Challenges for improving online teaching

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Methodology

This study begins with a review of the literature and the available reports in the area. Hence, through this instrument the project team has gathered and analyzed the existing information, data and previous reports (secondary sources) and data collected from universities, publications from governmental and non-governmental institutions, reports and available studies on Internet, newspapers and professional magazines, international organizations reports etc.

Data collection and literature review is the first stage of the study. The first stage was very useful as it offered enhanced knowledge on the topic and helped gather information from the scientific research.

The project team used the first stage as a starting point to identify the problematics and benefits of online learning from the perspective of all interested parties. For more information on the reviewed literature and the sources used on this report please check the listed sources of the study's bibliography.

Quantitative techniques Within the framework of this project two questionnaire-based surveys were performed specifically: a) a survey with students in public and private HEIs[1]; b) a survey with the academic personnel in public and private HEIs. The first instrument aims to gather quantitative data to analyze the challenges faced by the students during the online learning in regards to knowledge acquisition. The second survey, analyses the topic from the perspective of university pedagogues in the online teaching process.

Procedures Data gathered from the students' and the pedagogues' quantitative surveys were collected through online questionnaires. Initially, it was decided that the sample was going to be formed as a combined outcome of random selection and selection in series. This was achieved following these steps:

The universities that were part of this survey, were selected randomly . From the selection process it resulted that the survey was going to be performed in 4 public universities (University of Tirana, University of Elbasan, University of Korça and University of Vlora) and 3 non-public HEIs (Luarasi University, Mesdhetar University and Metropolitan University).

Two faculties were selected from each university.

The learning groups to be surveyed on the challenges of online learning were selected following random selection (study groups that were selected were on the second and third year of the bachelor level and on the second year of master studies). Two groups were selected per each branches and year.

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[1] Higher Education Institutions

Each selected group was considered as a seri based on the fact that it aimed to get a response from all students in the group. The response rate was calculated based on the responses that were provided.

The ilustration below shows the methodology applied in the study.

Figure 1: Applied methodology
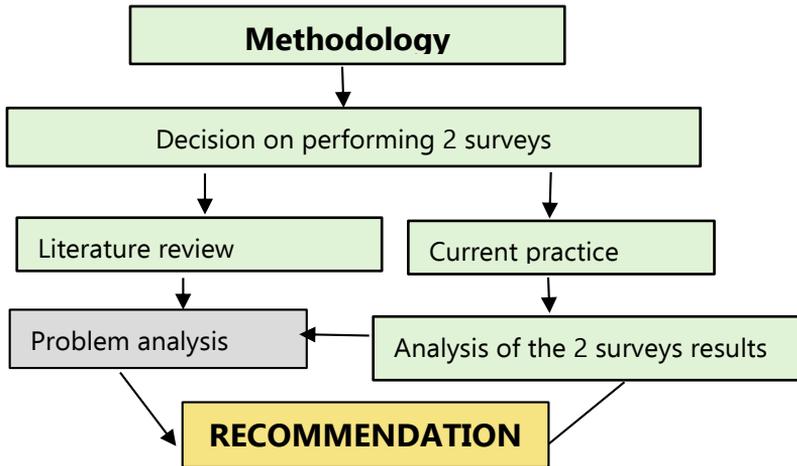
Data elaboration and Statistical Analysis After the database was set up,the next step was to enter in the database, the quantitative data that was gathered. The data were processed and analyzed in SPSS. The data was initially cleaned and controlled in terms of stability. This was followed up with data analysis. All values were tested by employing the appropriate statistical tests in terms of statistical significance and the confidence level 95%.

Sampling

A. The size of the students' sample was set after the pilot test and was made from the composition of 7 universities * 2 faculties * 3 different study years * 2 learning groups = 56 learning groups (statistical series). Considering the number of students in each group a sample size of 1502 students was created in the contex of this study. University coordinators informed and encouraged the students to fulfill the online questionnaire.

B. The size of the pedagogues' sample was set through random selection after the pilot test was performed. From the calculation of the necessary observation number was concluded that it was required to have 35 pedagogues from each selected university, in total 245 pedagogues. University coordinators informed and encouraged the pedagogues to fulfill the online questionnaire.

   Under the oversight of each university's selected coordinator, the online survey was available for a period of three weeks (October 26th – November 15th, 2020).

Literature review

The Covid-19 pandemic has affected the development of many sectors worldwide such as health care, economy, free movement of people and education at all its levels. Referring to the OECD 2020 Report, during 2020 the global economic activity is expected to decline by 6% and the average unemployment rate in OECD countries to reach 9.2% from 5.4% in 2019.

The Covid-19 pandemic also has had a great impact on the development of education . Due to the pandemic, this year (in 2020) many governments were forced to apply lockdown measures, which changed the working and university's teaching approach. UNESCO has estimated that in 177 countries schools were closed as a precautionary measure against COVID-19, affecting 1,268,164,088 pupils and students across the globe (UNESCO, 2020).

Meanwhile, referring to the UN 2020 Report, the Covid-19 pandemic has caused the largest education system disruption in history, affecting an estimated 1.6 billion students in more than 190 countries worldwide. School closures have affected 94% of students worldwide and 99% of students in middle- and low-income countries. The ability to respond to schools' closures has been largely influenced by the level of country development: in the second quarter of 2020, 86% of primary school students in low development countries were left out of the education system compared to only 20% in countries with very high human development.

According to an ILO (2020) report on the impact of Covid-19 on young people in the labor market, education, rights and mental health it was concluded that more than 73% of young people were affected by the closure of schools, universities or training centers. In the study, there were included 12,605 young people aged 18-34 from 112 countries. The impact was slightly higher in those who only studied (74%), compared to those who studied and worked. A higher percentage of missing courses during the lockdown from the pandemic have been reported by young people living in low-income countries. In high-income countries 65% of young people used video lecture classes, while in low-income countries this way of learning was stated by 18% of young people. According to the report, the reasons that hindered the effectiveness of online learning are: 1. Low level of Internet access; 2. Insufficient digital skills for distance learning; 3. Lack of suitable IT equipment; 4. Lack of a dedicated space; 5. Absence of materials suitable for distance learning; 6. Lack of working groups and social contact. Social distancing measures applied during the pandemic brought new challenges in the teaching process, where digital resources have a primary role in coping with the situation. Online learning was considered as the best alternative to continue the educational programs, now virtually via the Internet. Under these new circumstances, the

Internet was used to communicate through e-mails and other forms of communication developed by different communication platforms.

