from "race" affect black learners more negatively than other learners in South Africa. However, the researcher disagrees with this statement as it is clear that this FSS showcases cultural diversity as holistically integrated. Educational policies produced since 1994 comments within the policy to consider cultural diversity and has practical examples for education, however, Jansen argues that "policy is not practice, and while an impressive architecture exists for democratic education, South Africa has a very long way to go" (Jansen, 2004:126). The findings correlate with stated Mahaye (2018) that Ubuntu stretches one's mind into a school classroom practice and sparks a new look and transformative navigation and innovation required in our 4th industrial revolution for socio-economic development

Theme 2: The vision, mission and code of conduct show that the educator's knowledge on cultural diversity pivotal and should be promoted through teaching

Research by numerous individuals (Pillay 2004; Carrim & Soudien 1999; Vally & Dalamba 1999; Jansen 1998c and Goduka 1998) places doubt on whether attempts at providing equitable and quality education for learners with diverse backgrounds, interests and abilities are successful. The findings revealed in the documentation shows a proactive cultural responsive approach and not an assimilationist approach. Various cultures and histories are shared and encouraged.

Theme 3: The vision, mission and code of conduct show Cultural diversity influences the spiritual wellness dimension in a school setting

The spiritual dimension, as indicated by Hettler (1976), involves the religious dimension in a Full-Service School environment. In South Africa, a culture of different religions is recognised and respected in each school. The social wellness dimension focuses on the way in which one interacts with others in intimate and meaningful relationships and on being an active member in the community (Hettler 1976). Chandler et al. (1992) clearly stated that spiritual wellness is a pinnacle addition to the holistic wellness model and for defining the development of one's spirituality. Miller (2005) defined spiritual wellness musing over the meaning of life, to be tolerant of the beliefs of individuals and to live consistently with our values and beliefs. Furthermore, educators must realise that their role includes being a counsellor and guiding learners to spiritual wellness in the educations system. McGuire and Bagher (2010)

researched the impact of spiritual labour on the emotions and job satisfaction. McGuire and Bagher (2010) concluded in the study that spirituality can be used to develop culture, this was also noted by Lee (2009) and Witmer (2001). It can then be suggested that spirituality can develop culture, while simultaneously influencing spiritual wellness. The theories revealed from McGuire and Bagher (2010), Lee (2009) and Witmer (2001) assisted the researcher to be able to see that spiritual wellness plays an important role in the overall wellness of a Full-Service School. McGuire and Bagher (2010) concluded in the study that spirituality can be used to develop culture, this was also noted by Lee (2009) and Witmer (2001). It can then be suggested that spirituality can develop culture, while simultaneously influencing spiritual wellness. The theories revealed from McGuire and Bagher (2010), Lee (2009) and Witmer (2001) assisted the researcher to be able to see that spiritual wellness plays an important role in the overall wellness of a Full-Service School.

Theme 4: The vision, mission and code of conduct shows teachers, SGB members and the principal should experience cultural diversity as a shared goal

The findings correlate with Murithi (2007) that Ubuntu shows a sense of shared destiny between people. The findings shows that each role player felt that they as a school and individual has a shared vision and mission towards cultural diversity. Ubuntu comprises principles such as, "equity, fairness, reciprocity, inclusivity, sense of shared destiny between peoples" (Murithi, 2007: 282). The findings do not agree with Enslin and Horsthemke (2004) and Eliastam (2015) the Ubuntu has negative connotations to development of a community. The findings reveal that without participants realising it, they embody the term Ubuntu and shared the vision and mission to promote cultural diversity in this FSS.

Theme 5: Practising respect is a framework proposed within the vision, mission and code of conducts to address cultural diversity

Lam and Hui (2010) point out that this could conversely hamper the way teachers deal with discipline as teachers of a respective culture might inadvertently adopt inapposite cultural approaches to dealing with discipline. Mokgoro (1998) the following values are defined as key social values of Ubuntu: group solidarity, conformity, compassion, respect. Ubuntu, is also seen by Dekker and van Schalkwyk (1989) as, "a spiritual idea which directs the life experiences of African" (1989:466) and thus a crucial directional marker for validating the research methodology within an African context.

Themes that Emerged from Diary Entries

Theme 1: Emotional wellness is influenced by cultural diversity on role players in an FSS

Tan, Härtel, Panipucci and Strybosch argue that, "emotions are a crucial factor in cross-cultural interactions and the need to develop both cross-cultural and emotional skills in expatriates is greatest when there is a large cultural gap between the home and host nations" (Tan et al., 2005:4) and further state that culture can direct the emotional state of a person. The findings focuses on cultural diversity and it agrees with Tan et al. (2005) that culture or the topic rather, can have a direct impact on the emotional state of a person. Tan *et al*. (2005) also identifies a decline in emotional wellness in Asia due to work overload and from the findings

correlates with this study as cultural diversity influences the workload of teachers and policy makers to ensure that it/they address and promote cultural diversity.

Theme 2: Educator's knowledge on cultural diversity is seen as everyday practice.

Mokgoro (1998) the following values are defined as key social values of Ubuntu: group solidarity, conformity, compassion, respect. Murithi (2007) and Nussbaum (2003) explain that Ubuntu comprises principles such as, "equity, fairness, reciprocity, inclusivity, sense of shared destiny between peoples" (Murithi 2007: 282). Waghid and Smeyers (2012) states that, a directive of national curriculum policy is that indigenous knowledge systems form part of the broad environments of all school areas and subjects. Maisty and Thakrar's (2012) study suggests, without knowledge of the Ubuntu philosophy one might not develop the social responsibilities required by Ubuntu thus not developing social wellness in the community. Understanding the history of their social culture individuals can adjust or improve their own social cultural history – it is the knowledge and familiarity with the culture itself which empowers the reinforcement of positive cultural norms. This study interprets the knowledge and familiarity with the culture of this Full-Service School and the researcher being familiar with the culture within the community and this was evident in the findings.

Theme 3: Cultural diversity influences the emotional wellness dimension within a school setting

The increasing cultural diversity in educational institutions demands that educators teach and manage learners with different cultures, languages and backgrounds that are unknown to them. This in itself can cause anxiety as it is the 'unknown', however more importantly the findings revealed that in this FSS the educators are from similar cultural backgrounds and understand the learners they teach and can culturally adapt their lessons and way of instruction. However, it is still clear that by adapting and ensuring one addresses all the students' cultural needs the educators' emotional wellness will decline. Du Toit (1995) takes the stance that by opening school to all races doesn't automatically ensure mutual respect and understanding for each others' cultures. This is important because it was evident in the findings that educators play a pivotal role in teaching learners about various cultures.

Theme 4: Teachers, SGB members and principal experience cultural diversity as influencing being worrying

The finding revealed that the topic 'cultural diversity' made the participants feel worried about the topic. This was evident prior to the interviews. In a book written by Mooney, Knox and Schacht (2007) it reveals that journal entries illustrated that when personal topics are discussed it might make the participants uneasy as one would consider the social norm. Participants subconsciously know the politically correct responses, but they might be afraid to express their true feelings. In the current study the findings showed that the post diary entries expressed the satisfaction participants felt after the interview, this correlates with Mooney *et al*. (2007) as one participant said, "I hope I answered it correctly".

Discussion of Findings

This study explored cultural diversity and its role in a Full-Service School. The increasing cultural diversity in educational institutions forces that role players teach and manage learners and teachers with cultures, languages and backgrounds that are unknown to them.

This study focused on the role cultural diversity might play on role players within a Full-Service School.

Findings from the semi-structured interviews revealed that role players' identity and sense of belonging is influenced by cultural diversity. Additionally, the educator's knowledge on cultural diversity is learning in a diverse world and that cultural diversity influences all wellness dimensions holistically. Teachers, SGB and the principal experience cultural diversity and its influences as hierarchal in an FSS and that a community governance framework is proposed to address cultural diversity.

Themes from the open-ended questionnaires revealed that the role players' social acuity is influenced by cultural diversity in an FSS. The educator's knowledge of cultural diversity is defined as 'multifaceted' and unique to each participant. Cultural diversity influences the social wellness dimension at an FSS. Teachers, SBG and the principal experience cultural diversity and its influences as historically orientated. Finally, an equity framework is proposed to address cultural diversity

Themes from the document analysis revealed that the vision, mission and code of conduct shows school policies and documents are adapted to promote cultural diversity, the educator's knowledge of cultural diversity is pivotal and should be promoted through teaching and that cultural diversity influences the spiritual wellness dimension in a school setting. Additionally, the vision, mission and code of conduct show that teachers, SGB members and the principal should strive for cultural diversity as a shared goal. Finally, practising respect is a framework proposed in the vision, mission and code of conducts to address cultural diversity

Findings from the diary entries revealed that the role players' emotional wellness is influenced by cultural diversity in an FSS and the educators' knowledge on cultural diversity is seen as everyday practice. Furthermore it became evident that cultural diversity influences the emotional wellness dimension within a school setting. Finally, teachers, SGB members and the principal experience cultural diversity as influencing their physical wellness and participants proposed a wellness framework to address cultural diversity by establishing a community governance framework, promoting equality and by practising and teaching 'respect'.

Conclusion

Cultural diversity and its influence on role players within a Full-service school from a wellness perspective remains a subject of discussion and from the findings can influence wellness within a Full-service school holistically. All role players were influences by cultural diversity and if not addressed influences the school culture, teaching and learning. Although this article cannot be regarded as generalised on all Full-service School, but it provides a basis for extended research and discussion for role players within Full-service School s in South Africa or in similar context.

Recommendations

Through the voices of the role players, the study recommends that policy makers and education officials give the necessary provision to schools; especially in terms of curriculum adaptation, knowledge and funding.

The study recommends that educators be trained on cultural diversity and Ubuntu and how to effectively teach and celebrate each culture. This can be done through training courses,

workshops, visits and staff development programmes in which they invite people with knowledge and expertise in cultural diversity and or various cultures.

Teachers, SGB and the principal experience cultural diversity and its influences as hierarchal in an FSS and that a community governance framework is proposed to address cultural diversity.

The researcher believes that workshops could be established through the Department of Education to improve the way in which Full-Service Schools view cultural diversity.

An equity framework is proposed to address cultural diversity.

Compliance with Ethical Standards

Conflict of interest Author A declares that he/she has no conflict of interest.

Ethical Approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed Consent Informed consent was obtained from all individual participants included in the study.

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Does "Microteaching" Meet Pre-Service Teacher's Expectations?

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Abstract

Practically every academic institution and official body that is involved in the preparation of teachers of every educational grade and orientation regarding didactic practice in class, has included "Microteaching" in its academic curriculum as a basic subject. However, what is the attitude of students themselves towards this subject? What are their expectations? Does it eventually meet these expectations? What kind of knowledge and skills does it provide them with? This current research attempts to give insight to such queries, as it aims at researching the views of 115 student teachers on the subject "Microteaching". These views have been documented in short texts that students were asked to produce both in the beginning of the academic semester-after receiving initial information – and in its end - after their training was completed. This study makes use of a double perspective: it focuses on the one hand on their expectations from this subject, while on the other on their critical overall assessment, in order to formulate a thorough and rounded picture regarding the subject "Microteaching" through the viewpoint of the students who are trained in it.

Keywords: teaching strategies, microteaching, elementary pre-service teacher education, teacher skills

Introduction

Every academic institution takes special care in studying and designing the curriculum to be attended by its prospective students, so that they become multilaterally trained in the required skills and knowledge and they are rendered qualified in exercising their future profession. More specifically, in Greece – but also worldwide - most university departments, as well as other education and training bodies that prepare future educators of every level and orientation on the educational practice in class, have included in their curriculum "Microteaching" as a fundamental subject (Fykaris & Papaspyrou, 2014, McKnight, 1971).

"Microteaching" as a method of training future teachers has a long history (Allen, 1967, 1970) and a broad spectrum of applications (Dayanindhi & Hegde, 2018, Chatzidimou, 2013). It is defined (Fortune et al., 1965, p. 389, Perlberg, 1987, p. 715) as the technique which can aid future teachers to exercise teaching skills either already gained or (even) new, in safe and simplified teaching conditions, keeping a distance from the environment of a natural class, which is complicated, full of unforeseen events and stressful to them. It is generally evaluated as a method of many advantages (Reddy, 2019, Chatzidimou, 1997), but this should not mean that certain negative parameters are not pointed out (Gibbs, 1980, Luaran et al., 2016).

However, how is this subject regarded by the trainees themselves? What do they expect from it? Are their expectations finally met? What knowledge and skills are they provided with, in their opinion? Such are the queries attempted to be answered by this present research, whose **aim** is to investigate the views of 115 future educators on the "Microteaching" course, as these views have been illustrated in short texts that they were asked to write anonymously.

Methodology

The research was conducted among second-year students of the Department of Primary Education during the spring semester of the academic year 2018-2019. The subjects of the research were asked to write anonymously a short text in two-time phases: a) in the beginning of the academic semester, after receiving initial information regarding the practical Microteaching course and b) in the end of the academic semester, after having completed their practice using the Microteaching method. In the initial phase 115 texts were collected, while in the second 92.

To conduct this specific research, "content analysis" was considered to be the most appropriate method and was consequently used (Vamvoukas, 1988, Palla, 1992, Gall, Bory & Gall, 1996). This is a technique that was initially developed in the US in the beginning of the previous century (Lazarsfeld, Berelson, & Gaudet, 1948) and constitutes the most appropriate method for the objective and systematic description, processing and interpretation (qualitative and quantitative) of the denoted content of the communication whether in written or oral speech, as it allows for making replicable and valid inferences from texts to the contexts of their use (Berelson, 1952, Krippendorf, 2004).

This specific survey was conducted in the following stages:

Decoding: at this first stage, after careful and multiple readings of the students' texts, we decoded all the references related to the Microteaching course. For the decoding, the "topic" was chosen as an analysis and measurement unit. An "inference unit" (i.e. the text environment in which every subject is found) was defined to be a unit ranging from a word to an entire phrase. In total, 483 excerpts emerged from the first group of texts using this process, whereas for the second group 487 excerpts.

Choice of categories: after compiling the material and after careful and successive readings, the choice of categories was made on grounds of fulfilling the rules of objectivity, universality, thoroughness and mutual exclusion (Vamvoukas, 1991). The general categories which have emerged through restructuring of data (Papadopoulou, 2000) were coded (Bücker, 2020) as follows:

Chart 1. Categories - coding

CATEGORY	CODE
Microteaching course in the Department of Primary Education	A
The impact of Microteaching on the academic and professional course of future teachers	B
Acquisition of knowledge and skills through Microteaching	C

Verification of expectations on the Microteaching course[1]	D

Categorisation: the next stage was the classification of references in categories. Care was taken so that each reference would be placed in only one category. The references that emerged from the decoding were finally distributed in the categories as follows:

Chart 2. Distribution of references in categories

CATEGORY	CODE	Texts before practice in M/T		Texts after practice in M/T	
		N	%	N	%
Microteaching course in the Department of Primary Education	A	150	31,06	173	35,52
The impact of Microteaching on the academic and professional course of future teachers	B	131	27,12	91	18,69
Acquisition of knowledge and skills through Microteaching	C	202	41,82	194	39,84
Verification of expectations on the Microteaching course	D	-	-	29	5,95
Total references		483	100	487	100

Analysis

Through this categorization we subsequently attempt the quantitative analysis and processing of the material so that the statements of students regarding their expectations from the Microteaching course are approached and evaluated in the most comprehensive way.

In the first stage of the research 27 male future teachers (23,5%) and 88 female future teachers (76,5%) participated, while in the second stage the data was 21 (22,8%) and 71 (77,2%) respectively. What is, thus, observed is a female gender dominance, a common phenomenon for university departments that trains teachers, but also a decrease in the participation of students, which can be interpreted by the usual practice of attending more willingly in the beginning of the semester rather than in its end.

Assessing the percentages of the references in the above-mentioned categories (chart 2), we discover that the highest percentages for both groups of texts are gathered by the category that pertains to the knowledge and skills with which Microteaching provides its trainees. Following in second position – with a relatively small deviation, especially in the second text group – is the category of Microteaching as a subject in itself, while third position is held by the category regarding the impact of Microteaching on the academic and professional course

[1] The category "Expectations" emerged only during the decoding of references in the texts that students wrote after their practice in Microteaching.

of future teachers. Finally, concerning the second text group, the category related to verification of initial expectations, i.e. whether these were fulfilled or not, holds last position.

From the quantitative analysis of the separate thematic units, as well as their sub-categories (A-D), the following emerge:

Chart 3. Category A: The Microteaching course in the Department of Primary Education

		Texts before practice in Microteaching		Texts after practice in Microteaching	
The Microteaching course in the Department of Primary Education	A	N	%	N	%
Value of Microteaching course	A1	35	23,33	61	35,26
Microteaching as classroom simulation	A2	36	24,00	39	22,54
Opportunity for practice	A3	3	2,00	14	8,09
Potential for familiarization	A4	16	10,67	5	2,89
Acquaintance with the role of teacher	A5	17	11,33	9	5,20
Microteaching course as stressful	A6	5	3,33	3	1,73
Acquaintance and interaction with fellow-students	A7	38	25,33	42	24,28
Total references		150	100,00	173	100,00

By analysing the thematic unit that pertains to the Microteaching course in the Department of Primary Education, we concluded that the relevant references can be divided in seven sub-categories. It is worth mentioning that in both text groups the highest percentages of references (chart 3) are found in the same three sub-categories: "value of Microteaching course", "Microteaching as classroom simulation" and "Acquaintance and interaction with fellow-students". The only thing that differs is their ranking.