The technological development has created the opportunity to employ various innovative tools to enable distance learning. Online learning is a good alternative in situations such as the one related to the Covid-19 pandemic. Prior to the application of the lockdown measures due to the Covid-19 pandemic, online learning had been mainly used as an effective alternative for students that were not able to physically attend classes. Earlier, the needs that had led to the increased use of online learning had been mainly economic, related to the inability of students to attend classes in their classrooms, nowadays it arose as a need defined by the circumstances, to protect health.

Ally (2008) defined the term online learning as a way to increase students' knowledge, who Internet can access learning materials' content, interact with materials, teachers and students through the Internet. The Internet is becoming the dominant channel for spreading information and knowledge due to its low cost and fast information distribution. Nowadays the Internet has become an important alternative in disseminating and obtaining information (Arkorful & Abaidoo, 2015). In recent times, many educational institutions have increased online learning application not only in various trainings but in the development of teaching curricula as well, especially in the circumstances of total lockdown due to the Covid-19 pandemic.

In various countries, after the onset of the pandemic, higher education institutions and schools faced new challenges of the distance education process. According to the Department of Education of the Council of Europe, in various European countries there have been developed different distance learning practices, including synchronous distance learning program, accessible via computers, tablets, mobile phones and asynchronous platforms.

According to the OECD 2020 Report, with the closure of schools in many countries, one of the measures taken in March 2020 as response to the pandemic, was to use various alternatives to support teaching for students. Such tools included instructional packages (textbooks, worksheets, prints), teaching in radio and television as well as online guiding resources. In OCDE countries, during the lockdown, during schools' closures, online platforms have been the most used learning tools (Schleicher and Reimers, 2020). The online learning tools used in remote learning included educational materials, that students could acquire both through individual reading and real-time learning, where teachers mentored students through the virtual meeting platforms. In France, where distance learning programs were previously existing, the "Home

Learning" programe became available to all primary and 9th grade students (Ministry of Youth and Education, 2020). In Greece, there was applied a combination of synchronous and asynchronous learning (Ministry of Education and Religious Affairs, 2020; Schleicher and Reimers, 2020).

In many OCDE countries, television programs were used especially for primary school pupils (Greece, Portugal) as well as for students who could not have the necessary resources to access online learning. In Luxembourg, the government built a special system to support students and parents of students for home learning (OECD, 2020). There are two known forms in terms of online learning: hybrid learning (partly online and partly in the classroom) and fully online learning. According to Boelens R. et al. (2017) the use of the blended (hybrid) learning environment can lead to four main challenges: 1-incorporating flexibility, 2- stimulating interaction, 3- facilitating students' learning processes, and 4-fostering an affective learning climate.

Online learning platforms, are often seen in three forms: virtual learning environments (VLE), learning management systems (LMS) and learning content management system (LCMS). VLEs are commonly used to stimulate traditional learning, as examples of these platforms Moodle 46 and Blackboard 47 can be mentioned. According to Coates H. et al., LMSs are platforms which include learning systems, portals, institution management systems as well as content management systems. LMSs facilitates knowledge management including online and virtual classes as well as instructor-led courses. Both these platforms are similar, however LMS-es are mainly used for trainings and VLEs for teaching. LCMSs platforms are used to create content materials, such as articles, tests, games, videos, which are then collected, reused and adapted to different courses according to the students' needs.

In Albania, on March 2020, schools across the country were closed as a precautionary measure during the pandemic. On March 30, 2020, the Ministry of Education, Sports and Youth published home learning guides. The Ministry of Education, Sports and Youth, to enable the continuation of online learning created online platforms such as Akademia.al (for pupils of 3-18 years old) and even channels on YouTube as well as an electronic bookstore, Electronic u-Library (RASH). During the second quarter of 2020, the two main teaching forms that were applied in the country were: lessons broadcasted on the Albanian Radio Television (RTSH) and the work of students and teachers through social networks or various platforms that enable running virtual classrooms (such as Google Classroom, Zoom, etc.).

According to the World Vision Report, 652,592 pupils and students have been affected, 482,048 of whom were children (World Vision, May 2020). The change in the teaching form led to changes in behavior in learners, their parents and teachers. The change in behavior was needed to adapt as quickly as possible to the new teaching form which is very different from the traditional teaching form in classrooms. All actors involved in the education system were affected by the new teaching approach. Educational institutions, teachers, students and pupils as well as their parents, are the stakeholders who contribute to the quality of distance learning. For the actors involved, distance learning, in addition to the challenges, presented new opportunities. Some of the new opportunities in this regard were: a new channel of communication between students' parents and teachers, constant interaction among teachers on sharing their experiences, application of new teaching opportunities and increased creativity in teaching (Petrie, et al., 2020).

There are many factors that can affect the effectiveness of online learning, such as the subject typology, the technology used, the students' characteristics, etc. Gamage, et al. (2014) based on a qualitative analysis have identified the main dimensions that affect the participants' effectiveness: technology, pedagogy, motivation, usability, materials, students support, assessment, orientation for the future, collaboration, interactivity. Sun (2016), has emphasized that the effectiveness of online learning depends on the way of presenting the teaching materials content, the lecturer's engagement in the online environment, as well as the lecturer-student and student-student interactions.

Bao (2020), has concluded on five high impact principles on online education: 1. Great importance of the curriculum and student learning plan, 2. Effective dissemination of instructional information, 3. Adequate support of lecturers for students, 4. High quality participation to improve student knowledge, 5. Contingency plan to manage unexpected incidents on online learning platforms. Studies have shown that students have preferred teaching happening in classrooms between teaching taking place online and in classrooms, but with statistically insignificant differences between the two teaching modes (Kemp and Grieve 2014). According to Liu (2010) online learning is slightly more effective than classical learning in the classroom, however in regards to teachers there were no significant differences between the two instructing modes.

Distance learning, as well as classroom learning, involves different types of interactions, such as those between students and educational materials, between students and their lecturers, and among students themselves. Dhawan (2020)

suggests that accepting and adapting to changes in the way of learning, would bring innovation. Anyhow, it should not be forgotten to consider the students who do not have access to the Internet or belong to low-income families as well as the extra costs related to additional equipment's and Internet costs. According to Dhawan (2020) digital sharing can produce inequality.

Despite the common features of online and classroom learning, there are also online learning challenges, mostly related to the logistics aspects. Online teaching requires longer preparation time compared to classroom teaching. In addition, certain types of teaching materials can be very difficult to develop and presented online or even learned virtually. Other important issues related to online learning that need to be considered are issues with regards to confidentiality and individual responsibility as well as Internet security which is an ongoing challenge. However, in certain situations, online learning is an applicable and practical alternative compared to the traditional classroom learning. Furthermore, in many cases, online learning can significantly complement classroom learning by continuing to expand as a necessary component of the academic and vocational education.

According to a UNESCO Report for students with disabilities, as a consequence of the Covid-19 pandemic it has been difficult to determine the number of students who have had difficulty in the learning process due to online learning (UNESCO, 2020). Difficulties for this category include: lack of access to online learning and the (poor) quality of this service due to the socio-economic situation of their families. Other difficulties include being locked up at home and the lack of companionship with peers, increased isolation for these children, which also affected their emotional state and development. Another difficulty in this context has been the lack of teachers' computer skills to mentor these students. In OCDE countries, 40% of teachers lacked computer skills (OECD, 2019). According to a World Vision Report on the impact of Covid-19 on the well-being of children and their families in Albania, the biggest challenges produced by this new form of learning were related to problems with the Internet access, working-from-home parents that were divided between work and being present at home to help their children in the learning process, as well as difficulties in subjects such as music, sports or other subjects that require physical presence rather than online attendance. Moreover, children with difficulties or disabilities faced great challenges as they had to work individually and independently.

We all should continue to explore how to design more engaging and effective online learning environments. One way to do this is by integrating appropriate

pedagogical methods, enhancing system interaction and personalization and increasing students' engagement. During the lockdown, the transition from teaching on auditoriums to online was challenging. Despite the development in technological knowledge, its application and use in the teaching process along with the advantages brought a big change in the way of teaching as well as in the way of learning. Adapted teaching materials, software installation, new class schedules were some of the important and necessary steps for conducting online learning. In Albania, during the school closure period, the Ministry of Education, Sports and Youth and the Quality Assurance Agency in Pre-University Education conducted two surveys on online learning.

The first report, (MARS & ASCAP, 2020a), was conducted with 321,911 children, parents and teachers in public education institutions, from 1st to 12th grade. The report aimed to assess the involvement of actors in the learning process and the effectiveness of this process. According to the survey, the process was positive with a high percentage of participation from teachers and students and a constant communication among children, parents and teachers. According to this survey, the perception of parents and teachers regarding online learning effectiveness is almost the same, with slight differences (43.6% of parents and 37.8% of teachers). Similarly, the second survey (MARS & ASCAP, 2020b), was conducted with 219,590 participants, aimed as well to assess the effectiveness of the online learning process as well as the productivity of this process for students and teachers.

During the 2020 spring a study was conducted in 10 schools specialized on vocational education and training (VET) part of the project "Skills for Jobs" (S4J), supported by the Swiss Agency for Cooperation and Development. For the students and teachers of these VET schools the learning process, conducted through distance learning in the situation created by the schools' closure and domestic isolation, has been a satisfactory solution. However the study notes that the distance learning's effectiveness is related to the massive use of online platforms that has also been influenced by digital skills in teaching and learning. The quality of online learning has been affected by the lack of electronic equipment and constant Internet connection.

In Albania there are 15 public institutions of higher education and 25 non-public institutions with a total of 139,043 students (with reference to the academic year 2018-2019), most of whom are enrolled in public institutions (113,277 students that make up 81% of students).

The table below provides data on online learning in the 4 largest public higher education institutions in Albania (April 2020). As shown in the table, the

platforms used by various higher education institutions have most commonly been: Google classroom, Microsoft Teams, etc. The selection has been determined by the decisions of the higher education institutions themselves. Students' attendance has had a high percentage, with at least 80% of them attending online. These platforms have mainly been used to carry out lectures and exercises for which online learning has been more feasible while some of the laboratories and practices/ internships have been more difficult to conduct via online learning and these platforms. The materials provided to the students were: lectures & exercises in pdf, in ppt, etc., recorded videos of lectures, supporting materials, e-book, u-library, etc. The major difficulty for the staff has been teaching from home as the infrastructure is not appropriate for teaching, considering as well the problems of Internet access. For students, the major difficulty has been the lack of electronic equipment, lack of Internet access, and unfavorable home conditions.

	High Education Institutions			
	Tirana	**"A.M." Durrës**	**Polytechnic**	**Agricultural**
Students number	29.460	19.278	14.566	8.916
Platform	Based on the faculty decision			
	Google classroom (mostly), with institutional email; Microsoft teams			
Students that have attended online schooling (%)	90	90	86.5	80
Curricula/ Learning activities	Lectures, Seminars, Exercises & some Labs	Lectures & exercises	Lectures & exercises	Lectures, exercises & some Labs
Waiting to start	Same Labs Internships & Diplomas	Labs Internships & Diplomas	Labs Internships & Diplomas	Same Labs Internships & Diplomas
Difficulties faced: Employees	With exception of the first week dedicated to training, some instructions were prepared from the IT department Home conditions ***Challenges***: encouragement of critical thinking development			
Difficulties faced: Students	Internet &electronic equipment access & technical issues	Internet &electronic equipment access & technical issues	Home conditions	Internet &electronic equipment access & technical issues
Library and didactic downloaded materials	Lectures & supporting exercises pdf, ppt, etc., recorded lectures videos, supporting materials, e-book, u-library etc.			

Source: HEREs ALBANIA 2020

During the pandemic, online learning has been the main line of education but the opportunities and advantages of digital technologies go far beyond simply using it as a mean of managing an emergency situation. Digital technology supports people on what, where, when and how to learn. Technology enables

teachers and students to access materials content in a variety of formats at any time and in any place. The use of technology in the learning process, in addition to offering greater opportunities for a more open learning process, it also aims to bring students more independence and self-determination, make them more responsible for their own learning so that they acquire self-regulatory skills in relation to goal setting, being self-monitoring and more independent (Goode et al., 2007). Online learning is advantageous for those students who can study on their own and move forward without being hindered by others who may have poorer results. Moreover, it creates opportunities even for those students who are timid and reserved in the traditional classroom schooling while online learning improves self-confidence. (O'Donoghue, J. et al (2004).

Technology not only changes the teaching and learning modus but also strengthens the role of the teacher as co-creator and facilitator of the learning process (Huang, Liu, Tlili, Yang, Wang, et al. 2020), sharing the responsibility of teaching with the students by boosting their responsibility.

Data Analysis

Analysis of the data gathered from the students' questionnaire

To get a clearer picture of the application of online learning in both types of HEIs, public institutions and private ones, the questionnaire was distributed to various HEI in the country (approximately 58% in public universities and approximately 42% in private universities). In total we received 1502 responses from students of public and private HEI's. The questionnaire was distributed in different study levels, 80% in Bachelor level (second year and third year) and 20% at Master level (Chart 1). Descriptive statistics such as frequencies and means, tabular and graphical presentation were used to describe the data from students questionaires

Based on the results, the majority of the students, about 78%, live in urban areas and about 22% of them in rural areas (Chart 2). It was also observed that about 37% of students live in the municipality of Tirana and the rest of them in other municipalities in the country. Approximately 59% of the students live in families with an employed household head, 27% of students live in families with an unemployed household head and nearly 3% of them live in families with a disabled household head (Table 1). The average age of the students is 20 years old (standard deviation 1.24).