In the first text group, the highest percentage is held by the sub-category which collects student references on how important the course has been for them to get acquainted with their fellow-students, to cooperate with them, to interact and to contribute to each other's academic/professional evolution, while in the second text group it holds second position (chart 3). This can be possibly explained by the fact that during the first year of studies, future teachers mostly attend courses of general orientation in plenary, that is, they have not found themselves in smaller classes or groups that allow for dialogue, interaction, development of relationships and ties among them.

The sub-category that comes second in percentage of references in the first text group is the one whose references speak about the opportunity that future teachers had to experience the classroom for the first time, to participate in a simulation of school reality, while in the second text group it falls in third place (chart 3). A possible explanation for this-otherwise small-quantitative differentiation could be that the anticipation of the experience of Microteaching makes them assign it special value, which is slightly moderated when this has been fulfilled.

Third in percentage in the first text group comes the sub-category that refers to the value of the Microteaching course and which also collects the expectations and the evaluation of students for the course when still in its initial stages. This sub-category "shoots" in first place in the second text group (chart 3). It is highly likely that, the future teachers, having completed

their practice in microteaching, have a complete overview on the course and therefore feel more comfortable and more at ease to assess it properly.

The sub-categories referring to the potential that Microteaching offers to practice skills, to familiarize oneself with teaching factors and to experience the role of teacher, alternate in the next positions in the students' texts in both groups, while the sub-category related to references characterizing the course as stressful, comes in last position. We could, therefore, cautiously reach the conclusion that future teachers draw such positive experiences from Microteaching that they manage to override any negative emotions of fear or stress that their "virgin" teaching session might bring, together with the subsequent critique from their fellow-students and their professor.

Chart 4. Category B: Impact of Microteaching in professional teaching course

		Texts before practice in M/T		Texts after practice in M/T	
Impact of microteaching in professional course as teacher	B	N	%	N	%
Interesting and pleasant teaching	B1	9	6,87	4	4,40
Effective teaching	B2	18	13,74	6	6,59
Contribution in future academic and professional course	B3	28	21,37	9	9,89
Self-assessment and personal evolution	B4	34	25,95	23	25,27
Acquisition of self-confidence and stress management	B5	42	32,06	49	53,85
Total references		131	100,00	91	100,00

When studying the thematic unit of references focusing on the impact of Microteaching on the future professional course of undergraduate students as teachers, we noted that in both text groups the sub-category that brings out the contribution of the course in causing the research subjects to gain self-confidence and manage their stress effectively collects the highest percentage in references (chart 4). Moreover, we observe that in subsequent texts this percentage has significantly increased, clearly displaying that the experience in Microteaching has seriously boosted future teachers' confidence in their own powers and has helped them overcome -in part - their stress and anxiety in the face of the teaching procedure. Second position is held - equally before and after their practice in microteaching –by the sub-category that refers to the course contribution towards their self-assessment, recognition of their mistakes and personal development related to teaching actual students, with almost similar percentages (chart 4). Following in next place in both text groups is the sub-category on the contribution of this course in the academic and professional course of future teachers. It is, however, worth noting that in this case, the percentages show a great discrepancy, evidently surging – as it happens with the other categories - towards the sub-category that collects references on subjects' forming a positive self-image thanks to Microteaching. In the last positions of the thematic unit one finds the sub-categories that speak about the success of an effective and interesting/pleasant teaching with the aid of Microteaching bearing similar percentages (chart 4).

Chart 5. Category C: the contribution of Microteaching in skills and knowledge acquisition

Texts before practice in Microteaching						
SKILLS/KNOWLEDGE ACQUISITION	C	N	%	N	%	% of total
COGNITIVE LEVEL	C1	51	25,25			
ICT	C1A			13	25,49	6,44
Knowledge and skills	C1B			38	74,51	18,81
					100,00	
TEACHING METHODOLOGY	C2	94	46,53			
Organizing and Planning a Session	C2A			35	37,23	17,33
Teaching Preparation	C2B			9	9,57	4,46
Time Management	C2C			10	10,64	4,95
Methodology and Teaching Principles	C2D			10	10,64	4,95
Teaching Means	C2E			7	7,45	3,47
Teaching Implementation	C2F			0	0,00	0,00
Teaching Models and Techniques	C2G			23	24,47	11,39
					100,00	
PEDAGOGIC HANDLINGS	C3	57	28,22			
Mistakes and queries' management	C3A			11	19,30	5,45
Pedagogic atmosphere and Class management	C3B			36	63,16	17,82
Movement and Body Posture	C3C			6	10,53	2,97
Teaching Style and Poise	C3D			4	7,02	1,98
					100	
Total references		202	100	202		100,00
Texts after practice in Microteaching						
SKILLS/KNOWLEDGE ACQUISITION	C		%		%	% of total
COGNITIVE LEVEL	C1	54	27,84			
ICT	C1A			13	24,07	6,70
Knowledge and skills	C1B			41	75,93	21,13
					100	
TEACHING METHODOLOGY	C2	100	51,55			
Organizing and Planning a Session	C2A			68	68	35,05

Teaching Preparation	C2B			14	14	7,22
Time Management	C2C			5	5	2,58
Methodology and Teaching Principles	C2D			2	2	1,03
Teaching Means	C2E			1	1	0,52
Teaching Implementation	C2F			6	6	3,09
Teaching Models and Techniques	C2G			4	4	2,06
					100	
PEDAGOGIC HANDLINGS	C3	40	20,62			
Mistakes and queries' management	C3A			2	5	1,03
Pedagogic atmosphere and Class management	C3B			30	75	15,46
Movement and Body Posture	C3C			8	20	4,12
Teaching Style and Poise	C3D			0	0	0,00
					100	
Total references		194	100	194		100,00

The first thematic unit which collects students' comments on knowledge acquisition and skills owing to the Microteaching course, offers rich material for analysis. This rich material is distributed in three separate sub-units and they, in turn, in other sub-categories. First position (chart 5) in both text groups is held by the sub-unit that concerns the acquisition of Teaching Methodology knowledge and skills, in which Microteaching trains future teachers (46,53 και 51,55%). The other two categories alternate for second and third position: in the first text group, the sub-unit that talks about learning pedagogic handlings is preceding (28,22%), whereas in the second group the sub-unit that refers to the enrichment of cognitive background of students is preceding (27,84%). It is obvious that the subjects of this research anticipate to delve into topics of Teaching Methodology and assess this delving as the basic benefit to be gained from this course. Moreover, they initially wish to get acquainted with various pedagogic handlings which will help them in the educational process, but eventually seem to appreciate more the enrichment of their cognitive "gear", possibly because they understand that their instruction in issues of Teaching Methodology fortifies them also in the level of pedagogic handling of their students.

Upon examination of the separate categories of the sub-units (chart 5), it can be observed that:

In the sub-unit "Skills and knowledge acquisition", the reference to "skills and knowledge" prevails in reference percentage in both groups (74,51 και 75,93 %), however the percentage of references that depicts student expectation to train in ICT is not negligible (25,49%), nor is the certainty that this has been achieved (24,07%), a remarkable fact for a course of non-technical orientation.

In the sub-unit "Teaching Methodology", the references on training in course planning and organization prevail in percentage (68%), proving the importance that students place in this factor of the educational process, both before the start of the Microteaching (37,23%) and especially after its end (68%), when they have been convinced of its crucial role. In the first

text group, what follows in second position is the references on expectation to learn models and techniques for teaching (24,47%), while the references on practicing in time management and training in methodology and teaching principles tie for third place (10,64%). In the second text group, in second position we encounter the references on teaching preparation (14%), and in third place references on teaching implementation (6%)[1]. Besides the shift in topics which students refer to after the implementation of Microteaching, it is also worth noting the exceptionally low percentage that these two categories share, compared to the corresponding in the first group. This perhaps reveals the different estimation of teaching factors on behalf of the research subjects after their classroom experience.

In the sub-unit "Pedagogic Handling", prevalent in percentage in both text groups are the references on skills that contribute to pedagogic atmosphere and class management (63,16 and 75%), whereas second position is held in the first text group by references on mistake and student query management skills (19,3%), while in the second group by those one teacher's choice of movement inside the classroom and proper body posture when teaching (20%), leaving thus in last position – in both cases – the references on style and teaching poise. It is rendered obvious that students are concerned and stressed about their coexistence with pupils in class as well as the appropriate ways to maintain a healthy and beneficial to them pedagogic atmosphere.

In attempting an analysis of the separate categories at the level of percentage within the broader thematic unit (Skills and knowledge acquisition), we discover an entirely different distribution between the two text groups. The sub-category that pertains to the skills and knowledge that microteaching cultivates in the first group holds first place with a percentage of 18,81%, while in the second group it falls second (21,13%). Following comes in the first group the sub-category referring to pedagogic atmosphere and class management (17,82%), which ranks third in the second group (15,46%). Finally, in the first group, what comes after is the sub-category on planning and organizing a session (17,33%), which in the second group scores the highest percentage of references (35,05%). This reversal possibly reflects the change in views and attitudes that practice through Microteaching has brought about, and the subsequent shift of attention of students from a theoretical address to teaching towards a more practical and technical approach to it.

Chart 6: Category D: Expectations from the Microteaching course

Texts after practice in M/T			
EXPECTATIONS	D	N	%
Verification of expectations	D1	21	72,41
Falsification of expectations	D2	8	27,59
Total references		29	100

Only in the second text group do we find – as would be expected – references which discuss either the anticipated or the non-confirmed expectations that had been formulated and had – perhaps – been noted in initial texts by the subjects of the research in the beginning of the academic semester. The greatest part (72,41%) is occupied by the sub-category with references that speak about verification of initial positive expectations, while the sub-category

[1] This sub-category had zero percentage in the first text group.

bearing references that inform us on refutation) of initial expectations comes after with a percentage of 27,59%, whether these (refutation) appear in a negative, or positive way, enhancing thus the positive value that is attributed to the Microteaching course (chart 6).

Discussion and Conclusions

The quantitative display of the content analysis of the texts that students wrote as much in the beginning of the academic semester, before practicing in Microteaching, as after its completion, is revealing of the expectations they had from this course, but also of what they finally gained from it.

By prioritizing among their expectations from the Microteaching course, as well as its subsequent evaluation, the acquisition of knowledge and skills, they express their positive attitude towards their studies and their effort to qualify themselves on many aspects, so that in the future they will be able to live up to the demands of the teaching profession (Parylo et al., 2015, Ilie, 2015).

This is the reason why, when speaking a posteriori about this specific course in the Department of Primary Education, they mainly refer to its gravity and usefulness in the framework of the curriculum of the Department where they study (Deniz, 2010), when initially they had considered as most important benefit the opportunity it gave them to socialize with fellow students they did not know up to that time.

An important success of the Microteaching course is considered to be its contribution to the boosting of their self-confidence, as well as their stress management related to teaching before an audience, something that seemed to be of special concern to them from the very start, related to their future educational course, as it appears in their initial texts. Moreover, they emphatically claim – as much before as after the course – that the specific course helps them to get better acquainted with their own potential and to improve any weaknesses they may have, so that they evolve into efficient educators (Saban & Çoklar, 2013, Elias, 2018).

At the level of course content, future teachers steadily consider as fundamental contributor to the value of Microteaching, skills in which they train in the framework of their practical exercises, such as planning, organizing and implementation of teaching, utilizing relevant principles and means, time management etc. That is to say, teaching methodology seems to bear gravity for their pedagogic training in general (Mahmud & Rawshon, 2013).

To summarise, the future teachers of the Department of Primary Education view the Microteaching course from the start as a promising course that will provide them with the opportunity to develop academically on the one hand, and professionally on the other, but that will also broaden their horizons and their potential in the implementation of a teaching session. This view is verified to a great extent and thus the Microteaching course proves to be a catalytic factor for the exercise of their educational work (Kougiourouki, 2003, 2013).

The above conclusions allow us to highlight – as many have done before us – how important it is for this course to be included in the curricula of all academic departments/schools and bodies that prepare educators and trainers of all grades and orientations, even in digital form (Ledger & Fischetti, 2016). The Microteaching course is almost always considered worthy in the conscience of future teachers and constitutes an experience that remains indelibly imprinted in their conscience.

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Foreign Language Learning via Mobile Devices during a Language Immersion Program

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Abstract

The progress of technology and the complete integration of its products in our daily lives is now a reality. In addition to this, more and more young children now own their personal mobile devices, most of which have a connection to the internet. These new portable devices offer unlimited possibilities to their users, yet they also create more and more challenges in the field of learning. Inevitably, Mobile-assisted language learning (MALL) as a subcategory of Mlearning is also affected. The purpose of this paper is to present students' perceptions on the use of an application in the process of learning French as a foreign language. To this end, we developed an application for mobile devices in real teaching conditions, which respects the principles of the Common European Framework of Reference for Languages (CEFR). Experimental quantitative research was carried out in order to explore the students' experience concerning the application as a portable learning tool, completely integrated into the course. The target group we addressed was international students from various countries in Europe, Asia and America, who were taught French during a language immersion program, as part of a language stay in Saint Raphaël in France.

Keywords: mobile-assisted language learning, foreign language, application, language immersion program

Introduction

In a period that distances are being eliminated and cooperation between countries in trade, economy, tourism and research are becoming global, the need to learn foreign languages is growing worldwide. Foreign language teaching takes place in schools, in foreign language centers, through private lessons in lifelong and/or distance learning or even through a language immersion program.

A language immersion program is a method developed to teach people a particular foreign language in a natural way, while being in the country of the target language, achieving thus, rapid progress while also having the joy of meeting people and learning about the local culture. "The term immersion refers to the perception of being surrounded by a substance or liquid" (Blyth, 2018, p.1). Its metaphorical sense of being surrounded by language and culture is "typically describing a kind of enhanced language learning" (Blyth, 2018, p. 1). During these

programs, one can meet students from all over the world, with the same goal in mind; that is to learn the language in the country where it is spoken, through a course that matches their preferences. This approach maximizes the time the student gets to practice the language they are learning, thus achieving better results in areas such as knowledge of a foreign language, knowledge of the native language and understanding characteristics of other cultures.

Literature review

"As digital technology has become more sophisticated, its tools and applications can be used in and outside the classroom, in both formal and informal settings, in order to increase students' motivation" (Arvanitis, Krystalli & Panagiotidis, 2018, p. 43). Research demonstrates also that "mobile-assisted language learning helps to create language immersion, which effectively motivates the learners further" (Shi, Luo, & He 2017, p. 1) and that "mobile devices such as laptops, personal digital assistants, and mobile phones have become a learning tool with great potential in both classrooms and outdoor learning" (Sung, Chang & Liu, 2016, p. 252). It is obvious fact that mobile application usage can enable a variety of teaching innovations that assist students in pursuing knowledge and language skills (Sung & al., 2020).

Furthermore, using new technologies in the classroom is now a justified practice as digital technology is part of the everyday life for this decade's learners. In addition to that, there is a need to redefine literacy and incorporate technology into almost every aspect of the lesson (Ahmed & Nasser, 2015).

The fact that learning a foreign language in the country of the target language has better results for the students isn't because they live in this context. According to Kramsch and Andersen, "the problem with learning a language from live context is that context itself cannot be learned, it can only be experienced, or apprenticed in" (Kramsch & Andersen, 1999, p. 33) and that the solution is "to make the context learnable by entextualizing it" through the use of multimedia. According to M. (Snow, 1987) immersion is an excellent example of communicative language teaching and there is still a great need to develop appropriate, challenging materials. Also, it is very important to continue searching for effective ways of teaching languages via immersion. Moreover, (Bakhov & Honcharenko-Zakrevska, 2018, p. 6) "…learning through immersion not only is suitable for most students but also is possibly the only opportunity for some students to learn a foreign language.".

Research methodology

For the purposes of the research, we used an application we created as a tool for French language learning for mobile devices in real teaching conditions, which respects the principles of the Common European Framework of Reference for Languages. This application was published for Android and iOS app in English and it was used by the foreign students during the language immersion program. After using the application during the French language course, and in order to explore students' perceptions, an experimental, qualitative and quantitative research was carried out.

The target group we addressed consisted of 60 international students aged 11-18, from various countries in Europe, Asia and America, who were taught French during a language immersion program, as part of a language stay in Saint Raphaël in France. The students of the language immersion program were taught six foreign language lessons with the "traditional" learning method - student book and exercise book and six lessons exclusively with the use of

the application. The purpose was to identify the perceptions of students concerning its overall assessment as a portable learning tool. After completing these 12 lessons, the research was concluded, the data were collected, the quantification followed and finally the analysis.

A questionnaire was distributed in order to conduct our research. The questionnaire consisted of 18 questions, it was anonymous and was accompanied by written instructions on how to complete it. We limited ourselves to very concise and standardized instructions to avoid comprehension difficulties.

An emphasis should be given to the fact that for the completion of the questionnaire by the students, an oral translation was done in English, Italian and Spanish to the degree that was allowed by the use of mobile devices for the translation and comprehension of the questions. There followed the analysis of the data collected from the questionnaire.