Table 1: Socio-demographic characteristics and geographical distribution of students

Characteristic	Number	(as %)	Characteristic	Number	(as %)
Gender			**University**		
Female	1074	(71.5%)	University of Elbasan	210	(14%)
Male	428	(28.5%)	University of Korça	201	(13.4)
Zona			University of Tirana	262	(17.4%)
Urbane	1170	(77.9%)	University of Vlora	207	(13.8%)
Rural	332	(22.1%)	Luarasi University	213	(14.2%)
			Mediterranean University	203	(13.5%)
			Metropolitan University	206	(13.7%)
Municipality			**Employment status of the household**		
Tirana Municipality	562	(37.4%)			
Other Municipalities	940	(62.6%)	Employed	887	(59.1%)
Study Level			Unemployed	408	(27.2%)
Master, first year	282	(18.8%)	Invalid	38	(2.5%)
Bachelor, second year	765	(50.9%)	Retired	40	(2.7)
Bachelor, third year	455	(30.3%)	Other	129	(8.9%)

Chart 1: Distribution of the students according to the study level	Chart 2: Distribution of the students according to living area

Chart 1 (pie): Bachelor third year, 30.3%; Master first year, 18.8%; Bachelor second year, 50.9%

Chart 2 (pie): Rural 22%; Urban 78%
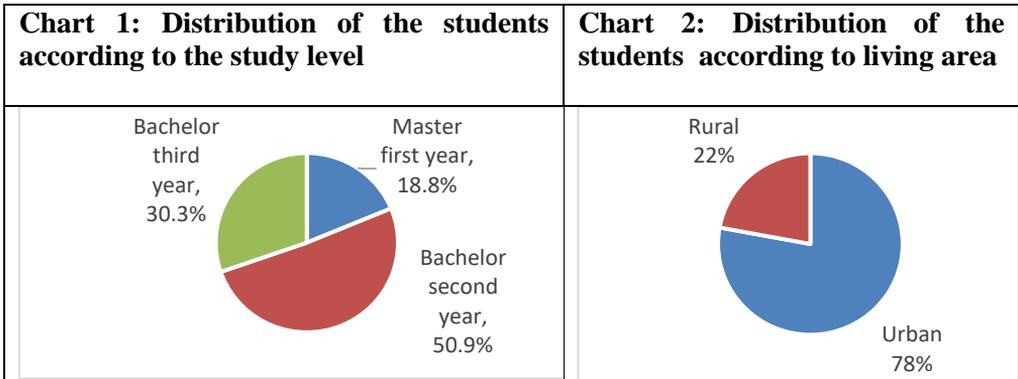
There are various devices, such as desktops, laptops, tablets or even smart phones, that are used to attend online classes . The majority of students stated that they have used only one device to attend online classes and approximately 15% of them have used more than one device to attend online classes. Among students who have used different devices to attend online classes most of them, 85%, have used two different devices. The devices most used were: laptops, used by 32% of the students, and 5-6 inches smart phones, used by 26% of the students. Only 3.2% of students have used tablets to attend online classes (Chart 3). Since this question was a multiple choice question the percentages are calculated on the basis of the total number of answers received.

Chart 3: Equipment used to attend online classes

Chart 3 (bar): Less than 5 inch smart phone 18.5%; 5 - 6 inches smart phone 26.3%; Bigger than 6 inch smart phone 13.3%; Laptop 32.0%; Desktop computer 6.7%; Tablet 3.2%
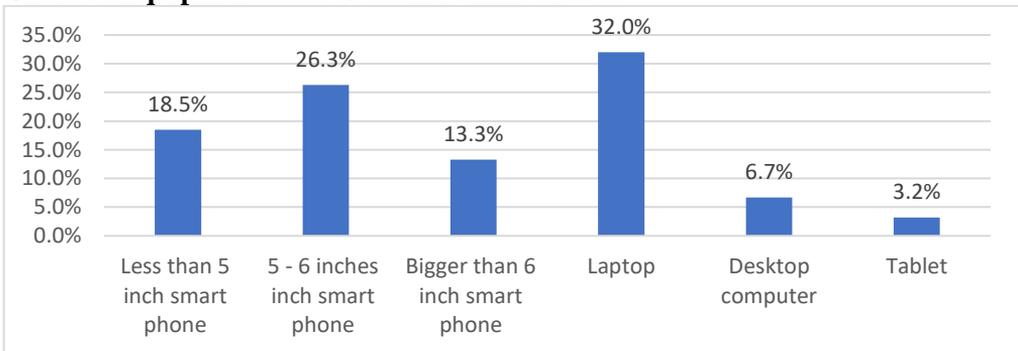
Albrahim (2020) highlight six categories of skills and competencies for people who teach online, and one of them is the technological ones. For an effective online learning process, both teachers and students must have the necessary skills not only on using computer equipment, but also on various platforms for online classes etc.

One of the question for students was about their skills on technology, IT. Approximately 3% of the students stated that they have "Very poor" skills, 5.8% have "Poor" skills, 23% s have "Moderate" skills and 53% of them have "Good" skill, while the rest stated that they have "Very good" knowledge in technology (Chart 4).

About the internet access, the question was : "Did you have internet access for lectures, seminars and independent study?", the answers were : About 24% of them have "Very frequent" level of acces , 29% have "Frequent" internet access, 33% of students have "Average" level of access, 6% have "Very rarely" and 8% have "Rare" level of access to internet (Chart 5).