Analysis

The questionnaire, distributed in July 2018, consisted of 18 questions which were structured around five axes. Specifically, these axes examine the data of the participants, their contact with ICT, their position on the learning outcomes of the application, its usability and its technical implementation. The responses were 60 in total and came exclusively from the students during the language immersion program.

The first three questions of the questionnaire concern the gender, the age and the nationality of the students. The next two questions aim to gather information about the students' contact with ICT. Questions 5 and 6 refer to the use of the application in language learning. The next eight questions relate to students' views on the application in relation to language learning, while the last three questions relate to their views on the technical characteristics of the application.

Out of the total number of students, 23 were boys, and 37 were girls: 45 out of 60 were between 14 and 16 years old. The nationalities of the students varied. The majority (of the participants) were Swedes and Swiss. More specifically, from the 60 students, fifteen were Swedes, ten Swiss, seven Austrians, five Spanish, four Finns, four Germans, two Americans, two Turkish, two Norwegians, two Danes, one Russian, one Dutch and one Italian.

When asked how often they use new technologies in their daily lives, 9 out of 60 students said they use them less than two hours per day, while 51 said they use them more than four hours per day.

Regarding the way they choose to communicate in their daily life, 45 out of 60 replied that they communicate via Viber, 29 out of 60 via Skype and 47 out of 60 via Facebook, followed by WhatsApp communication for 29 students, Instagram for 49, communication via E-mail for 39 and SMS for 37. Regarding the use of an application on a mobile device for the scope of learning a foreign language, we can see that the majority has already used an application (56 out of 60). Google Translate is superior, as it is used by 51 students, compared to Duolingo, which comes second in use with 30 students, while Babbel follows with only two students.

When asked about how interesting they found the change (use of the application) in the curriculum and the way the course was conducted, the prevailing answer is "very interesting" (52 students out of 60).

When asked about the usefulness of integrating the application into foreign language learning, it is evident that the majority of the students find it useful (57 students out of 60).

In terms of what skills they think they have improved and assimilated through the use of the application, we have observed almost to a full degree an improvement in written comprehension (60 students out of 60), in oral comprehension (56 out of 60 students) and (95 out of 100 students) followed by an improvement in written production (35 out of 60 students) and in oral production (32 out of 60 students).

All students stated that they progressed more in terms of acquiring more vocabulary, improving pronunciation (55 out of 60 students) and assimilating grammar (56 out of 60 students) and less in improving spelling (56 out of 60) and comprehension of syntax (51 out of 60).

In terms of teaching, 56 students out of 60 were in favor of the use of mobile devices, while the use of multimedia (video and podcasting) benefited 57 students out of 60 in terms of oral comprehension. For all students, it was easy to point out the mistakes, while also the same number of students found it easy to provide additional clarifications.

Moreover, 38 students out of 60 in total consider the application environment to be very user-friendly, while the rest consider it less user-friendly (22 out of 60 students).

The majority of the students consider the navigation user-friendly (29 students out of 60), 31 students consider it to be less user-friendly.

The last question required students to record the difficulties they encountered during the course. After the answers were collected, they were grouped into specific categories of problems. The problems refer to technical issues of the application.

Discussion

This study showed the views of the students of a language immersion program in relation to the application used as complimentary educational tool for French learning. Studying the data collected from the questionnaires, the following important conclusions can be drawn: All students have daily involvement with ICT and often use it for communication. Many students have already used a few commercial language learning applications. This previous experience probably predisposes learners positively to use another learning application. The results of the answers concerning the specific application that we provided to them show that the students find the lessons with the application more interesting than the traditional language learning lessons. They also believe that it helped them develop their language skills, especially in understanding and producing written content. Multimedia elements such as video and podcasting also helped them a lot in improving their oral content. The ease of use of the feedback and clarifications was considered satisfactory, but with plenty of room for improvement. Finally, both the application environment and its navigation also need improvement.

Conclusion

The findings of this study highlighted the significance of using mobile assisted language learning applications as complimentary educational tools and suggest their effectiveness. Additionally, participants believe that mobile devices are useful instructional tools and the integration of technology leads to improved performance and better learning results.

Prior research has demonstrated that mobile devices as learning tools promote motivation, learner autonomy and creativity and they help students to develop IT skills (Arvanitis, Krystalli & Panagiotidis, 2016). It is very important that an application for foreign language learning can encourage students to identify the phonetic aspects of a foreign (Sung & al., 2020).

As we live"…in a digitally globalized world, an increasing number of learners are learning foreign languages outside a formal and structural classroom-based education" (Arvanitis, 2019, p. 1). The guided learning of a foreign language with an appropriate application and a teacher, in combination with real communication circumstances in the original country of use, would be the ideal way of learning a foreign language. Last, as it is evident that mobile devices gain more and more ground in diverse sectors of life worldwide, future research in this direction is required for better learning outcomes.

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Teaching Experience: Pharmaceutical Market to Fight Against COVID-19

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Abstract

As the Sars-CoV2 pandemic continues to grow, researchers around the world are urgently seeking new treatments to prevent infection, cure those infected, or lessen the severity of the disease. Although there are several recently approved vaccines, clinical trials are underway to "re-use" drugs normally indicated for other diseases. This teaching experience studies the market for 8 pharmaceutical products used to fight the pandemic (remdesivir, favipiravir, lopinavir/ritonavir, chloroquine, hydroxychloroquine, sofosbuvir, pyrfenidone and tocilizumab) in 13 countries (Bangladesh, Brazil, China, Egypt, France, India, Malaysia, Pakistan, South Africa, Sweden, Turkey, United Kingdom and United States). Through the analysis of prices and costs, we reflect on the difficulty of access to treatment according to the country. The objective is to deepen knowledge of the pharmaceutical market: (i) to demonstrate in a tangible way the differences between production costs and final prices of medicines, (ii) to perceive the difficulty of access to certain treatments depending on the country, (iii) to reflect on what initiatives should be implemented in an international emergency context such as the one we are experiencing.

Keywords: patents, Covid-19, pharmaceutical products, mark-up, costs

1. Introduction

As the Sars-CoV2 pandemic continues to grow, researchers around the world are urgently seeking new treatments to prevent infection, cure those infected, or lessen the severity of the disease. As of 9 January 2021, 87.5 million cases have been confirmed and 1.9 million people have died. Although there are several recently approved vaccines, clinical trials are underway to "re-use" drugs normally indicated for other diseases (Li and LeClercq, 2020). The shorter development time and reduced costs of using existing compounds are particularly advantageous compared to the discovery of new drugs in a pandemic situation, where time is of the essence.

Antiviral drugs include the nucleotide analogue remdesivir, which was previously used experimentally but without success against Ebola (Siegal et al, 2017), favipiravir, used to treat influenza (Hayden and Shindo, 2019), the HIV protease inhibitor lopinavir/ritonavir (Cao et al., 2020), the antimalarials chloroquine and hydroxychloroquine (Yao et al., 2020), and the direct-acting antivirals sofosbuvir and daclatasvir (IRCT, 2020). In addition, treatments to improve lung function and reduce inflammation, such as pyrfenidone (WIPO, 2017) and tocilizumab (ClinicalTrials.gov, 2020), are being evaluated in clinical trials.

Most of the clinical trials reported so far are small pilot studies, often non-randomised, making interpretation of the current evidence difficult. If the results of these new trials are favourable, there is a possibility of rapidly increasing the production of the most promising drugs. The safety profiles of these drugs have already been established from clinical trials for other diseases, so they could be rapidly deployed to treat HIV-19 before vaccines become available.

Low- and middle-income countries will need access to these treatments at minimum prices to ensure that all who need them can be treated. Even in high-income countries, the disease burden could be so great that access to medicines at minimal cost may also be necessary. The HIV epidemic has been controlled by mass treatment with antiretroviral drugs around the world at very low unit cost. Large donor organizations, such as the Global Fund to Fight Immunodeficiency, Tuberculosis and Malaria and the United States President's Emergency Plan for Immunodeficiency Relief, are ordering drugs to treat more than 20 million people with HIV, at prices close to the cost of production (PEPFAR, 2019; The Global Fund, 2020). This system enables low- and middle-income countries to access high-quality drugs at affordable prices.

This educational project is designed for students in Economics, Business Administration, Political Science and Sociology. The objective is to deepen knowledge of the pharmaceutical market: (i) to demonstrate in a tangible way the differences between production costs and final prices of medicines, (ii) to perceive the difficulty of access to certain treatments depending on the country, (iii) to reflect on what initiatives should be implemented in an international emergency context such as the one we are experiencing. This will be done by consulting statistical bases and reading support documents on the structure of the pharmaceutical market. It is best to carry out this practice in small groups and then share it in order to favour "withing groups" and "between groups" interactions.

2. Methodology

The execution of this project involves different phases. Firstly, the estimation of the cost of pharmaceutical products. Secondly, the search for information on the retail price of pharmaceutical products. Thirdly, an activity of reading and reflection on the pharmaceutical market and its specificities. Fourthly, carrying out a series of mathematical exercises and analysing the results obtained. Finally, the development of proposals to improve access to medicines in the context of a health emergency.

2. 1. Preparation of price and cost information

The minimum production costs of medicines can be estimated by calculating the cost of active pharmaceutical ingredients, which is combined with the costs of excipients, formulation, packaging and a profit margin to estimate the price of the 'finished product', i.e. the ready-to-use medicine (Hill et al., 2018). Table 1 shows, for each drug, the duration of treatment and the number of doses to be administered each day, the daily cost of treatment and the total cost.

Table 1. Characteristics of each drug. Daily cost and total cost

	Length of the treament	Daily doses	Total treatment cost ($)	Daily cost ($)
Remdesivir	10 days	2 the 1st day; 1 other days	9	0,93

Favipiravir	14 days	2 per day	20	1,45
Lopinavir	14 days	2 per day	4	0,28
Hidroxcicloroquina	14 days	1 per day	1	0,08
Cloroquina	14 days	1 per day	0,3	0,02
Azitromicina	14 days	1 per day	1,4	0,2
Sofosvubir	14 days	1 per day	5	0,39
Pirfenidone	28 days	3 per day	31	1,09
Tocilizumab	-	2	177,5	355

Source: Own work using data from Hill et al. (2020). For Tocilizumab the table has been completed using information from Table 1, Cost-Comparison Table for Biologic Disease-Modifying Drugs for Rheumatoid Arthritis - Tocilizumab (Actemra) - NCBI Bookshelf (nih.gov)

Price information was obtained through published lists for each medicine in a number of countries (Bangladesh, Brazil, China, Egypt, France, India, Malaysia, Pakistan, South Africa, Sweden, Turkey, United Kingdom and United States) to provide a representative sample of prices in countries with different levels of economic development, although all the medicines analysed in this study are available in the selected countries. Where more than one price was available for the same medicine, the lowest price was chosen. Table 2 shows the price of full treatment for each drug and country.

Table 2. Price for complete COVID-19 treatment ($)

	Remdesivir	Favipiravir	Lopinavir	Hidroxicloroquina	Cloroquina	Azitromicina	Sofosvubir	Pirfenidone	Tocilizumab
Bangladesh	600	-	-	3	0,2	5	168	124	690
Brazil	600	-	-	-	-	19	428 9	-	-
China	600	231	17	19	5	7	-	1379	1.950
Egypt	600	-	-	-	-	-	-	-	606
United States	3.120	-	503	18	93	63	186 10	9.606	3.383
France	2.340	-	97	5	-	44	-	2.344	-
India	600	112,8	40	2	1	5	7	100	806
Malasya	600	-	-	7	2	11	-	-	-
Pakistan	600	-	-	-	-	-	6	-	510
United Kingdom	2.340	-	144	4	8	11	783 2	2.561	914
South Africa	600	-	15	-	5	35	-	2.490	566
Sweden	2.340	-	172	3	4	16	-	2.196	-
Turkey	600	-	149	3	-	-	-	1.499	650

Source: Hill et al. (2020). For remdesivir and favipiravir, information has been completed using Remdesivir developed country price announced | Medicines Law & Policy (medicineslawandpolicy.org) y India's Glenmark cuts price of COVID-19 drug favipiravir version to $1 per tablet | Reuters. Price for treatment with remdesivir was 600$ in developing countries, 2.340$ in developed countries and 3.120 in United States.

2.2 . Content of the practice

The practice begins with the reading of two documents: "Patents, price regulation and innovation in the pharmaceutical industry" and "Drug price differentials across different retail market settings", both available on the internet (see references). After this reading, the following introductory questions are posed:

What special characteristics differentiate medicines from other goods?

What type of market do you consider to be the pharmaceutical market?

Does it share characteristics with a market of perfect competition? Given your answer to this question, do you consider that there may be a market failure in the pharmaceutical market?

What are the advantages and disadvantages of pharmaceutical patents?

Do you consider that the knowledge on which new pharmaceutical products are based is a public good?

With the information in tables 1 and 2, a series of exercises are proposed.

Exercise 1: Calculate the average price and standard deviation for each drug. What do you notice?

Tabla 2. Mean and standard deviation for each complete treatment for COVID-19

	Remde-sivir	Favi pi-ravir	Lopinavir	Hidroxci-cloroquina	Cloro-quina	Azitro-micina	Sofosvubir	Pirfenidone	Tocilizumab
Mean	1.195,38	171,90	142,13	7,11	14,78	21,60	5.152,00	2.477,67	1.119,44
Standard deviation	949,78	68,92	140,72	6,40	25,35	19,36	5.420,58	2.602,49	947,38

Source: Own work

There are medicines with a very low average price (hydroxychloroquine, chloroquine and azithromycin), but there are also very expensive ones (remdesivir, pirfenidone, sofosvubir).

Within a single drug, there is also wide variability between countries (perfenidone, tociluzumab).

Exercise 2: Calculate the mark-up ratio for each drug and each country, taking into account the price and cost data for the entire treatment. Also calculate the mean and standard deviation of the mark-up ratio for each drug:

$$Mark - up\ ratio\ = \frac{Price - Marginal\ cost}{Marginal\ cost}$$

Table 4. Mark-up rate for complete COVID-19 treatment

	Rem de-	Favi pi-	Lopinavir	Hidroxci-	Clor o-	Azit ro-	Sofosvubir	Pirfenidone	Tocilizumab

	sivir	ravir		cloroquina	quina	micina			
Bangladesh	65,67	-	-	2,00	-0,33	2,57	32,60	3,00	0,94
Brazil	65,67	-	-	-	-	12,57	856,80	-	-
China	65,67	10,55	3,25	18,00	15,67	4,00	-	43,48	4,49
Egypt	65,67	-	-	-	-	-	-	-	0,71
United States	345,67	-	124,75	17,00	309,00	44,00	3.721,00	308,87	8,53
France	259,00	-	23,25	4,00	-	30,43	-	74,61	-
India	65,67	4,64	9,00	1,00	2,33	2,57	0,40	2,23	1,27
Malasya	65,67	-	-	6,00	5,67	6,86	-	-	-
Pakistan	65,67	-	-	-	-	-	0,20	-	0,44
United Kingdom	259,00	-	35,00	3,00	25,67	6,86	1.565,40	81,61	1,57
South Africa	65,67	-	2,75	-	15,67	24,00	-	79,32	0,59
Sweden	259,00	-	42,00	2,00	12,33	10,43	-	69,84	-
Turkey	65,67	-	36,25	2,00	-	-	-	47,35	0,83
Mean	131,82	7,60	34,53	6,11	48,25	14,43	1.029,40	78,92	2,15
Standard deviation	105,53	3,10	34,92	6,15	84,34	13,62	1.083,86	83,73	2,43

Source: Own work

The lowest profit margin corresponds to tocilizumab, favipiravir, hydroxychloroquine and azithromycin.

The highest profit margin corresponds to sofosvubir.

Exercise 3: Find the GDP per capita for each country (e.g. World Bank statistics) and compare the cost of the full treatment for VOC-19 with the GDP per capita of each country. Comment on the results.

Table 5. Percentage of complete treatment price with respect to per capita GDP.

	GDP (per capita $)	Remde-sivir	Favipi-ravir	Lopinavir	Hidroxci-cloroquina	Cloro-quina	Azitro-micina	Sofosvubir	Pirfenidone	Toculizumab
Bangladesh	1.855,78	32,33	-	-	0,16	0,01	0,27	9,05	6,68	37,18
Brazil	8.717,2	6,88	-	-	-	-	0,22	49,20	-	-
China	10.261,7	5,85	2,25	0,17	0,19	0,05	0,07	-	13,44	19,00
Egypt	3.019,2	19,87	-	-	-	-	-	-	-	20,07
United States	65.297,5	4,78	-	0,77	0,03	0,14	0,10	28,50	14,71	5,18
France	40.493,9	5,78	-	0,24	0,01	-	0,11	-	5,79	-
India	2.099,6	28,58	5,37	1,91	0,10	0,05	0,24	0,33	4,76	38,39
Malasya	11.414,2	5,26	-	-	0,06	0,02	0,10	-	-	-
Pakistan	1.284,7	46,70	-	-	-	-	-	0,47	-	39,70
United Kingdom	42.330,1	5,53	-	0,34	0,01	0,02	0,03	18,50	6,05	2,16
South Africa	6.001,4	10,00	-	0,25	-	0,08	0,58	-	41,49	9,43
Sweden	51.615,0	4,53	-	0,33	0,01	0,01	0,03	-	4,25	-
Turkey	9.126,6	6,57	-	1,63	0,03	-	-	-	16,42	7,12

Source: Own work using data from GDP per capita (current US$) | Data (worldbank.org)

Treatment with some drugs is relatively expensive compared to the country's GDPpc: remdesivir accounts for 28% in India, 32% of GDPpc in Bangladesh, 46% in Pakistan; pirfenidone accounts for 16% in Turkey and 41% in South Africa.

Exercise 4: Look at public health expenditure per capita (e.g. World Bank statistics) and compare it to the cost of full treatment for VOCs-19. Comment on the results.

Table 6. Percentage of complete treatment price with respect to per capita health expenditure.

	Public health expenditure (per capita, $)	Remde-sivir	Favipi-ravir	Lopinavir	Hidroxci-cloroquina	Cloro-quina	Azitro-micina	Sofosvubir	Pirfenidone	Toculizumab

Bangladesh	7,12	8.426,97	-	-	42,13	2,81	70,225,3	2.359,55	1.741,57	9.691,01
Brazil	353,54	169,71	-	-	-	-	7	1.213,16	-	-
China	282,68	212,25	81,72	6,01	6,72	1,77	2,48	-	487,83	689,83
Egypt	36,07	1.663,43	-	-	-	-	-	-	-	1.680,07
United States	5.355,79	58,25	-	9,39	0,34	1,74	1,18	347,47	179,36	63,17
France	3.441,17	68,00	-	2,82	0,15	-	1,28	-	68,12	-
India	19,63	3.056,55	574,63	203,77	10,19	5,09	25,47	35,66	509,42	4.105,96
Malaysia	218,65	274,41	-	-	3,20	0,91	5,03	-	-	-
Pakistan	15,24	3.937,01	-	-	-	-	-	39,37	-	3.346,46
United Kingdom	3.392,09	68,98	-	4,25	0,12	0,24	0,32	230,89	75,50	26,95
South Africa	284,28	211,06	-	5,28	-	1,76	12,31	-	875,90	199,10
Sweden	5.089,96	45,97	-	3,38	0,06	0,08	0,31	-	43,14	-
Turkey	301,69	198,88	-	49,39	0,99	-	-	0,00	496,87	215,45

Source: own work using data from Domestic general government health expenditure per capita (current US$) | Data (worldbank.org)

The unaffordability of some of the treatments becomes even more apparent when comparing their price with public health expenditure. In India, the cheapest treatment is 5 times the public health expenditure in per capita terms. In Sweden, some treatments account for a tiny percentage of public health expenditure (hydroxychloroquine, chloroquine, azithromycin), but others account for more than 40% of public expenditure per capita (remdesivir, pirfenidone).

Few drugs are marketed in some countries, which means that there are very few options to choose from. In Pakistan, the cost of treatment ranges from 39 to 3,000%, in Brazil it ranges from 5 to 1,200%.

The differences between tables 5 and 6 highlight that GDP per capita is not an "ideal" indicator of economic well-being. In countries with low GDP per capita, public expenditure on health is even lower and this may make it impossible for the public health system to purchase medicines to combat the coronavirus.

Exercise 5: Reflect on the above results and suggest some measures that could improve affordability and access to treatment

This analysis shows that medicines to treat cOViD-19 could be manufactured at very low prices. If promising results from key clinical trials emerge, there is a possibility to increase production of generics and provide treatment to millions of people at very low unit prices.

Large orders are needed to encourage generic companies to manufacture medicines at low prices, as is the case for AIDS, malaria and TB medicines.

Other mechanisms are in place to optimise drug manufacturing. With joint procurement, a number of countries can order medicines together, to take advantage of economies of scale. There can be volume-price guarantees to purchase large quantities of medicines at fixed prices for a certain number of years.

Prequalification of major companies by the WHO can be recognized by any country as an indicator of the quality of the medicine, including adherence to good manufacturing practices and the stability or viability of the medicine over its stated shelf life, along with the bioequivalence of generic to branded versions.

There should be no intellectual property barriers preventing the mass production of these treatments worldwide. We need open 'technology transfer' so that the methods used to manufacture key medicines can be shared with any country that decides to produce them locally.

3. Discussion

Students should reflect on the particularities of the pharmaceutical market. The price of a medicine can be high for two reasons. Firstly, because the cost of the active ingredients used is high. Secondly, because, due to a situation of lack of competition, the market power situation is exploited to set a high price.

Moreover, unlike in other markets where, as the number of competitors increases, the price tends to decrease (computers, mobile phones, etc.), this is not necessarily the case in the pharmaceutical market, because companies tend to include the costs of all "wasted drugs" in the price of "successful drugs".

The comparison of prices and costs in the tables above shows that there are treatments that, if effective in combating Covid-19, could be moderately expensive (less than $30 for a standard course of treatment). However, in many cases, the differences between prices and costs are stratospheric, which may jeopardise the accessibility of these treatments for many countries.

4. Conclusion and recommendations

This teaching experience has been very satisfactory, both from the point of view of the students' involvement and work, as well as their own assessment of the subject studied. In the first place, they have valued very positively the topicality of the subject. Secondly, it has helped them to use international statistical portals that they had never used before. Thirdly, it has helped them to reflect on the difference between prices and costs, and how this difference translates into the profit margin.

Fourthly, they have carried out an in-depth reflection on the existing disparities in access to medicines. In this situation, they considered, by an overwhelming majority, that although patents aim to promote knowledge by creating a monopoly around the product or innovation developed, in the particular case of the Covid-19 pandemic, health should be prioritised, and

therefore, there should be a free transfer of technology, not only at the level of medicines developed, but of all the trials carried out. It is essential that generic medicines are accessible to all people, because the health of some is good for the health of all (positive externality).

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Students' Perceptions of Distance Language Learning in Vocational Training

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Abstract

The coronavirus pandemic has had a significant impact in almost all areas of human activity around the world with education being unquestionably affected as well. Universities and Vocational Training Institutes have been forced to close their doors in an effort to stop the spread of the COVID-19 virus. To ensure pedagogical continuity, distance learning courses have been recommended as immediate alternatives. The purpose of this contribution is to investigate how students of Vocational Training Institutes perceive distance education and effectiveness of online foreign language teaching. To this end, a quantitative research based on an online survey was conducted, which included 206, students of five (5) public Vocational Training Institutes and different specialties. The questions were intended to examine the participants' views on the use of platforms and the collaborative tools, the utility of the educational materials and activities proposed, the learning outcomes in the target language, and, the benefits and limitations of distance synchronous language learning.

Keywords: distance learning, language learning, students 'perceptions, vocational training

Introduction

From the beginning of the COVID-19 global crisis, educational institutions around the world closed, following hygiene protocols, and started delivering online courses. Therefore, educators were forced to create virtual classrooms so as to guarantee pedagogical continuity (Krystalli, 2020). The impact of this crisis on the quality and conditions of learning has been immense (Unesco, 2020). Although many are reluctant to admit it, we are fully entering the era of distance learning, which presents both advantages and challenges for learners, ie. motivation, engagement and perseverance, for teachers, ie. course design and mentoring of learners (Karsenti, Poellhuber, Roy and Parent, 2020). To assure the quality of foreign language in the vocational field, teachers of language for special purposes had to adapt to the new circumstances and revise their teachings methods in order to offer relevant learning

content and activities to their students. It is clear that beyond goodwill and even mastery of technological tools, it can be difficult to change training strategies, while respecting the (techno) pedagogical design initially thought (Verchier, & Lison, 2020: 128). Switching lectures from a face -to- face to a virtual one may be challenging as it demands a great deal of effort (Krystalli, 2020). This change becomes more difficult in institutions where students have previous experience. This is the case of public Vocational Training Institutes (VTI) in Greece where courses were traditionally delivered face-to-face. For this reason, we found it intriguing to investigate the students' views of online foreign language teaching as it was not their choice but a solution of necessity chosen in order to continue their studies during the pandemic. The conclusions that will emerge from this research will be useful in the future, when designing an online foreign language course.

In this article we aimed to answer the following key questions:

- What are the participants' views about the utility of the collaborative tools used, the learning materials and the activities proposed during the French online course?
- Which delivery method do the participants prefer for language learning?
- What are the participants' opinions about online assessment?
- What changes or added components do participants suggest for a future online French course?

Distance Education and Language Learning

Distance education (DE) started as an alternative for many individuals whose lifestyles, location, or time constraints prevented them from attending face-to-face educational programs (Chamorro, 2018). The first two generations of DE aimed at producing and distributing educational materials with the means allowed by the technology of the day, but without paying attention to the lack of interactive communication between students and teachers (Katz, 2002). During the last two decades, third generation of online teaching and learning, have seen significant changes due to the advancement of the internet and digital technologies. The World Wide Web has made information access and distribution of educational content available to a large fraction of the world's population and helped to move DE to the digital era (Fidalgo, Thormann & Kulyk, et *al.,* 2020). As a result of the development of enhanced third generation distance learning, systems which include interactive digital technologies, learning activity has been redefined to include teacher–student interaction (Katz, 2002). Thanks to this relationship with the digital technologies, DE or distance learning is also called e-learning or online learning (Krystalli, 2020). DE is defined as any type of educational activity in which the participants are at a distance from each other--in other words, are separated in space. Participants may also be separated in time but this is not always the case (asynchronous vs. synchronous learning?) (iNACOL, 2011). Hartnett defines online learning as "a form of distance education mediated by technological tools where learners are geographically separated from the instructor and the main institution" (2016, 7). The term "online learning" is used interchangeably with Virtual learning, Cyber learning and e-learning (iNACOL, 2011). Among the benefits of distance online education mentioned in the literature, the most important is the ability to overcome temporal and spatial restrictions of traditional face-to-face instruction (Bates, 2005). Another important benefit of this form of learning is greater equity of access. As Hartnett (2016) argues online learning gives the possibility to people previously excluded from education due to personal or financial issues, disabilities or lack of time and course availability, to participate in education. Online courses typically take

place in a VLE (Virtual Learning Environment) or LMS (Learning Management System). "The term online language learning (OLL) can refer to a number of learning arrangements: A Web-facilitated class, a blended or hybrid course, or a fully virtual or online course" (Blake, 2011, 9). Several studies have focused on the effectiveness of the methods used and activities proposed in an online second language (L2) or foreign language (FL) course. Research has demonstrated that effective online language learning depends on the learning environment, pedagogical materials, Web-based task design, and individual learner differences (Blake, 2008). Based on findings from previous research, Vorobel and Kim (2012) suggested five key features that make online foreign language courses effective: clear instructions, student-teacher interaction, student-student interaction, use of audio text, and development of all communication language skills. In VTI the objective of FL learning is students is to acquire skills and competencies that can meet language needs specific to the area of a specialty. Therefore, in course language for specials purposes the methodology, the content, the objectives, the materials and the assessment practices must stem from specific, target language used based on an identified set of specialized needs (Trace, Hudson & Brown, 2015).

Methodology

Research design and methods

This research was conducted at five (5) public VIT in Thessaloniki, Greece, between January and February 2021. One of them is supervised by the Ministry of Tourism while the others by the Ministry of Education, Research and Religious Affairs. The primary purpose of this study was to investigate the perceptions of distance learning VTI students and the effectiveness of online foreign language teaching, specifically the French language, that is taught as a compulsory course. In order to collect in-depth information an online survey was conducted to collect the data. The survey was created with Google Forms. Participants were asked to answer an online questionnaire which contained 9 closed-ended questions and 3 open-ended questions. The research involved 206 students from 4 different specialties, ie. Culinary Technician-Chef, Bakery & Pastry Art Technician, Executive Officer in Management and Finance in the field of Tourism, Executive in Air Transport Services. Participants were taught French as a foreign language two (2) hours per week during the winter semester. Classes were carried out entirely online and synchronously, via two platforms: . Zoom and Teams. Additionally, learning materials and quizzes were provided asynchronously via E-courses Management Systems for the VIT, and were supervised by the Ministry of Education and Research. Microsoft Teams was used for the distribution of education materials in the VIT supervised by the Ministry of Tourism.

The questionnaire's closed-ended questions aimed to outline the profile of the participants, (gender, age and specialty), and get information on the utility of the collaborative tools and the learning materials used to the course. Students were asked to rate the activities proposed as tools of motivation and express their opinion on online assessment. Additionally, participants were asked to indicate the impact of online learning on the learning outcomes and the progress they have made in the development of specific communication linguistic skills in the target language during the semester. The three open-ended questions aimed to collect data on students' views about foreign language distance learning, online assessment as well as students' suggestions about the structure and content of an online language learning course.

Data collection and analysis

The participant sample used in the study was evenly split across males and females, as shown by the first question (table 1). The majority of participants (152 people) are 18-25 years old, while 22 participants are over 40 years old, 18 are between 26-30 years old, 9 are between 31-35 years old and 6 are between 36-40. In terms of specialties the sample is distributed as follows (table 1): the majority of the participants (108) study Culinary Art, 56 study Bakery and Pastry Art, 33 of the participants study Management and Finance in the Field of Tourism and only 9 out of 206 study in the field of Air Transport Services.

Table 1: Participants Profile

Variable Label	Percentages		N
Gender	51% female 49% male		206
Age	73% 8,7 % 9 3 11	18-25 years 26-30 years 31-35 years 36-40 years > 40 years	206
Specialty	53% 27% 15,5% 4,5 %	Culinary Art Bakery and Pastry Art Management and Finance in the Field of Tourism Air Transport Services	206

In question 4 participants were asked to evaluate the utility of the collaboration tools in the foreign language online classes. In the virtual classroom, we used breakout rooms for speaking and written mediation activities. Students worked in small groups and collaborated to complete their activities during a breakout room session. They then shared their screens to present their work to the rest of the classroom. Research has demonstrated that interaction, facilitates language learning and motivates students to continue improving their language skills (Gonzalez-Lloret, 2020). Therefore, fostering positive group dynamics can be surely relevant to promoting motivational condition in classrooms (Jeong, 2019). The chatbox was used to provide short answers. Screen sharing allowed teacher to navigate the web when required. Participants indicated that sharing screen and files was useful enough (137 participants out of 206). 90 participants found the breakout rooms useful, while 67 preferred the whiteboard and 48 the chat (fig. 1).

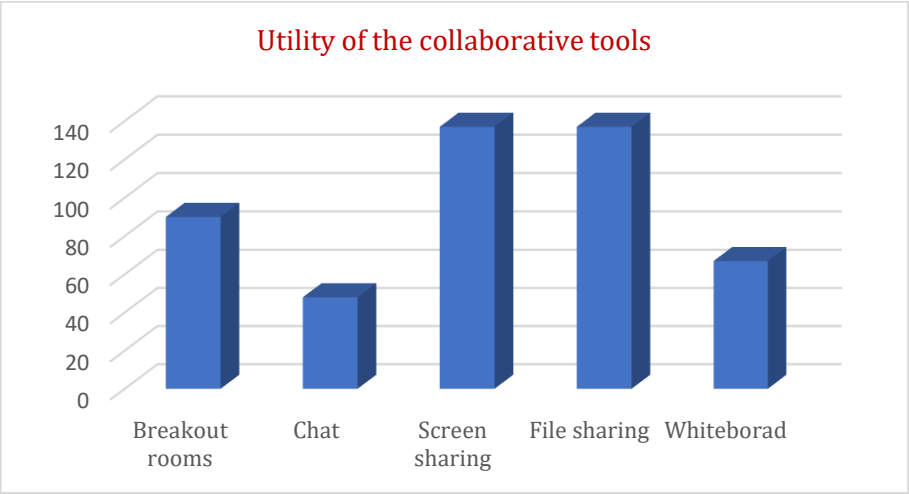

Figure 1: Utility of the collaborative tools

Question 5 aimed to explore which communicative language activity, do participants think they developed most during online learning. As we can see in Figure 2, participants argued that they most developed receptive activities, with 65 participants arguing that they have improved more reading skills and 46 listening skills. Students answer selection was justified by the fact that the majority of interactive online activities and quizzes suggested to students, were comprehension type of activities. Few participants believe that they have improved in productive activities, 37 believe that they have progressed in writing and 30 in speaking. This is mostly because they were reluctant to speak the target language during the lessons. This also explains the small number of students (only 10 out of 206) who believe that they have improved in oral medication. As for the written mediation only 18 participants made progress during the online classes.