Chart 4: Information Technology skills
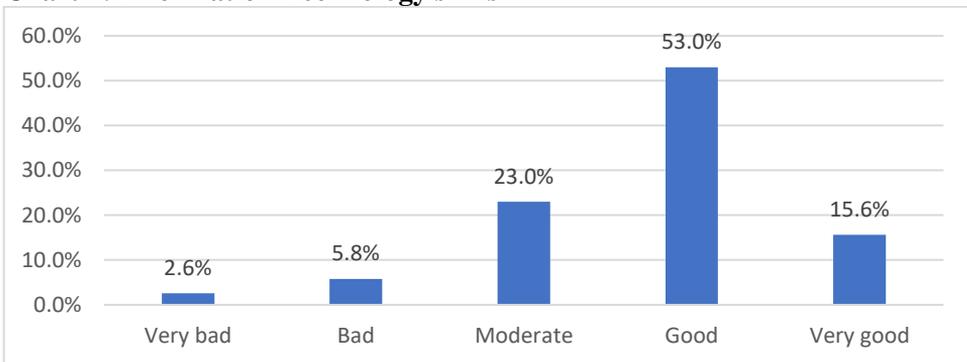
Chart 5: Internet access for lectures, seminars and independent study
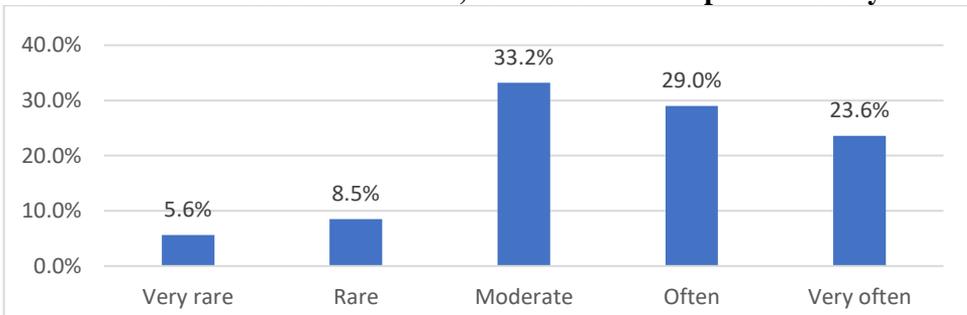
Approximately 67% of the students have WiFi and cable internet at home, while the rest have used internet packages provided from the telephone mobile companies. Regarding the average cost of the internet, approximately 87.2% of students declared that the costs of internet ranged from 1,000 to 3,000 Lekë and for 40% of them the average cost ranged from 1,500 to 2,000 Lekë (Chart 6).

Chart 6: How much is your average monthly internet cost to attend online classes?

Category	Percentage
Above 3,000 ALL	5.7%
2,000 up to 3,000 ALL	21.7%
1,500 up to 2,000 ALL	40.1%
1,000 up to 1,500 ALL	25.4%
Up to 1,000 ALL	7.1%
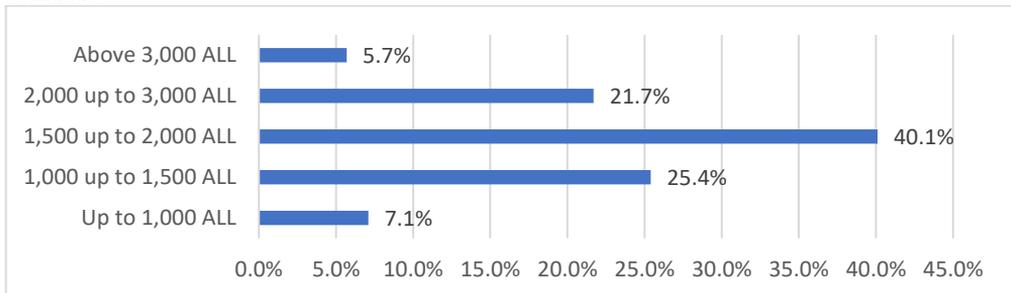
Students were asked about the opportunities of having an appropriate space in their houses to attend the online learning process. Approximately 48% of the students claimed that "In a few cases" they have a quiet space for learning process, about 26% of them said "Yes" on having a quiet space and about 22% said that "In most cases" they have a quite space to attend online classes Graph 7).

Chart 7: Do you have a quiet space in your house to learn and attend online classes?
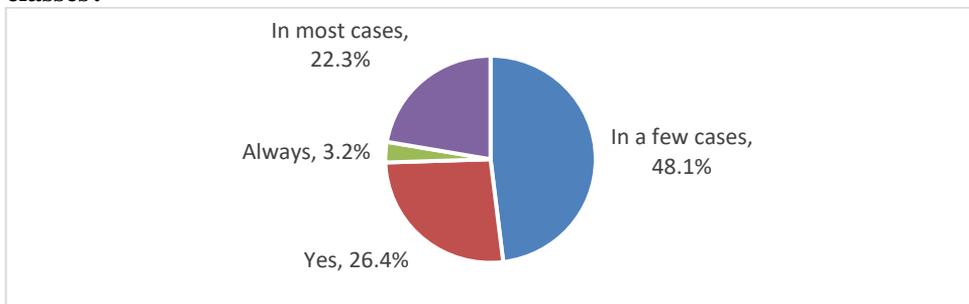
The majority of students (76%) stated that they did not work during the period of online learning process (approximately 16% of them stated that they have worked before the Covid-19 situation but not now and 60% of them have not worked before and did not work even during this period). There were students who haven't work before the Covid-19 situation but they have start to work during it, about 14% of students belong to this category. 10% of students stated that they worked from home (Chart 8).

Chart 8: Work engagement
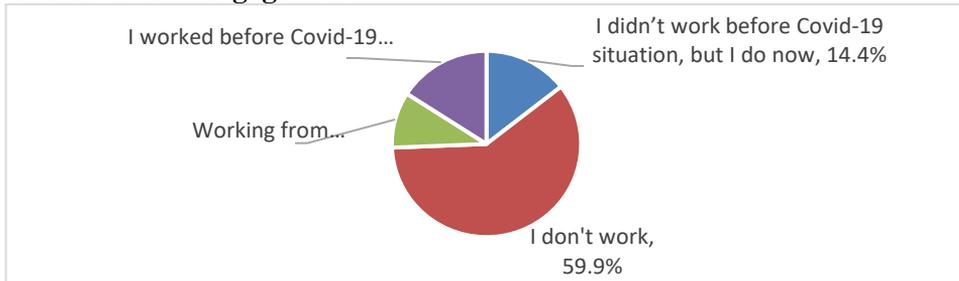
Various authors (Hrastinski (2008); Littlefield (2018)) have defined the synchronous and asynchronous methods of online learning process. The asynchronous methods relies on the use of emails, online forums, audio/ video recordings and other discussion ways where it is not necessairy for individuals to be online in the same time. Littlefield (2018) defines synchronous learning as a method where individuals are not in the same place but they are online at the same time through video conferencing or chat groups, web seminars, etc.
Hrastinski (2008) in his study showed that despite the advantages and disadvantages of these both learning methods, in the end they are complementary of each other. For all higher education institutions in Albania, moving to distance learning has been an opportunity to expand flexible learning modalities, as a new way of working.
 Based on the answers of students, the most used tools for online lectures and seminars were live video conferencing, followed by other tools such as independent reading of the recommended book chapter, independent reading of power point presentation, video lectures - power point presentation with audio of the lecturer or video lectures - power point presentation with audio and video of the lecturer. Less used teaching methods were case studies, and guest lectures (Graph 9). (This was also a multiple choice question, as such the percentages are calculated on the basis of the total number of answers received.)