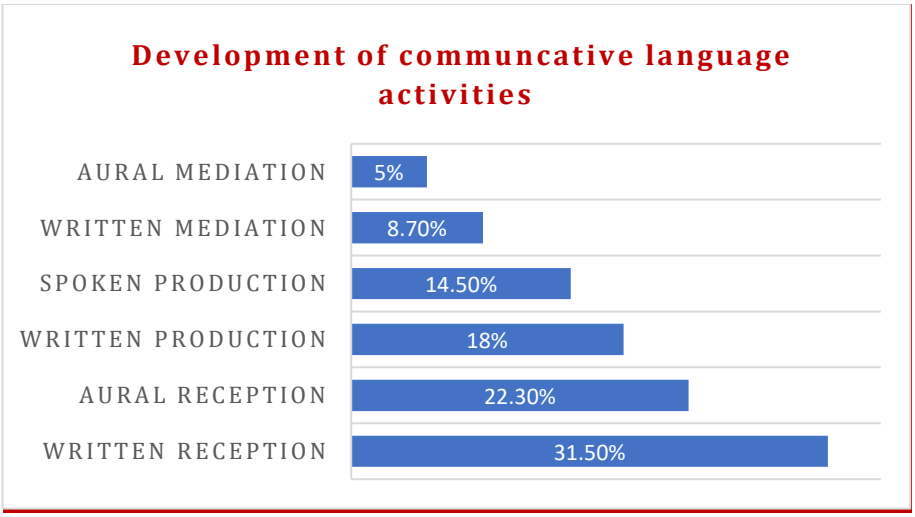

Figure 2. Development of communicative language activities

Question 6 asked students to indicate on a scale from 1 to 5 (where 1 is the minimum and 5 is the maximum) the usefulness of the educational materials provided by the teacher during the online course. The materials used during the classes were the following: YouTube videos, online dictionaries and grammars, audio and written documents in French, online terminology glossaries and online magazines and newspapers. By providing access to learning materials available on the internet, new technologies can satisfy the individual needs of students (Krystalli, Arvanitis, Panagiotidis, 2020). From the findings emerged (fig. 3), the majority of participants highly appreciated the materials provided, 57% indicated level 5, while 29% consider the materials to be useful at level 4 and for 14% of the participants materials are useful at level 3.

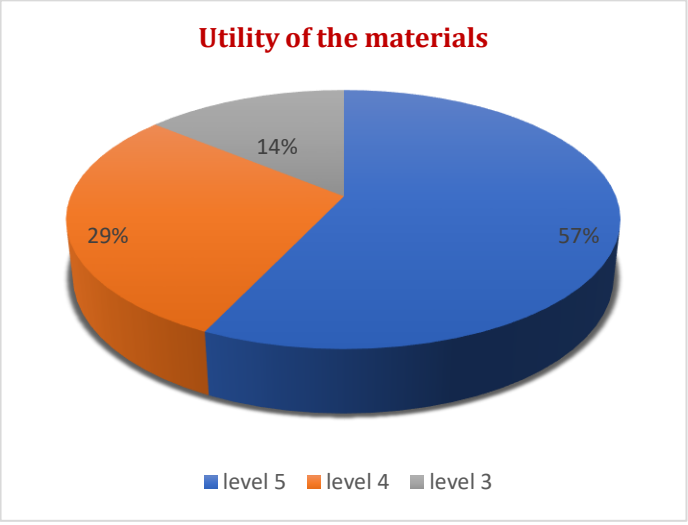

Figure 3: Utility of the materials suggested during the course

In question 7, participants were asked to choose which type of the most frequently suggested activities they found more motivational. More specifically, to increase engagement and motivation, throughout the semester we suggested different types of interactive activities and quizzes to students, created with Class marker and Worldwall. The interactive activities and quizzes aimed to promote a better understanding of various linguistic phenomena. Additionally, participants were asked to record their productions and upload their mp3 files to e-classes. Finally, in order to practice the terminology of each specialty, we suggested several written mediation activities. According to findings, the activities that were most appreciated in terms of motivation, were the interactive online activities (51%) and the online quizzes (32%). This preference is probably due to the possibility of immediate feedback and self-assessment offered by the applications used to create online activities and quizzes. Self-assessment and immediate feedback allowed students to judge the quality of their work and effort as well as the level of the knowledge acquired (Krystalli, Arvanitis, 2018). Participants found the aural production activities (11%) and the written mediation activities (6%) significantly less motivational.

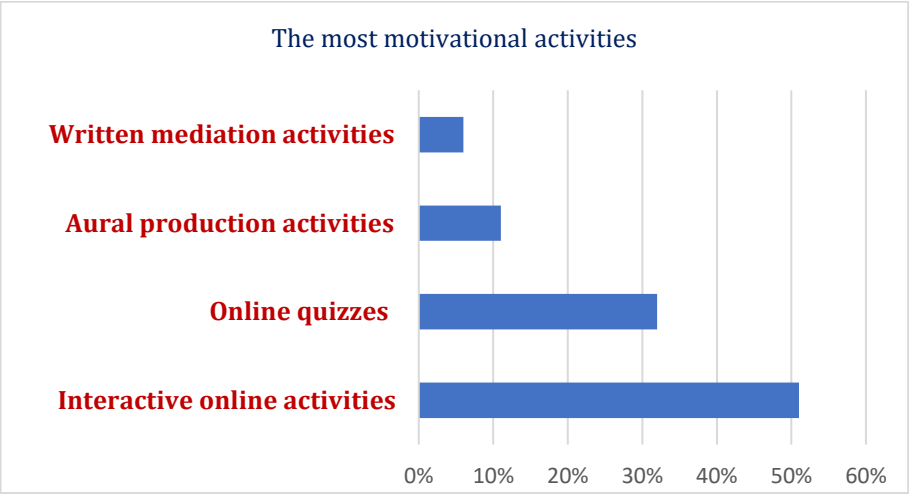

Figure 4. Activities that enhance students' motivation

The purpose of questions 8 and 9 was to explore students preferred delivery method of the French language learning. As part of their answer, participants had to state the reasoning behind choosing a specific delivery method. We found that 123 students preferred in-person classes, 64 preferred hybrid classes and only 19 students preferred online classes (fig. 5)

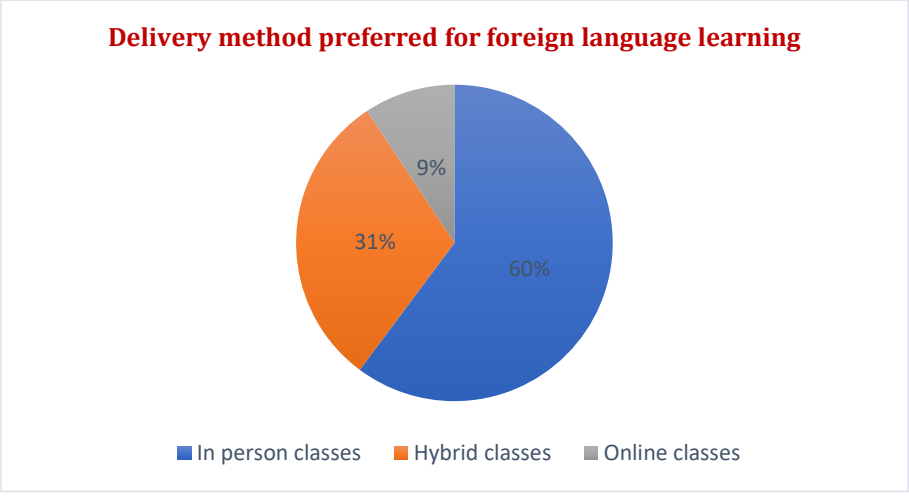

Figure 5. Delivery method preferred for foreign language learning

In question 9, an open-ended question, participants provided a justification for their choice made in the previous question. The reason for preferring in-person classes was the ability to socially interact with both classmates and teachers. Participants also argued that internet connection problems and poor sound and screen image quality, during online classes, had a negative impact in their concertation. For this reason, they think that face-to-face teaching is more effective. Participants who had a positive attitude towards virtual teaching, appreciated the use of the collaboration tools and referred to several benefits of online classes such as the

possibility to select the study location and save time and money, since online education decreases travel time. Many participants argued that they would prefer hybrid courses that combine online and face-to-face learning. They think that blended teaching has many advantages with the primary ones being flexibility as they could work in their own pace, organizing their time independently.

Moreover, they argued that during face-to face classes students had the opportunity to ask questions while better grasping concepts and linguistic phenomena.

In question 10 the participants were asked to choose whether they prefer online assessment or the traditional written assessment for the foreign language course. According to the findings (fig. 6), the majority of the students (153 out of 206) prefer online exams while 53 students prefer paper-based exams. In the following question (11) students were asked to explain the reasons of their choices. Participants indicated that online tests and quizzes are more motivating because of instant feedback that helped them reflect on their learning. Additionally, many of them argued that they prefer to see their results and errors immediately after a test, while in the paper-based exam it usually took a long time for the feedback to be released by the examiner. Many participants preferred online quizzes since they are shorter and therefore less stressful. Participants preferring paper-based exams, argued that they are forced to be more prepared and focused in the classroom. Some participants argued that paper-based exams are more reliable because students cannot easily cheat. Many referred to the technology issues saying that they are not familiar enough with the software used in online examinations? Finally, participants referred to internet connection problems as an important drawback of online tests.

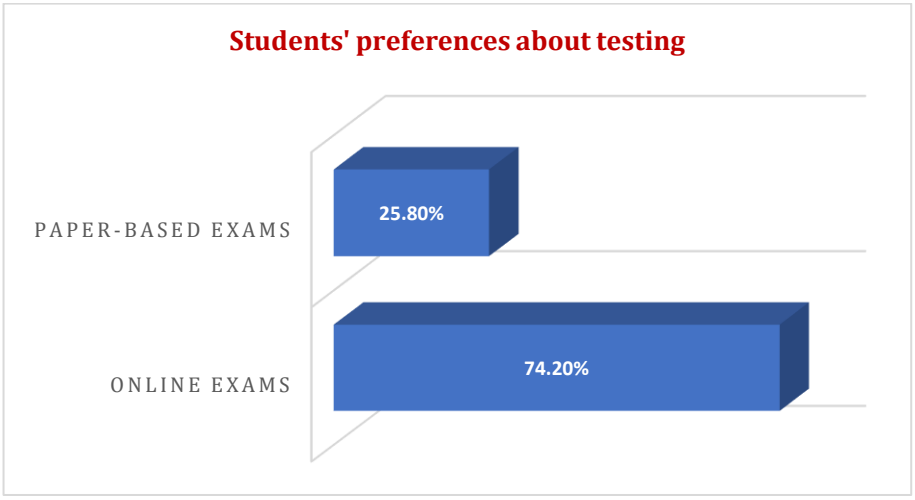

Figure 6: Students' preferences about testing

Regarding the last question (question 12), students' suggestions for a possible future online language course were the followings: more group work, more subtitled videos and oral interaction activities in the virtual classroom, less grammar activities and, an increase teaching hours. Participants have put forward pertinent suggestions and proposals that we should be taken into consideration when developing future online courses. First of all, group work maximizes the benefits for students in the classroom. As Alfares (2017: 248) argues "it

can be used to improve oral activities for language learners, to complete tasks that need discussion among learners, to share reading and listening activities, and to write cooperatively with other learners". As for the second suggestion, research has demonstrated that the use of subtitled videos help learners to better understand foreign language as they combine image, sound and text (Yang, 2020). Regarding participants' suggestion to increase teaching hours, we would like to underline that two teaching hours a week for learning a foreign language is not sufficient either in the traditional classroom or the virtual one. After all, the increase of teaching hours is the constant demand of foreign language teachers in Greece.

Conclusion

The purpose of this study was to investigate students' perceptions about online language teaching in VTI. Students of five different public Institutes and four different specialties, attending French classes as an FL course during the winter semester 2020-21, participated in the research. These courses traditionally take place in-person, so the virtual classroom was not a choice but a necessity imposed by the COVID-19 pandemic. French language in VTI is taught as a compulsory course. Our research tool was an online questionnaire of 12 questions given at the end of the winter semester. During online classes, students were provided with online interactive activities and quizzes based on multimodal texts and mainly captioned videos. The results of study showed that students preferred this type of activity more than others that were suggested to them. Actually, the combination of image, text and audio helps better understand linguistic phenomena in foreign language, especially when it comes to low level language proficiency as in this case that students were at A1 level. Visual learning is essential and effective and, should be used to complement and reinforce a more abstract approach to a subject (Pezzino, 2018). According to findings, the majority of students are not in favor of distance language learning and prefer face-to-face teaching of a foreign language, however a large percentage of students prefer online assessment (74%). With online assessments, students have the possibility to repeatedly practice similar questions and, at the same time, obtain immediate feedback. This is an important benefit in a constructivist teaching that helps people learn through exploring new things, making errors and reflecting on those experiences (Pezzino, 2018).

The students made interesting suggestions that language teachers should take into account when designing distance learning courses. The majority of participants, when asked what component should be added to an online FL course, chose group work. Previous research has found that mutual learning achieved within a group, where group members share their knowledge, contributes to a successful learning experience with better learning outcomes (Jeong, 2019). Therefore, since collaborative learning is considered to be effective in DE as well as in -person, we should propose more task-based group work and take advantage of the breakout rooms. Additionally, breakout rooms sessions facilitate interactions among students and enhance motivation (Hartnett, 2016).

We therefore conclude that instructional design, content, learning materials and type of activities positively or negatively affect students' perceptions of distance language learning. Thus, further research might focus on frameworks, learning scenarios, and task-based motivational and engaging activities in virtual classrooms as well as on the effective use of the collaborative tools.

New forms of teaching and interactions with students were formed/developed during the COVID-19 pandemic. As part of the distancing measures many teachers develop distance or hybrid courses online. We strongly believe that the end of the pandemic will mark the beginning of a new era for distance education improved thanks to the lessons we learned during the three semesters of compulsory online teaching. Moreover, the rapid increase in research demonstrates the academic community's interest in effective distance learning in a Digital Society.

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Success Factors for Using Case Method in Teaching Applied Data Science Education

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Abstract

In a world where everything involves data, an application of it became essential to the decision-making process. The Case Method approach is necessary for Data Science education to expose students to real scenarios that challenge them to develop the appropriate skills to deal with practical problems by providing solutions for different activities. Data science combines multiple fields like statistics, scientific methods, and data analysis to extract value from data, being an umbrella term used for multiple industries, such as data analytics, data mining, machine learning, big data, business intelligence, and predictive analytics. This paper gives an overview of success factors for using the Case Method in teaching Applied Data Science education. Showing that close analysis provides a deeper understanding of implications, connects theory to practice, and classes unfold without a detailed script when successful instructors simultaneously manage content and process. This synthesis of current research can be used by Applied Data Science educators to more effectively plan the use of the Case Method as one possible teaching method.

Keywords: data science, education, marketing intelligence, case method, learning methodology

Introduction

Data science (DS) is about decision-making in an increasingly data-driven world we live in today. It has employed great efforts in developing advanced analytics, improving data models, and cultivating new algorithms. However, there are organizational and socio-technical challenges that arise when executing a DS project: lack of vision and clear objectives, a biased emphasis on technical issues, a low level of maturity for ad-hoc projects, and the ambiguity of roles in DS are among these challenges (Chkoniya et al., 2020; Martinez et al., 2021).

As companies power up model development, DS teams are going into overdrive to better connect and communicate with business leaders. Firms are launching data literacy programs to help business teams better understand what DS is and what it can do (Babcock, 2020).

Demand for DS education is surging and traditional teaching methods are not meeting the needs of those seeking training. In a data-driven society, the main priority is to bring applications to the forefront. The individuals tasked with developing DS courses should not only have statistical and computing training but also have experience analyzing data with the main objective of solving real-world problems (Hicks & Irizarry, 2018).

This paper gives an overview of the contribution of Case Method (CM) teaching to applied DS education.

Background

DS is a new profession emerging along with the exponential growth in the era of digital overexposure. A data scientist provides support to the decision-making process by looking at past and current data. Application of it is an essential skillset in a world of uncertainty where everything from communication to transport, industry to commerce, involves data.

In this section, an overview of possible contributions of CM teaching to respond to challenges of applied DS education. Showing that, unlike lectures, applied DS education cannot happen only in passive reception of knowledge classroom isolation, it requires a deeper understanding of implications in real cases. Through their close analysis, the CM connects theory to practice, and classes unfold without a detailed script when successful instructors simultaneously manage content and process. Applied DS and CM Teaching definitions used for the analysis in this review are introduced.

Case Method

Case Learning (Wang & Yang, 2010) and Case Study approach (Garg & Varma, 2007) are among two other synonymous terms by which CM is also known (Razali & Zainal, 2013).

Teaching based on cases or problems can be traced back to Christopher Columbus Langdell, who prepared the first casebook for students in the Harvard Law School in the 1870s (Servant-Miklos, 2019). This method was adapted to business education by Edwin Gay, the first dean of the Harvard Business School, in 1908 (Lima & Fabiani, 2014). Since then, the method has spread into curricula in many fields (Lundberg & Winn, 2005). The CM is a Socratic student-led system where students review a case (a story about how an organization faced a specific business problem) and have to think through possible solutions and what they would do in the same situation (Stoten, 2020). Critical thinking is "the ability to make decisions based on data, with its inherent uncertainties and variability" (Holmes et al., 2015). Unlike other teaching methods, there is no lecturing with the CM (Patil & Karadesai, 2016).

Data science

Data Science (DS) is inherently applied and interdisciplinary, it is a unique blend of skills from analytics, engineering & communication aiming at generating value from the data itself (Braschler et al., 2019). DS combines multiple fields including statistics, scientific methods, and data analysis to extract value from data, being is an umbrella term used for multiple industries, such as data analytics, big data, business intelligence, data mining, machine learning and artificial intelligence, and predictive analytics, and is being increasingly adopted to analyze and predict consumer behavior (Chkoniya, 2020; Cognetik, 2020).