Chart 9: Most used online learning tools
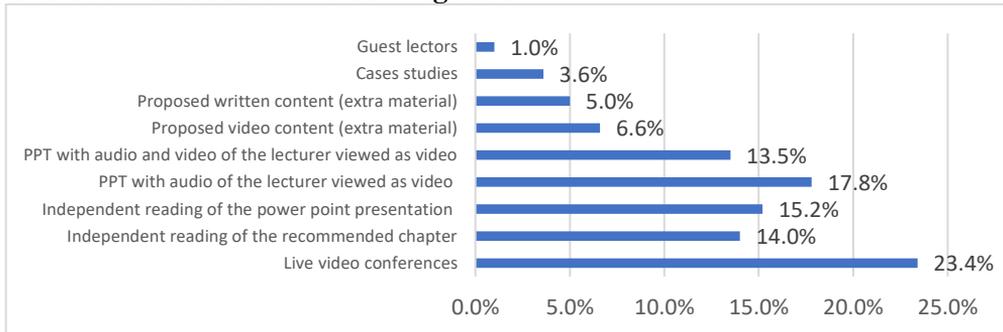
Regarding the question whether was used the same online learning approach in all the courses, 60% of the students answered that the same online learning approach was used for all courses (Chart 10).

Chart 10: It was the same online learning approach for all courses?
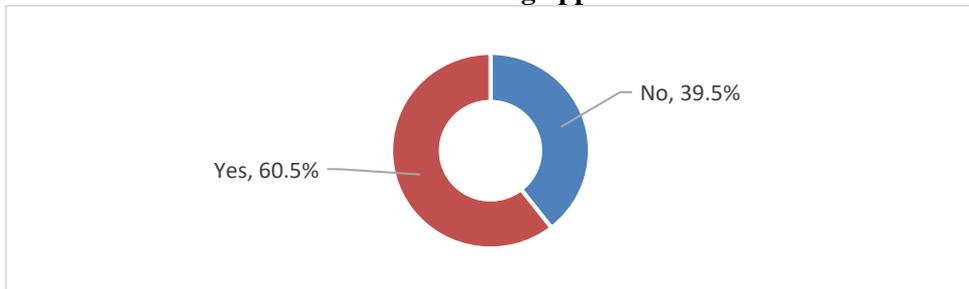
Students were asked about the effectiveness of methods used for the online classes. Approximately one in three students rated as "Moderately effective" almost all the various methods used in online learning process. Based on the opinion of students, the methods: "independent reading of the recommended chapter" and "independent reading of the power point presentation", result the least effective methods where, about 30% of students consider them as "Less effective" and about 25% of them as "Not at all effective". The "live video conferencing" method was "Moderately effective", for 36 % of students, "Highly effective", for 15 % of them and for about 8% was "Extremely effective". The method "Video lectures = power point presentation with audio of the lecturer viewed as video" was evaluated as "Moderately effective" by approximately 34% of students, "Highly effective" by approximately 17% of students and "Extremely effective" by approximately 9% of the students. The "Video lectures = power point presentation with audio and video of the lecturer

viewed as video" method was rated as "Moderately effective" by 34% of the students and "Highly effective" by approximately 18% of the students and "extremely effective" by approximately 11% of the students.

Regarding other methods used during online learning, it turns out that the percentage of students who have judged them as "Moderately effective" varies from 28% to 33%, "Highly effective" and "Extremely effective" varies from 12% to 20% of students. The methods "Proposed video material (additional material)", "Reading proposed additional written materials", "Guest lecturer" and "Case studies" are considered as the least effective methods. For these methods a high percentage of students have evaluated them as "Not at all effective" and "Less effective" compared to the other methods (Table 2).

Table 2: How effective do you think are the following methods for online classes

	Not at all effective	Less effective	Moderately effective	Highly effective	Extremely effective	Average
Independent reading of the recommended chapter	25.4	31.7	30.5	7.9	4.5	2.34
Guest lecturer	28.6	26	30.5	9.8	5.1	2.37
Independent reading of the power point presentation	24.2	33.6	30	7.1	5.1	2.35
Reading proposed additional written materials	21	29.3	32.1	11.7	5.9	2.52
Cases studies	22.6	28.1	28.6	13.4	7.3	2.55
Proposed video material (additional material)	18.6	28.5	33.5	12.7	6.7	2.6
Live video conferences	15.8	24.8	36.2	15	8.2	2.75
video lectures = power point presentation with audio of the lecturer viewed as video	16.2	23.1	34.3	17.2	9.2	2.79
video lectures = power point presentation with audio and video	15.1	22.1	33.7	18.2	10.9	2.87

There were used different methods of teaching for online classes, such as: live video conferences, independent reading of the recommended book chapter, independent reading of the power point presentation, video lectures - power point presentation with audio of the lecturer viewed as video, video lectures - power point presentation with audio and video of the lecturer viewed as video, following the proposed video (additional) materials, reading the proposed additional written materials, guest lecturer, case studies and other methods.

The students could choose what were the four most used methods for online learning process. According to their answers, the four most used methods were: the direct one through live video conferences, the video lectures with audio and video of the lecturer viewed as video, with audio of the lecturer followed by video that is followed in video form, the independent reading of the power point presentation and the independent reading of the recommended book chapter. The

guest lecturers or the case studies were among the four least used methods. This was a multiple choise question , as such the percentages are calculated on the basis of the total number of answers received (Chart 11).

Chart 11: The most applied methods for online learning (choose four of them)
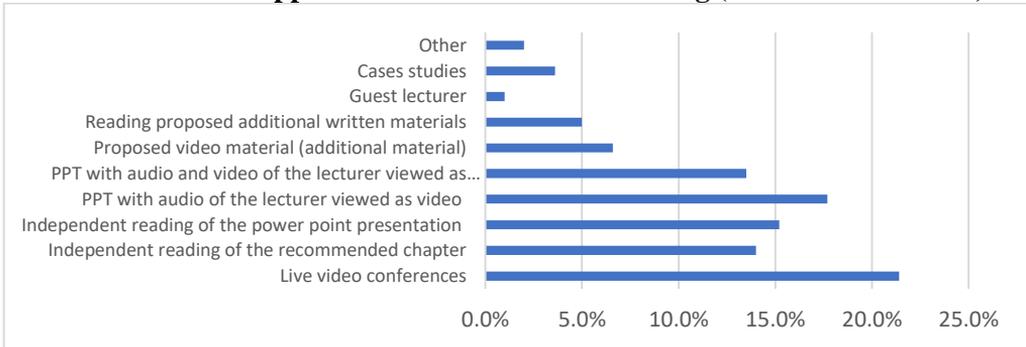
For the question "What did you do during the live lectures?", approximately 36 % of students stated that they have listened and watched to the lecture very attentively, approximately 27% stated that they have participated by intervening live with audio or video, and 17% were involved in making various comments, approximately 20% of students stated that they have listened to the lecture but in the meantime they were involved in something else as well or were logged in just to comply with the requirement of attendance and have listened to the lecture from time to time (Chart 12).

Chart 12: What did you do during the live lectures
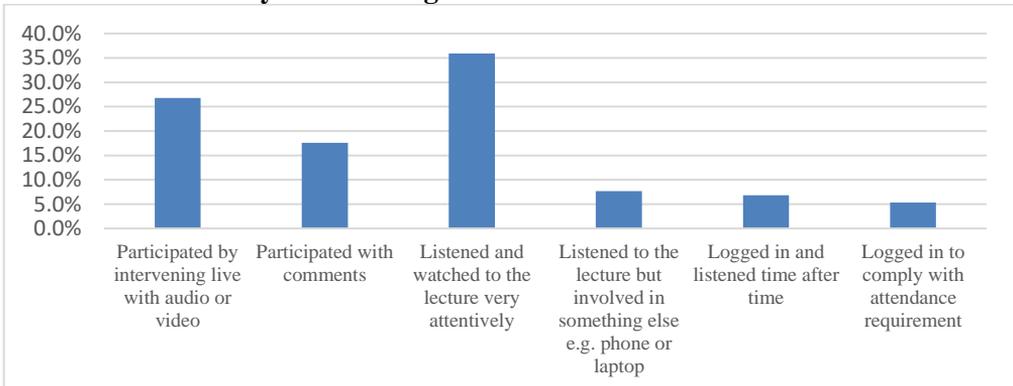
The online learning process has not only its advantages but also its disavantages and difficulties. The disadvantages are more related to the technology and its costs , lack or limited teacher-student interaction, difficulty

to apply this approach in certain fields of studies where practice is very necessary etc.

Students were asked about some of the limitations / problems that in their opinion obstacle the attendance of online classes. Students have more than one choice for this question. (The percentages are calculated with reference to the total number of responses received). The principals limitations for students are: the difficulty to concentrate during online classes (the greatest frequency of answers, 824 responses), the poor internet connection (796 responses), the internet cost (641 responses), the inadequate online classes time schedule (442 responses). Students describe the "Difficulties in using the online platform, with the less impact on attending online classes , with only 157 responses. There were also students who didn't have difficulty at all to attend online classes (168 students) (Chart 13).

Chart 13: Limitations that hindered full online classes attendance (100%)
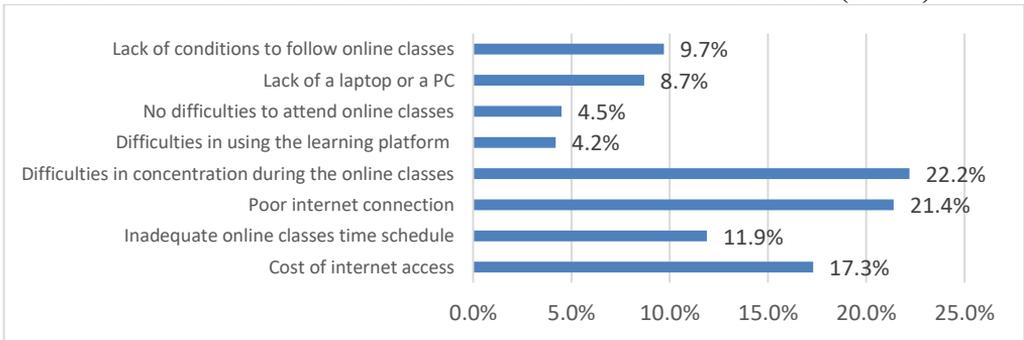
About the difficulties faced during online classes, students were wasked (in likert scale "Not at all difficult", "Little difficult", "Moderately difficult", "Very difficult" and "Extremely difficult") for the : Technology (computers, platforms, internet, etc.), interactive communication with the lecturer, lack of digital learning materials, lack of digital knowledge for them and lecturers, the management of the process by the faculty. For most of the difficulties the answer was "moderately difficult" and only for the alternative "lack of digital skills of students" the answer of student was "Not at all important", meaning that the digital knowledge did not pose a difficulty in the online learning process for studnets.

50% of students have no difficulty with technology or little problem with it. For 37 % of students the interactive communication with the lecturer during online classes was not difficult at all or a little, while the lack of digital teaching materials was not at all or a little difficult for approximately 42% of

students. Students have good level of digital knowledge as almost 60% of them have little or no difficulty at all during online classes, even the lecturers have good digital knowledge as the majority of students, approximately 53% , declare to have not at all or little difficulties with the knowledge of their pedagogues. The management of time seems to be more difficult for students, as about 24% of the students state that they have many or extremely difficulties related to this issue. Less than 22 % of students have declared to be very difficult or extremely very difficult for the others problems such as: the technology (computers, platforms, internet, etc.), the interactive communication with lecturer, the lack of digital teaching materials, low level of digital skills for students and professors, and low guidance/ support from the university (Table 3).

Table 3: Level of difficulties during online learning

	Not at all	Little	Moderate	Very much	Extremely much	Average
Low level of digital knowledge on your part	33.9	25.6	28.4	8.3	3.9	2.23
Low level of digital knowledge of lecturers	24.6	29	32.7	9.8	3.9	2.4
Technology (computers, platforms, internet, etc.)	24.4	25	28.8	14	7.8	2.55
Lack of university guidance / support	19.6	23.3	35.5	13.2	8.4	2.67
Lack of digitized learning materials	19.6	23.3	35.5	13.2	8.4	2.76
Interactive communication with the lecturer	12.7	24.4	39.7	15.7	7.5	2.8
Time management and organization	14.1	22.8	38.6	15.9	8.6	2.82

During the online learning period, 29% of the students stated that they have attended the seminars with live video conferencing, approximately 28% of the students stated that they have attended the seminars by sending prepared assignments in written form and 21% by answering questions on online platforms, for a small proportion of students, about 9% of them the teacher has used case study during the seminars and for 13% of students the mini quizzes were applied. The distribution of students for different alternatives used during the seminars is presented in the graph 14 .