Where:

Big data is a collection of unstructured data that has a very large volume. The major demanding issues in big data processing include storage, search, distribution, transfer, analysis, and visualization (Khade, 2016).

Data mining is defined as a process used to extract usable data from a larger set of raw data. It implies analyzing data patterns in large batches of data using one or more software (Ge et al., 2017).

Predictive analytics is the branch of advanced analytics which is used to make predictions about unknown future events (Kumar et al., 2020).

Machine Learning is used in DS to make predictions and also to discover patterns in the data, in situations where necessary the machine learn from the big amounts of data, and then apply that knowledge to new pieces of data that streams into the system (Liu et al., 2018; Zolghadri & Couffin, 2018).

Artificial Intelligence is the field of study that describes the capability of Machine Learning just like humans and the ability and refers to programs, algorithms, systems, and machines that demonstrate intelligence (Khanna et al., 2020; Shankar, 2018).

Business intelligence is a data analysis process that organizations use to gain insights into business performance and improve operational decision-making (Jakhar & Krishna, 2020).

Methodology

To better understand challenges in decoding consumer behavior with DS, this paper presents a systematic literature review that helps to understand the contribution of CM Teaching to Applied DS Education.

One way to achieve greater rigor and better levels of reliability in a literature review is to adopt a systematic approach, which allows the researcher to make a rigorous and reliable assessment of the research carried out within a specific topic (Levy & Ellis, 2006). The result must be the "state of the art" and demonstrate that the research in question contributes something new to the existing body of knowledge, the methodological approach is mainly supported in three phases: input; processing, and output (Sampaio, 2007). The input phase begins with the definition and presentation of the main goal of this research: "Determine the most recent applications of DS techniques in CBR context".

After that, continues with the process of data source identification requiring the definition of rigorous string that suits the different bibliographic databases selected. Scientific articles (ar) or conference proceedings (cp) related to CBR and DS from six main academic databases were searched. These academic databases include Springer Link, Web of Science, Scopus, IEEE Explore, Google Scholar, and Science Direct. Concerning the goal of identify the publications related to research works around the application of CM Teaching in DS, in the first, it is used the string: TITLE-ABS-KEY ("CM Teaching") AND TITLE-ABS-KEY ("DS") AND (LIMIT-TO (DOCTYPE, "cp") OR LIMIT-TO (DOCTYPE, "ar")). So, applying exclusion and inclusion criteria cited, the total document results are 821. In this case, as all results are about recent articles, published between 2017 and 2021, in the English language.

All the publications titles and abstracts were read manually for relevance checking. This process resulted in 79 publications being excluded. Lastly, 21 eligible publications were selected. The analyzed publications were investigated based on the relevance to the research domain and availability.

Findings and Discussion

While DS is somewhat a "hot topic" there is still little literature that addresses the applied side of DS.

Emerging technologies like the DS are bringing new opportunities, challenges, and solutions for many domains including agriculture, plant sciences, animal sciences, food sciences, and social sciences. These disruptive technologies are at the center of the fourth industrial revolution, but we not ready yet to educate and prepare new generations to help society, science, and humanity adapt them (Catal & Tekinerdogan, 2019).

Case Method as the Potential Solution

It has been long argued that social science education must transform itself to support students' acquisition of twenty-first-century competencies, such as critical thinking, effective communication, and collaborative problem-solving. Recognizing the limitations of the lecture model in fostering these competencies, scholars favor to integrate theory with practice. There are three most common approaches currently used to introduce practice in the business curriculum: the CM, internships, and problem-based learning with four building blocks of a management learning epistemology (Perusso & Baaken, 2020):

Ill-defined problems where students.

Execute solutions in real-life.

In close collaboration with a real organization, with learning.

Supported by a process of reflection (Perusso & Baaken, 2020).

In the context of applied DS education, the action-oriented goals for decision-making literacy education often demand a more active, situated approach to instruction. A key philosophical model that can meet these needs is experiential learning. Field-based, hands-on experiential learning is a mainstay of meaningful science education throughout a student's career (O'Neil et al., 2020). Drawn from the work of Dewey, Lewin, Piaget, and others, this philosophy views learning as a dialectical process that integrates concrete, personal experiences with reflection, consideration, and application (O'Neil et al., 2020; Warren, 1995; Wilson & Beard, 2013). Experiential learning is distinguished from traditional approaches in that learning constitutes a process – where "concepts are derived from and continuously modified by experience" (Kolb & Kolb, 2017) – rather than the accumulation of a fixed set of ideas or outcomes.

CMs, or case-based learning, like other problem-based methods, are intended to develop students' ability to solve problems using knowledge, concepts, and skills relevant to a course. Cases provide contextualized learning, as contrasted with learning disassociated from meaningful contexts. The CM has long been used effectively in business and law education (McKeachie et al., 2006; Razali & Zainal, 2013). Its potential use in Applied Science such as Applied DS however has yet to be further explored.

How Harvard's case method can help bridge the gap between DS and decision making

The discipline of DS has emerged over the past decade as a convergence of high-power computing, data visualization and analysis, and data-driven application domains. Prominent research institutions and private sector industries have embraced DS, but foundations for effective tertiary-level DS education remain absent (Turek et al., 2016).

There are three foundation stones for DS projects success: project, team, and data & information management. This is a constantly evolving and improving framework to adapt to new challenges in DS, generating uncertainty (Martinez et al., 2021).

Harvard Business School Professor C. Roland Christensen was the world's leading authority on CM teaching, which he described as "the art of managing uncertainty" (Barnes et al., 1994; Cullen, 2013; Forman & Rymer, 1999).

In CM, subjects are presented to students through real cases whereby students themselves either individually or in group discussions work through the problems and issues presented in the cases (Razali & Zainal, 2013). The CM approach is deemed necessary for DS education to expose students to real scenarios that challenge them to develop the appropriate skills to deal with practical problems. As a largely theoretical subject, DS students could understand more about the practical application of DS concepts and ideas via such active learning activities.

Case developers usually equip the cases with a teaching note (Erskine et al., 2019) that guides instructors on how to deliver the materials, for instance, highlighting important issues and providing sample questions. In exploring solutions in a case discussion, students place themselves in the shoes of the protagonists and try to analyze the issues that drive the decision-making process (Hoffer, 2020).

Case-based learning provides opportunities to increase engagement and foster inclusion for diverse communities of learners. Teaching with cases leverages the strengths of storytelling to help students internalize abstract concepts. Stories are the way we make sense of the world and translate abstract concepts into understanding. CM has a focus on engagement and inclusion, spanning traditional educational settings, online learning, and one-to-one virtual coaching models. Findings of research studies that assess case-based learning outcomes are provided, along with suggestions for incorporating new material into existing curricula to help learners construct new understandings and build inclusive behavior skills (Hoffer, 2020).

This indirectly trains students to confront real issues and to develop experience in proposing practical solutions. The basic criteria for a good case include: a clear problem statement; focus on one issue or problem; and alignment with the program objectives. Besides, cases must be based on meaningful realistic situations, which do not contain ideal and clear-cut solutions (Zhang & Li, 2010). The rationale behind having no clear-cut solutions is that the answers finally offered should come from students' deep analysis, discussion, and understanding, rather than being self-evident. This facilitates students in enhancing their analytical and problem-solving skills as well as promoting proactive learning (Razali & Zainal, 2013).

The results indicate that four main factors contribute to the acceptance of CM among students as a method for teaching and learning. The factors are Environment, Case, Instructor, and Student. Each factor has its own constituted criteria or characteristics that determine the efficacy of the method (Razali & Zainal, 2013).

Success Factors

Successful experiential learning occurs when students take initiative and actively participate in there. Further, experiential learning is augmented when disciplinary content is applied in authentic contexts and can therefore be 'tested' against relevant real-world problems with opportunities for reflection and refinement (Knobloch, 2003; O'Neil et al., 2020).

Demand for DS education is surging and traditional courses offered by statistics departments are not meeting the needs of those seeking training (Hicks & Irizarry, 2018). The American Statistical Association (ASA) has recognized changes in training made necessary by a changing landscape. In 2005, they first put out suggestions for a direction for the future of introductory statistics, and they updated these suggestions again in 2016 (Carver et al., 2016). Their target is teaching introductory statistics at a college, but the wisdom contained also applies to teaching DS in any environment:

Teach statistical thinking.

Focus on conceptual understanding.

Integrate real data with a context and purpose.

Foster active learning.

Use technology to explore concepts and analyze data.

Use assessments to improve and evaluate student learning.

The increasing use of CM in teaching and research ushered in a paradigm shift in pedagogical approach in recent years. It underscores the relevance of traditional learning discourses in professional education. Cases focus primarily on the individual development, cognitive behavior, personality, learning, interaction pattern and examine the interplay of all variables (Tripathy, 2009).

For example, there has been a great deal of recent educational research pointing out the significant measurable benefits of active learning (Koedinger et al., 2015; Wieman, 2014). It's also worth pointing out that some scholars argue that these suggestions point in the right direction but are simply not enough (Cobb, 2015).

Austin, Heskett, and Bartlett surveyed their colleagues at the Harvard Business School and determined eight characteristics of excellent cases (Austin et al., 2015):

Focus - important issue(s), requiring a plan or action

Completeness – sufficient narrative and data to answer the questions

Clarity and Succinctness – targeted and organized detail

Engagement – enable identification with stakeholders

Controversy – richness of conflict and issues

Complexity – layered dilemmas lacking obvious solutions

Robustness – requiring analysis, rigor, supported assumptions 8. Intellectual Richness – opportunity for insights and discovery

Building an environment in which students feel free to expose their knowledge state and compassionately help each other learn is incredibly difficult. The idea of a growth mindset was first put forth by Carol Dweck (2017). Their research points out the importance of students believing that they can improve through practice. More interestingly, perhaps, they offer suggestions as to how to foster growth mindsets such as praising effort as opposed to skill (Hicks & Irizarry, 2018).

Conclusions

Demand for data science education is surging and traditional courses offered by statistics departments are not meeting the needs of those seeking training (Hicks & Irizarry, 2018). Cases can help students grasp concepts, develop skills, become more engaged, and satisfied in the learning process. Also, cases can help faculty develop more inclusive learning environments. In line with the Kolb (2017) framework for experiential learning, a case or a story can provide an experience that engages students to reflect, to build a revised understanding of the world by applying new concepts, and to test this understanding in new situations. While navigating this cycle, faculty have the opportunity to introduce concepts of diversity and inclusion (Hoffer, 2020).

In an Applied Data Science course, the CM can help students gain the perspective of new decision-makers. Building upon findings, future studies can address the effects of CM implementation in practice.

This synthesis of current research can be useful to teachers and the student community by providing evidence about the contribution of case learning methodology in applied data science education.

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The City's Regulatory Plans in the First Half of the 20th Century

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Abstract

The aim of this work is to throw light on the regulatory plans of the city of Korça. Based on the researches done in the press of time and in the relevant institutions as well, it comes out that the city had a regulatory plan for its development. It is documented in the press of time since 1875 making it an early document for both the city and Albania in general. These data derive mainly from the press of time published in Korças they have had a great impact on the social and economic life of the city. The ever documented regulatory plan is that of 1931 in co-operation with two foreign engineers and approved by the Albanian Ministry of Infrastructure. Based not only on the press publications, but also on what we have inherited up to nowadays, we conclude that this plan has never been implemented. The only " new thing " this plan brought is the " Pirro Boulevard " or the today known " Skenderbe " , (Scanderbeg) which joins the Shen Gjergj Blvd with that of " Republikës " (Republic) . In the end, based on archive researches we can deduce that the city of Korça has been among the first cities of Albania having a regulatory plan. A concise and definite fact is the article of 1910 which speaks of " the City Card " (Chart).

Keywords: Korça, regulatory plan, first half of the twentieth century, road, engineer Kohler, Bertold, engineer nostos, D.Pilika, engineer Armenante

Introduction

From what we have presented so far in this paper is undeniable the general development of the city of Korça and without neglecting its architectural and urban development. The development of the city in this respect is normally done on the basis of a regulatory plan for the city. There is a lot of documentary evidence for this fact, but unfortunately not so numerous in terms of mapping materials and detailed plans. Evidence provided by the press of the time gives us an idea of the concept of regulatory plans of that period. (figure 1)

But there is no doubt that the construction of new quarters under the well-known orthogonal scheme has been a pre-established criterion and the absences of a binding official act or a regulatory plan would have led to deviations from this scheme and the construction would be subject to spontaneity if we refer to the long time of its implementation since '50 of 19th until the beginning of the 20th century. The rigorous pursuit of this scheme for such a long period of the time allows us to assume the existence of an act or plan that has disciplined city constructions during this period (Thomo, 2012).

" but when we look at it we have noticed that it is just a plan that show that

the city was divided forty and a half years ago. Many places where today are set up

big years on the plaque are marked for

…crops and diara lands "

(" Korça without Plan" , 1929*).*

This earliest data tells us of a plan dating from 1875!!! I say maybe because the article of the 14th of September 1929 " *Korça without Plan "* is about bringing into light the old city plan to make new constructions. Based on the order issued by Mr. H. Mosi, perferct of Korça, at that time, the old city plan come into use. In the late '20-s, as the article itself describes, areas of the city were filled with dwellings, which at the time were considered just " *… crops and diara lands!!!*" I would consider this as the first testimony to a regulatory plan or just the city's *" map "* as was it stretched out. This marks an important point for our city and especially for its urban development, which according to the article leads to the existence of a " *plan "* for the city in the middle of the second half of the 19th century. This is simply a datum derived from my research in the press of the time issued in Korça city.

Evidence for the progress and evolution of the city plan is especially impressive in the 20-30s of the last century. In the 1910 (1326), the famous article *" Map of our city "*, mentions that the city plan was compiled whereby the opening and arrangement of old roads with width of 8-12 m was foreseen. The article writer criticizes the plan, especially when it comes to settling old quarters, according to which many homes had to be broken, or to extend the roads from the hills and the river, from the first were steep, where cars could not pass, while the latter would be short and serve a limited number of families. (figure 2)

Apparently, from the beginning of the 20th century, there would be a need to draft a new city plan to meet its growth needs. But we do not know if the plan has been implemented since, as it emerges from the article, it was a mechanical application of the orthogonal system, intervening even in the old neighborhoods with a structure already formed and in inappropriate terrain (Thomo, 2012).

Later due to the growing pressure of social opinion, the need for drafting city' s regulatory plan become urgent. In the article " *Korça, a new town "*, the drafting of the plan is strongly established. Apparently these demands were related to the rapid expansion of the city at that time, which the old plan would not have foreseen *(" Korça, a new town ", 1920)*

The next testimony comes to us in the distant year 1928. In the article in question we distinguish the initiative of the Municipality to prepare a new city plan that would solve many problems compared to the old plans that were used till then. This article tells us about blocking some areas where it will not be built because constructions should be made according to the new future plan. While *" … in the other parts of the city it was decided that the construction would be free with the condition to be noted by the Municipal Technical Office in the country and to enjoy the plan of the building. This decision was approved by the Administrative Advisory "* (" City plan", 1928).

The above mentioned article recalls the speech verbatim:

"… The most important point for decorating a city is the plan. Almost all the cities of Albania have made modern plans and the Municipality of Korça decided to make the city plan and since 1923 has appointed from time to time tree engineers and until now there is no plan. It's been

two years now, since a foreign engineer was appointed to compile a plan and he has opened two roads only. Whatever you say seems to us to be superfluous. Time is up, we need the plan asap. The municipality needs within this year to have the city plan in every way " (" Korça without Plan, 1929*).*

These discussions in the press of the time are due to the fact the City Hall in 1928 brought an engineer from Vienna to draft the plan. The design of the plan lasted three years and ended in 1930. He holds the signature of eng. Kohler and Bertoldi (Thomo, 2012). But even though we have this information on the time and progress of our city plan, in a latter month's article we find the " *Korça Plan* ", *" ... we are notified that the Prefecture has appointed a commission of engineers to investigate the case of the plan of the city, ie what has been done so far, why the plan is not over yet, what is the job done by the appointed engineer till now, how long does it take for Korça to have a plan and at what costs "* (" Korça Plan ", 1929).

From this second article it follows that after " the little stinging article " made by Korça citizens against the Municipality and its measures for this plan, even though the author says that they had " hired " two engineers from Vienna for this plan, it shows that there engineers had taken the job not seriously, as it turns out that the engineers in question, had finished only two streets of the city!!! What makes the situation worse is that the engineers in question started working from 1928 till the end of 1929 with only two roads finished in return. Some may view it as criticism of the leaders of the time but there are merely the ideas of Korça citizenship who were only interested in " the prosperity of the city " and were not worried about anything else and also wanted the Municipality to do its job and not take jobs so " slowly " as the city really needed a plan, as most of the work and constructions were forbidden until the formulation of the new city development and construction plan.

We can even say that an article of October 1929 " *City Plan* " shows us a fact that we had not read before " ... *to finish the city plan as soon as possible, the Municipality also agrees to hire " The Maliqi Company ", to work with the municipality' s helper and finish until the end of March 1930 "* (Ibid. 2). So in this article, as I said above, it comes out that for the drafting of the city plan there are no foreign engineers who started to deal with its design, but the engineers of the Municipality and the engineer of " Maliqi Company ". The fact that the article writer does not mention the two Viennese engineers may be considered as a lapse. But it seems to be inconceivable not to mention them or even the lapse itself. Considering that the city' s own engineers had taken care of the 1930' s city plan, we can say this is an urban achievement of the city marking also a point in the city development in this respect as well.

The 1930 Plan found Korça formed as a territory, as a structure and in the path of further development of urban concepts. This plan fixed the existing situation, making adjustments, adjustments to shafts and road extensions in the existing structure, and foresaw the expansion of the city by defining new construction plots. The expansion of the city was based on the same criteria of the orthogonal system, so it was a mechanical continuation of the existing structure. Regarding the arrangement of the existing structure, the plan was extended to the old neighborhoods of the city, in Varosh and Kasaba. But these proposals were difficult to implement, as they related to numerous breakdowns and high costs, and all these did not favor any significant functional or urban improvement (Thomo, 2012).

But what happens during the 1930' s in the city of Korça and how is this plan expected not only by the ordinary citizens, but also the engineers of that time and the workers of the city.

Thus, from the data we always get from the press, we see the fiery discussion of the plan and the general concerns about the urban development of the time in our country. Thus, the article " City Plan " dated 1 April 1930 states that the name of the roads is over, and the road regulation plan will be completed " by Saturday ", upon completion will be sent to a special man in Tirana, so that it can be approached as soon as possible by the Ministry and return to implement. So, it turns out that the city plan was over in the early days of April and was sent to the capital for approval. But a few days later we come across another article that speaks of a telegraph sent by the workers of the city of Korça who ask the competent ministry to approve this plan as soon as this would lead to the unlocking of works and creating jobs for them. Because this state of affairs in the city has led this part of the population into drastic measures as they are the only ones who get work and keep their families. In another article, " *The Workers Advocate for Delaying the Plan* " (1930) emphasize that " *… because of the design of the new plan, the construction of the new buildings within the city is banned …* ", " *… this morning all city workers gathered in front of the City Hall demanding that construction permits be issued in confrontation with the new plan before being approached by the ministry. Workers gathered today are in a bad financial crisis and their prayers have been presented to the ministry telegraphically* " .

While at this stage when the city plan was sent to Tirana we also have such cases where engineers of the time gave an idea how to act and how should our state legislate to determine how maps should be drawn up, " *casting measurements on paper*" " *… it will be necessary for our parliament to draft such a law for the cities of Albania, so that they may walk modernly even in this branch on the road towards civilization* " ("On city plans", 1930,) and all this article " on the city plans " is all formulated by Nastas D. Pilika. (figure 3)

By comparing the 1930 plan with the present state of the city, we see that only a small part of it was implemented in later years. This has to do with some extensions and routes and with the addition of the some plots. Proposals for regulating the urban structure of old Korça, Varosh and Kasaba ensembles, as well as the addition of the new parcels in the some parts of the city, such as the slopes of the hills, etc., did not find any application (Thomo, 2012).

But after a year we come up with this article " *City Plan With Errors* " (1931) which points out that " *implementing the new city plan that was drafted a year ago, we noticed some important mistakes, which in order to decorate the city make it to look shaken*. *In order to make the necessary repairs, the Municipality invites Mr. Eshraf Frasheri to make proper observations and corrections* ". So the plan was again with errors and this is not only distinguished in articles published in the press of time but also in a review of the city plan " *Correction and modification of errors appearing in the regulatory plan of the city of Korça* " Tiranë, 3. VII. 1931, " *… on June 17, 1931, I flied to Korça by airplane to make action on the order received from it P. T. Minister as well as for checking the parts. The regulatory plan that is being implemented, as well as the part of the Commission, appointed by the Concil of Ministers for the assignment of Maliqi Lake Conservation Limits. According to verbal agreements with the Mayor, I was assigned from the Municipality (Letter No. 999 dated 30/ 6/ 931) to be interested in the case, regarding some points of the regulatory plan Eng. Armenante*".

In this correction we see the changes that take place on different streets in the inner quarters of the city and especially those located in the old part of the city as well as some streets in the " New Neighborhood ", these roads have simply and only changes and zoom roads by taking territories from the outskirts of the apartment and extending it and being fairer and more

open to the free movement of cars and people, as the roads in the part of the city are known to be a little tight. There are also seen in the notes made by the engineer assigned to arrange the plan where the changes made in certain roads and on the walls of the dwellings are made in red and green. They are marked in order to be changed and make the streets as good as possible.

But again in 1934 we have a mistake highlighted by the constructions that were happening in that area we see that " … *the Municipality noticed that the city's plan had big mistake because the newly built dwellings did not come into a straight line. Then, Mr. F. Koller, who designed this plan, was contacted. He found that the first measurements had not exactly been marked on the plan. So the old lines of this path on the plan are incorrectly marked. After this finding was corrected and the plan was sent to the Prefecture, whose administrative Council had proven it to be true, was sent to the Ministry of Infrastructure to give the definitive approval. But, the council of the prefecture, in the country, formed the idea that this correction will again have the error and therefore asked engineers from the Ministry of Infrastructure to come here and investigate the case* (" An error in the city plan*" , 1934*). But even this brought problems about the implementation of the 1930 plan.

Another evidence that has come in hand as a map is the existence of a " *Plan "* in 1937.This information is from a former employee of the City Hall before the 1990s, who has this material. From the conversation I realized that this map dated this year. Talking to me about a plan for the city this year, as well as from the good research at the AQTN in Tirana, I found a plan that the employees there told me that it is in 1937. The city of Korça in the late 1930' s also has a new plan that can possibly elevate the city to an even higher stage due to the fact that the existence of this plan has been made for improvement and development even more of the city.

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Figures

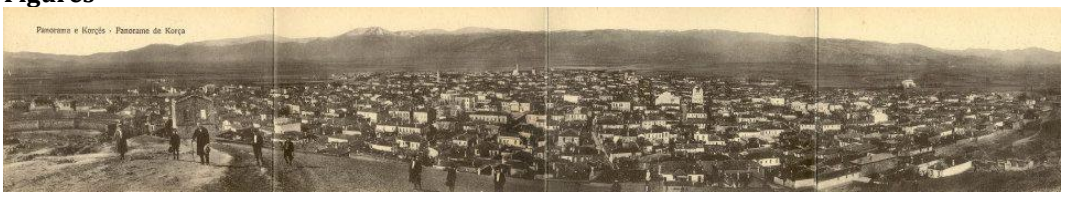
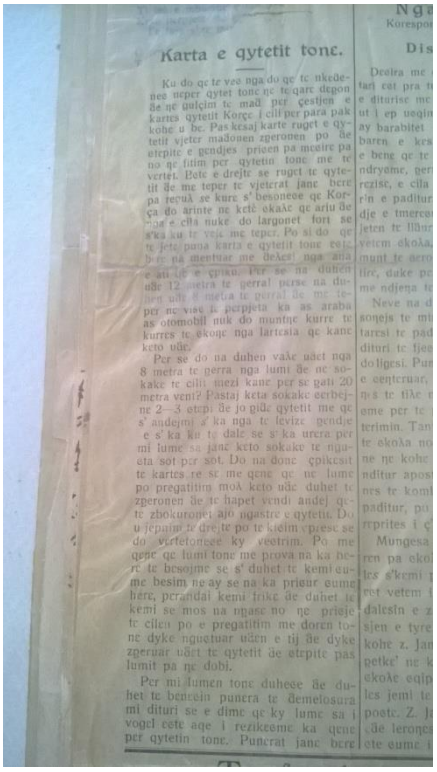


Figure 1. Panorama of Korça



Karta e qytetit tonc.

Figure 2. The first article about regulation plan in our city

Botime të Huaja

MBI PLLANET E QYTETEVE

Figure 3. Article of Eng. N. Pilika in the press of tim

Learning Losses Caused by the Covid-19 Pandemic - A Significant Threat to Economic Development

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Abstract

Numerous studies show that there is a positive correlation between education and the economic development of the country. Strong education systems have a positive impact not only on the success of individuals but also on the economy of the entire country. Graduates equipped with the skills required by the labor market can easily find a place in this market. Knowledge and skills relevant to market demand increase productivity have a positive impact on economic growth and development. Unfortunately, Covid Pandemic has severely damaged the education systems. Governments, scientists, and experts provide us with statistical information daily around the world about both the slowdown in economic growth as a whole and the problems of individual sectors of the economy. These are the problems and numbers that are already visible and it can be said that the losses are easily measurable. However, the damage caused to the economy by education systems affected by the pandemic will be felt by countries and humanity years later, nor will it be easy to calculate. The problem is even more difficult in poor and developing countries. This paper aims to study the impact of the Covid Pandemic on the education system and economy in Georgia. The research examines the reports and studies of various international organizations, analyzing the secondary data obtained from them. Local policy documents, government reports and regulations, and papers of different researchers have also been studied, conclusions have been made and relevant recommendations have been developed.

Keywords: Covid-19 pandemic, school closures, economic growth, learning losses, employment, development

Introduction

We live in a high-tech era. Humanity has been able to achieve incredibly high results during its development. The development of techniques and technologies has provided a high rate of global production. Highly developed technologies have allowed humanity not only to use nature in its favor but to create alternative sources of nature, new forms, and means of communication. Modern civilization often referred to as technogenic civilization, is based on scientific-technical achievements. Today humanity can study brain cells at the level of neurons, do research on anti-cancer drugs, replace a bad gene with a good one, send an

exoplanet hunter in space which monitors about 200 000 near stars expecting to find thousands of new planets, create a solar-powered plane, which can stop in the air for 25 days, not to mention that today there are automobiles which can be driven without a man, and artificial intelligence, which participates in debates with people and wins, conducts interviews, assists disabled people and so on. Modern science achievements help humanity not only to solve current tasks but also have the potential to influence the development of humanity in the long-term perspective.

The creators of the above-mentioned scientific-technical achievements are highly developed countries, the so-called the most innovative countries - South Korea, Sweden, Singapore, Germany, Switzerland, Japan, Finland, Denmark, France, Israel, the United States, Austria, Ireland, Belgium, Norway, and others who put the largest financial and human resources in scientific researches and a practical realization of results (Kasradze, 2018). The vector of economic development of these countries is directed towards the creation of a knowledge economy in which a person, his/her knowledge, skills, and abilities have a central place. The model of the knowledge economy is one of the main reasons for their socio-economic development. The economy of knowledge as the highest stage of the post-industrial economy is the source of the growth of the country's economy and the level of public life (Kasradze & Zarnadze, 2019).

Developed countries are spending huge financial resources to strengthen human capital since it is the main factor in creating new technologies, developing manufacturing, and increasing their efficiency. Human capital plays a major role in the development of science, culture, health, safety, and the social sphere (Wawrosz & Mihola, 2013).

The developed countries put great resources in research and development. Different institutions of society are involved in this process: state, business, and research institutes. It should be noted that there is a great demand for researches and scientific findings all over the world. So, in developed countries, the number of people working in science, research, and development is increasing from year to year (Zarnadze & Kasradze, 2019).

While global spending on research and development has reached a record high of almost 1.7 trillion US$ and about 10 countries account for 80% of spending, on the other hand, 40% of the world population lives in poverty (Action against hunger, 2020); Two-thirds of the world's school-age children – or 1.3 billion children aged 3 to 17 years old – do not have internet connection in their homes (Unicef for every child, 2020); There are 258 million children and adolescents not in school (the total includes 59 million children of primary school age, 62 million of lower secondary school age and 138 million of upper secondary age) (Out-of-School Children and Youth, 2018); 617 million children and adolescents worldwide are not achieving minimum proficiency levels in reading and mathematics, even after several years of schooling. This means that more than one-half – 56% – of all children won't achieve minimum proficiency levels by the time they should be completing primary education. The proportion is even higher for adolescents at 61% (Data for the Sustainable Development Goals, 2017). Studies show that despite the increased access to education and although the problems of illiteracy are solved in developing countries, the quality of education by the current institutions can not be reflected in the development of a country (Kasradze, Tea; Antia, Vakhtang; Gulua, Ekaterine, 2019).

Obviously, low-income countries are struggling with numerous problems on the path of education (Zarnadze & Kasradze, 2019). But Covid Pandemic has made the problems of education even more acute. Nearly a quarter of a billion students worldwide are still affected by COVID-19 school closures, forcing hundreds of millions of students to rely on virtual learning. For those with no internet access, education can be out of reach. Even before the pandemic, a growing cohort of young people needed to learn foundational, transferable, digital, job-specific, and entrepreneurial skills to compete in the 21st-century economy (Unicef for every child, 2020).

Some factors determine the level of education of the human (community): In this regard, a family needs to get educational materials, as well as the social status of parents, and the quality of their education, neighborhood, and the environment in general in which the person is placed (Gulua, 2017)

Covid Pandemic has exacerbated problems with access to education, funding, and quality around the world, especially in poor and developing countries. Which will harm the future economic development of the country and the welfare of the society. In our research, we try to prove the cause-effect links between learning losses caused by the pandemic and economic growth in Georgia. The research examines the reports and studies of various international organizations, analyzing the secondary data obtained from them. Local policy documents, government reports and regulations, legal acts, and papers of various researchers have been also studied, conclusions have been made and relevant recommendations have been developed.

Education and Economic Growth - Literature Review

The pathway from education to economics goes through the labor market (Zarnadze & Kasradze, 2019). The education system has an important role in delivering quality labor resources that will positively affect economic growth and development. And the economy in turn is a prerequisite for improving the quality of education.

The closure of schools in early 2020 has led to learning losses around the world that will not be easily compensated for even if schools quickly return to their previous work environment. These losses will have a sustainable, long-term economic impact on both students and schoolchildren, as well as on society as a whole if timely and effective steps are not taken to address them.

When children lose out on education, they lose out on future opportunities including economic benefits, such as additional earnings, with far-reaching consequences (Psacharopoulos, Patrinos, Collis, & Vegas, 2020). Some modeling suggests that the loss of learning during the extraordinary systemic crisis of World War II still had a negative impact on former students' lives some 40 years later (Ichino & Winter-Ebmer, 2004).

COVID-19 aggravates the youth employment crisis. Even before the pandemic, more than 267 million of the world's 1.2 billion young people did not have employment, education, or training. Since the onset of the pandemic, one out of six young people has stopped working and working hours have been reduced by 23% for those still working. The pandemic is changing the global labor market in three ways, affecting youth: 1. Reduces employment opportunities due to loss of COVID-related jobs; 2. There are more obstacles to finding a job

and moving on to better jobs; 3. Violation of education and training, which affects future employment opportunities (ILO, 2020).

Many examples of long-term school closures are not known in history before the Covid Pandemic, and therefore not much researches have been done to examine the damage caused by school closures to school beneficiaries and the economy. However, there is an interesting study conducted by Michèle Belot and Dinand Webbink in 2010 "Do Teacher Strikes Harm Educational Attainment of Students?". Where the results of long-term (up to 6 weeks and repeatedly) closure of schools due to a teachers' strike in Wallonia in the French-speaking southern region of Belgium have been studied. The study found that in this part of Belgium, compared to other parts of the country where schools were not closed for a long time, there was an increase in grade repetition due to low academic achievement and generally, low educational attainment. The rate of continuing education in higher education institutions was also low (Belot & Webbink, 2010).

It is noteworthy that the closure of schools not only deals with the loss of knowledge but also reduces the existing knowledge and skills that should have been the basis of future knowledge and skills.

Several interesting scientific papers and studies and reports by international organizations have been published during the pandemic period, exploring the links between education, the workforce, and economic growth and development. Among them is the study "The Economic Impacts of Learning Losses" by Eric A. Hanushek and Ludger Woessmann" published in 2020, according to which while the precise learning losses are not yet known, existing research suggests that the students in grades 1-12 affected by the closures might expect some 3% lower income over their entire lifetimes. For nations, the lower long-term growth related to such losses might yield an average of 1.5% lower annual GDP for the remainder of the century. These economic losses would grow if schools are unable to re-start quickly (Hanushek & Woessmann, 2020).

In the same study, the authors discuss two categories of damage received by closing schools. On the one hand, reduced income in the long run of the pupils and students whose educational process has been suspended in educational institutions. On the other hand, the losses from the slowdown in the economic growth of countries, because they will have to move forward with less-skilled workers, which will also affect the welfare of society. Education equips people with the skills that make them more productive at carrying out their work tasks, particularly in modern knowledge-based economies. Education also provides knowledge and skills that enable people to generate and apply new ideas and innovations that enable technological progress and overall economic growth (Hanushek & Woessmann, 2020). Nations with more skilled populations grow faster.

Through the educational system, pupils/students develop cognitive skills of economic value. The education system provides them with skills that make them more productive, especially in a modern knowledge-based economy. Education also provides knowledge and skills that enable people to create and apply new ideas and innovations to achieve technological progress and economic growth.

Learning losses due to the pandemic have different impacts on revenue losses in different countries. Students' future opportunities in the labor market are influenced by cognitive skills measured by standardized tests. A study conducted by the OECD in 2011-2015 examined the

relationship between individual incomes and test scores in the 32 highest-income countries. Research has shown that countries vary considerably in the economic rewards to higher skills. While workers in Singapore are estimated to receive 50% higher income if they have one standard deviation higher test score, the typical worker in Greece gains just 14% more income with one standard deviation higher test score. For the United States, the comparable return to skill is 27%, and for the average across all sampled countries, it is 23%. Importantly, these relationships provide estimates of the impact of skill differences across the entire work life.

Based on these calculations, Eric A. Hanushek and Ludger Woessmann found that individual income losses due to learning losses are highest in Singapore and lowest in Greece.

Table 1 Lost individual income due to Corona-induced learning loss

Learning loss (school-year equivalents)	Pooled (0.232)	US (0.274)	Lowest [Greece] (0.137)	Highest [Singapore] (0.501)
0.25	1.9%	2.3%	1.1%	4.2%
0.33	2.6%	3.0%	1.5%	5.6%
0.50	3.9%	4.6%	2.3%	8.4%
0.67	5.2%	6.1%	3.0%	11.1%
1.00	7.7%	9.1%	4.6%	16.7%

Source: The Economic Impacts of Learning Losses, Eric A. Hanushek, Ludger Woessmann, OECD 2020

Higher educational attainment is reflected not only in the high individual but also in high national incomes as a whole. Basic cognitive skills, as measured by international comparative tests in mathematics and science, are perhaps the most important determinants of economic growth and, thus, the long-term well-being of society (Hanushek & Woessmann, 2020). These results on the relationship between educational activity and economic growth can be used to calculate the economic cost of learning losses.

Table 2 Long-run loss in GDP due to Corona-induced learning loss

Learning loss (school-year equivalents)	In % of discounted future GDP	In % of current GDP	GDP decrease in the year 2100
0.25	1.1%	52%	1.9%
0.33	1.5%	69%	2.6%
0.50	2.2%	103%	3.8%
0.67	2.9%	136%	5.1%
1.00	4.3%	202%	7.5%

Source: The Economic Impacts of Learning Losses, Eric A. Hanushek, Ludger Woessmann, OECD 2020

The relationship between academic achievement and school closure in the United States is explored by Megan Kuhfeld, James Soland, Beth Tarasawa, Angela Johnson, Erik Ruzek, and Jing Liu in the study "Projecting the Potential Impact of COVID-19 School Closures on

Academic Achievement". The paper examines the impact of school absenteeism due to various causes (heavy snow, hurricanes, and other natural disasters) and their closure due to the Covid Pandemic on academic achievement. After the closure of the schools, they switched to distance learning, but due to the lack of experience of distance learning of students as well as teachers, as well as less access to technology, the result of distance learning did not equate to the result of face-to-face learning. The MAP Growth assessment data of 5 million public school students from grades 3 to grade 8 (approximately 22% of the total number of students in this grade) is analyzed in the study for the 2017-2018 and 2018-2019 academic years (Kuhfeld, et al., 2020).

Based on a study of the impact of school absenteeism and closures on student outcomes in Mathematics and ELA (English language arts) for a variety of reasons, a projection of student achievement in the period from the first closure of schools in the spring of 2020 to the start of the 2020-2021 school year has been made. The study has shown that school closures resulting from weather or natural disasters provide an analog to school closures due to COVID-19. Under the COVID Pandemic projections, students were projected to end the abbreviated 2019–2020 school year with roughly 63% to 68% of the learning gains in reading but only 37% to 50% of the average gains in mathematics compared to those of a normal school year. Under the Full Absenteeism projections, the story is even direr, with students in sixth and seventh grade projected to have ended the disrupted 2019–2020 school year with less than 30% of their typical learning gains in both mathematics and reading (Kuhfeld, et al., 2020).

Covid-19 Pandemic, Learning losses and Economic Growth in Georgia

For assessment of general education quality system the Program for International Student Assessment (PISA), the Progress in International Reading Literacy Study (PIRLS), the Trends in International Mathematics and Science Study (TIMSS) are used in Georgia. These studies show that the level of students' knowledge in Georgia was quite low even before the Covid Pandemic (Kasradze, 2018). In particular, according to PISA 2018, Georgian students lag behind students from almost all countries in the region in terms of academic results. According to these results, Georgia ranks 67th out of 78 countries in mathematics, 71st in reading comprehension, and 74th in natural sciences. The share of students in Georgia who failed to reach the baseline level of achievement-48.7% is also high, while in OECD countries the figure is on average 13.4% (Galt & Taggart, 2020).

The year 2020 completely changed the field of education not only in Georgia but all over the world, and unfortunately, it was not a change for the better. None of the countries, including the developed ones, were ready for the challenges. The main difficulty was related to the transition to distance learning due to the pandemic. Education specialists from around the world recognize that distance learning is an extreme and rather weak solution and that it is almost impossible to acquire and deepen knowledge through it. Especially for low school students.

The educational process was difficult in Georgia as well. The number and the duration of lessons both were reduced which resulted in backwardness and learning loss. We have this reality all over the world today and it is difficult to talk about how this loss will be compensated.

Every failure in secondary school is important because it is very difficult to fill it. Things are much better at higher education institutions because there are students who are highly

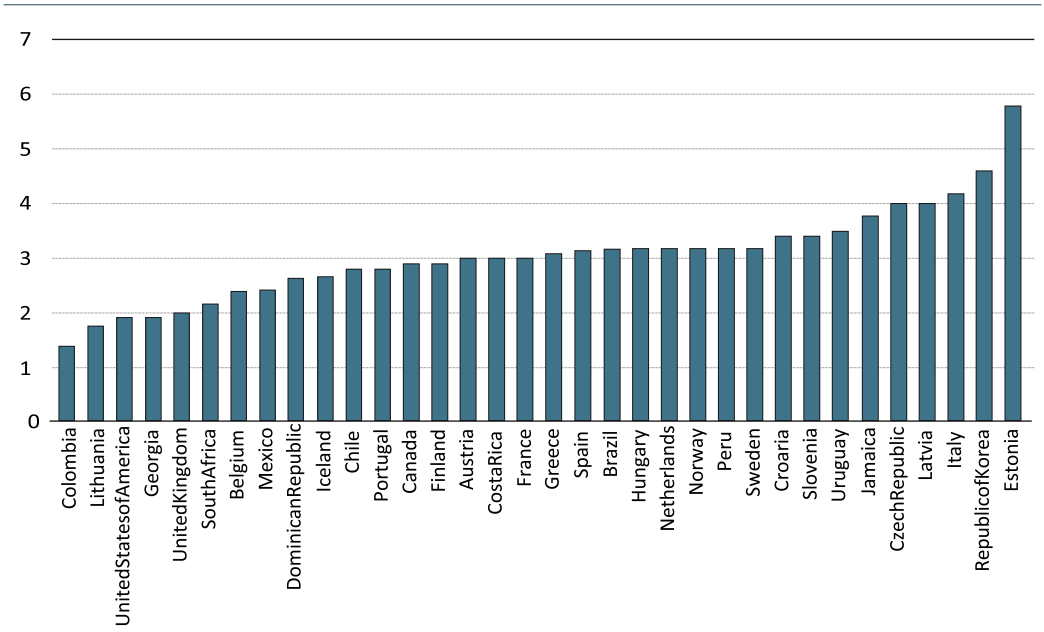
adapted and mobilized (Zarnadze, Nino; Kasradze, Tea, 2020). However, studies show that serious shortcomings are there too that need attention. However, we believe that this is a separate research topic.

One of the main obstacles to the distance learning process was the lack of technical and digital competencies in teachers, students, and parents. Teachers found it difficult to adapt to the new platforms and manage them technically.

The Internet and digital technologies are vital to modern man. Under the pandemic, it has acquired even greater significance since for a large part of the population the educational and work processes under limited mobility are carried out remotely via the Internet. Naturally, the lack of Internet access in such conditions causes serious discomfort for people.

Very soon after the start of the pandemic, the Georgian government took effective steps to ensure the continuity of education. In particular, the Microsoft Teams learning platform was created for public schools. Virtual classrooms were created for all public school classes and subjects, and more than 580,000 Microsoft Office 365 user profiles (528,327 students and 52,124 teachers) were created for students and teachers. The steps were taken by the Government of Georgia to ensure the continuous process of education in the conditions of the pandemic were named by OECD as one of the best examples in the world. This is evidenced by the learning losses calculated by countries by the OECD for May 2020.

Figure 1 Days of schooling lost by mid-May 2020



Source: The Economic Impacts of Learning Losses, Eric A. Hanushek, Ludger Woessmann, OECD 2020

Despite the government efforts, the problem of having access to the Internet and information technology has made access to education entirely a problem. The coronavirus brought to the

surface the inequality that had already existed in education. Not only in Georgia but all over the world, it has put students with low economic opportunities in an unequal position and exacerbated the problem of access to education.

According to a joint report by the United Nations Children's Fund and the International Telecommunication Union published in December 2020, 15 percent of school-age children in Georgia did not have access to the Internet at home. This figure is two-thirds of school-age children in the world. The rate is similar among young people aged from 15 to 25 and equates to 759 million young people, or 63 percent (UNICEF, 2020).

According to the data of the International Telecommunication Union (ITU) in 2018, the citizens of Ukraine and Georgia had the lowest Internet access among the neighboring and Eastern Partnership countries - 63%, while this figure was 81% in Russia, 79% in Belarus, 76% in Moldova, 71% in Turkey and in neighboring Azerbaijan and Armenia it was 80% and 65%, respectively (IDFI, 2020).

It should also be noted that Internet access is not the only indicator of its use. Computer literacy and digital literacy statistics are also important here. Only 62% of households in Georgia own a computer, while 46% of the population think they do not have the basic knowledge to use it.

According to the data of the National Statistics Office of Georgia in 2019, 79% of households are provided with the Internet. In cities, this figure reaches 86%. However, the situation is more deplorable in villages where only 69.9% of households have access to the Internet (IDFI, 2020).

According to the survey conducted by the Ministry of Education of Georgia in March 2020, 528,426 students were registered in the general education system, 12% of them (63,272 students) did not have access to the Internet at home, and 14% (71,796 students) did not have computer equipment. One part of the other students had access to both fixed and mobile internet. Overall, out of these two overlapping groups, 88% of students had access to landline internet and 53% to mobile internet (Ministry of Education, Science, Culture and Sports of Georgia, 2020).

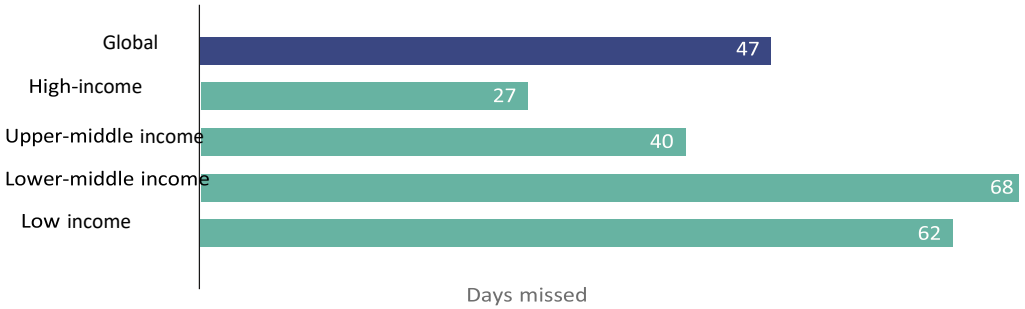
The OECD study is even more difficult. In particular, according to the survey, about 78% of students in Georgia own a computer suitable for school work. As for internet access, today up to 78,000 socially vulnerable students in Georgia do not have the internet. 95% of them live in the internet coverage area but are unable to pay internet fees due to material hardship (Reimers, Fernando M.; Schleicher, Andreas, 2020).

Although the above-mentioned restrictions on access to the Internet and digital technologies are present in Georgia today, the number of lessons and their duration in schools are reduced, most students and teachers do not have distance learning skills, the heads of the education system do not talk about learning losses, its future negative consequences and ways to compensate for the losses, and there are no relevant calculations. Therefore, we will try to predict the future personal/individual and economic losses caused by the pandemic-induced learning losses in Georgia by analyzing and generalizing the results of studies by international organizations and various foreign researchers.

According to the studies by Unicef conducted between July and October in 2020, an average of 40 school days were lost in countries where the academic year was already over by the time

of the study due to school closures and distance learning gaps caused by the pandemic. Students in low-income countries missed more school days than students in high-income countries

Figure 2. Average days of school missed, by income level



Source: UNESCO-UNICEF-World Bank joint survey round 2, 2020.

According to the New World Bank country classifications by income level 2020-2021, Georgia belongs to the upper-middle-income economies[1], so we can assume that the number of days missed due to the pandemic in Georgia is about 40 school days (according to the national curriculum, there are 170 school days per year for II-XI graders) And 157 days (for I-XII graders)). Therefore, if we rely on Eric A. Hanushek, Ludger Woessmann's study 'The Economic Impacts of Learning Losses', which is carried out within the framework of the OECD and which in turn is based on past studies about school closures and learning losses during the summer, future individual income losses will equate to about 1.9% during a lifetime. The average monthly salary in Georgia was 1,204 GEL ($ 377.2 / € 346) in 2019. Using this data, an individual loss will be on average $ 86 per year.))

This is not a big number at first glance, but if we recalculate this on the number of students who were affected by learning losses (528,426 students were registered in the general education system by March 2020), the total one-year loss is quite large - $ 45,444,636. If we also take into account that the average working period for a person is 45 years, then under the conditions of the 3% discount rate, the present value of the income lost by 1 student will be approximately $ 2,109. This suggests that the next generation will have to pay quite a high price due to covid-19)).

According to the same study, Georgia will lose 1.1% of the country's future GDP due to a 40-day study loss in the spring of 2020, which is 69% of the country's current GDP. If the delays continue, suppose, during six months, Georgia will have a next 2.9% decline in GDP, equivalent to 136% of our current GDP. Over time, these losses will be from $ 12,049 million to $ 23,796 million. Georgia's GDP in 2019 was 17,477.26 million US dollars.

However, as mentioned above, the same learning loss has different effects in different countries, just as the impact of education on individuals' incomes varies according to the level

[1] For the current 2021 fiscal year, upper middle-income economies are those with a GNI per capita between $4,046 and $12,535

of development of countries. In countries with highly developed economies, education is highly valued.

Generally, education on healthy labor markets increases the chances of employment, but this is not the case in Georgia. We have the opposite relationship between education level and employment rate. Higher education in Georgia slightly increases employment opportunities and increases pay by 26% compared to general education, which is significantly lower than the average of OECD countries (56%) (Galt & Taggart, 2020). One of the main reasons for this is the lack of knowledge and skills relevant to the market requirements which indicates the low quality of general, professional, and higher education and which we talked about above.

Given this, we think that the loss of education caused by the closure of schools caused by the pandemic will worsen the quality of education and reduce the incomes of the already poor population, although this reduction will not be as large as in the countries with developed economies and the decline in individual income and GDP may be much smaller than in our calculations made above (Tea Kasradze, 2015). Deterioration of the economic situation of both individuals and the country as a whole is inevitable in the short run but it should also be noted that the experience and technical skills acquired during the pandemic may have a positive impact on the incomes of future generations.

Summary and Recommendations

Due to the situation created by the new coronavirus pandemic, educational institutions switched to distance learning mode from March 2019-2020. Learning losses are precisely associated with distance learning. The damage caused by learning losses can be devastating for the country. Unfortunately, distance learning in Georgia is not a perfect alternative to the learning process because many students, schoolchildren, and even teachers do not have access to the Internet, computer, and relevant skills to use it.

Learning losses are present in Georgia today. There is a need for the government, particularly the Ministry of Education, to transparently collect information about students' academic achievement, social and emotional well-being due to the pandemic, identify learning losses, investigate the causes and find ways to eliminate the losses.

Surveys of students, their parents, and teachers show that the level of students' knowledge in Georgia is quite low. The level of teacher training is also often critically assessed. The knowledge level obtained through distance learning in Georgia and the level of distance learning conducted by teachers are also assessed with 5 points in both cases under the 10-point grading system. It means that students have mastered this or that discipline, crossed the minimum threshold, but this is not a quality education that will help them win in competitions and help them establish a place in the labor market.

The Government of Georgia has managed to shift the schools, closed due to the Covid-19 pandemic, to the remote mode in the shortest possible time, thus ensuring the continuity of teaching, but distance learning quality requires more attention. The methods and tools used in the online learning process also require extra attention from educational leaders, especially when school students have different technological, economic and social opportunities. It is necessary to evaluate how this or that online teaching method is better than the other. Do these methods lead the students to results? Are students taught through innovative methods?

Currently, face-to-face teaching in schools has been partially restored, but if the community is not vaccinated on time, the schools may close again. Which will further complicate the situation in the future. Discontinuation of education at educational institutions will have serious negative long-term consequences for both the economy and well-being of society - inequality will deepen, human health will deteriorate, and social ties and relationships will weaken.

Learning losses are especially high in vulnerable groups, as distance learning has further increased the problem of access to education for this category of students. Therefore there is a high risk that we will get an even more polarized student community after the schools are fully open. Many students may even refuse to attend school. This problem requires special attention from the state. Additional funding is needed to set up a tutoring teacher institute that will work individually with such students and facilitate their re-socialization. The tutoring teacher institute will help these children not to be left out of the learning process forever. The state must take care of them and create equal conditions for learning. The state role needs to be enhanced across countries, although special importance should be given to education support at the regional level.

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