Chart 14: The approach applied in seminars during online learning (percentage of total answers)
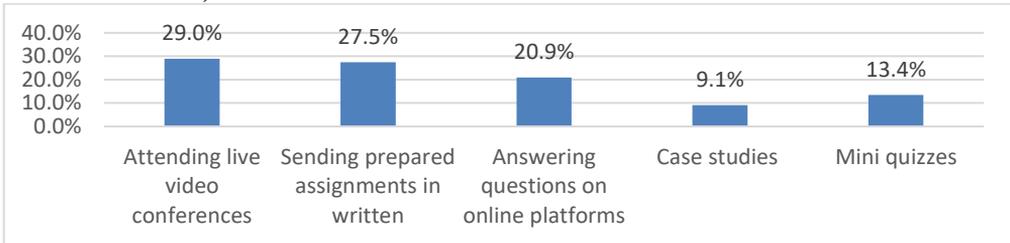
With the closure of schools due to pandemia the online learning process was the only an alternative for teaching. Based on their judgment, students assessed how relevant was each of the following statements related to various aspects of online learning, such as: gaining knowledge on the subject, encouraging reflection on teaching aspects, interacting with the lecturer, encouraging critical thinking, fostering creativity, free expression of their opinions, time spent learning, volume of learning, choosing time to fulfill obligations for seminars, etc. Approximately 44% of the students state that the declaration "During online learning students gained knowledge only on the respective subject", was "Moderately relevant", about 25% that it was "Slightly relevant", about 10% that it was "Not relevant", 14% that is was "Very relevant" and for the rest was "Extremely relevant".

Students have the same opinion about the Encouraging reflection on the aspects of teaching on online learning process" , as well for fostering creativity", as respectively 34% and 32% of them evaluate them on "Moderate relevance", approximately 29% of students think that both these statements are "Little relevant" and about 20% of them think as "Not at all relevant". The students think they are "moderately relevant" for the majority of statements and only for the statements: "the encouragement of the work in group" and the use of these practices even when they return to university", they think "Not at all relevant" (respectively 31% and 30% of students), On the other hand, the statements "the use of these practices even when returning to the university" and their difficulties to self-learning-arrangement", have the highest percentage for the option "Extremely highly relevant" (respectively approximately 12% and 11%) (Table 4).

Table 4: How relevant are the following statements regarding online learning

	Not at all	Little	Moderate	Very much	Extremely much	Average
I learn only knowledge of the subject	10	24.8	43.6	14.1	7.5	2.84
Encourages me to reflect on the aspects I am learning	19	30.6	34.1	10.4	5.9	2.54
Encourages critical thinking	20.8	29.5	32.4	11.4	5.9	2.52
Encourages creativity	24.9	28.9	29.4	9.5	7.3	2.45
Encourages group work	30.7	26.6	27.1	10.2	5.4	2.33
Interaction with the lecturer is intensive	21.2	28.6	33.7	10.1	6.4	2.52
I can freely express my opinions	18.2	28.1	30.7	14.2	8.8	2.67
I spend less than 2 hours learning	30.2	23.8	31.3	9.3	5.5	2.36
Online learning platforms help organize materials, tasks and schedules	25.6	28.4	28.7	10.6	6.7	2.45
I find it difficult the self-learning-arrangements	19	28.8	28.6	12.8	10.8	2.68
I choose when to fulfill obligations workshop	25.2	28.2	30.1	10.1	6.4	2.44
The volume is affordable	22.5	24.6	31.6	13.4	7.9	2.6
I would like to continue some of these practices when we return to university	30.2	23.6	24.6	10.1	11.5	2.49

Comparing the effectiveness of online learning process with that of traditional teaching, 34% of the students think that online teaching is "Not at all effective", about 29% of students think is "Little effective" and the same percentage of students think is "Moderately effective" and only 8% of them think that online learning is "Very effective" or "Extremely effective" (Graph15).

Chart 15: How effective is online learning compared to the teaching conducted in clasrooms
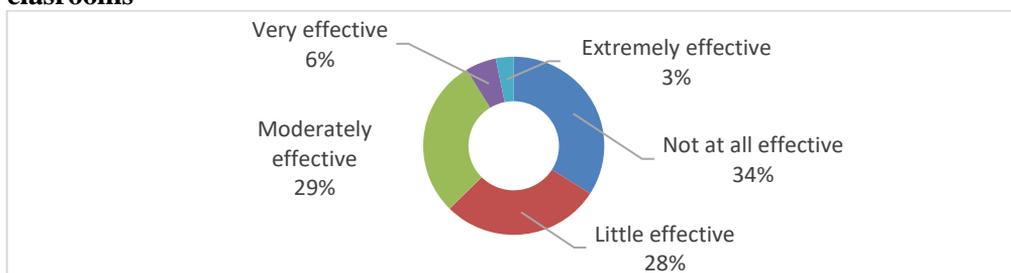
One of the question for students is what they would like to change in online classes related to: physical infrastructure, digital materials, students' capacities and pedagogues' capacities. Most of them think that changes should be made in physical infrastructure, digital materials and students' capacities but not for pedagogues' capacities (graph 16).

Chart 16: What would you like to change in online learning?
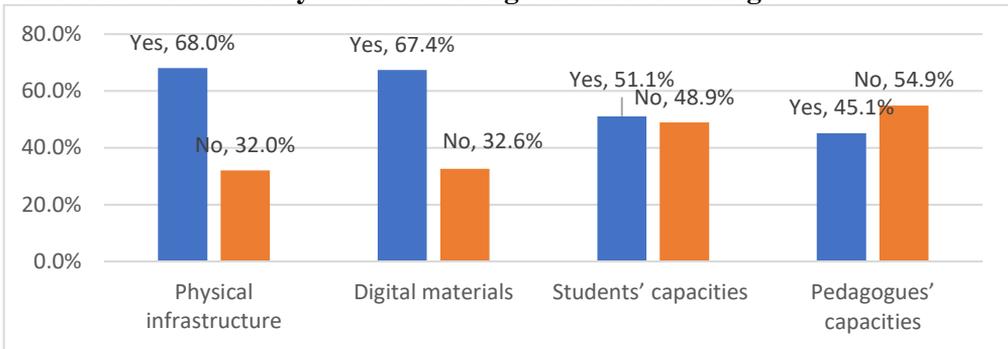
When students were asked how satisfied they were with the combination of seminars and lectures, approximately 37% of students were "Moderately satisfied" and approximately 23% were "Very little satisfied", about 26% "Slightly satisfied", the rest of the students were "Completely satisfied" and "Very satisfied" (Graph 17).

Chart 17: How satisfied are you with the combination of seminars with lectures during online learning
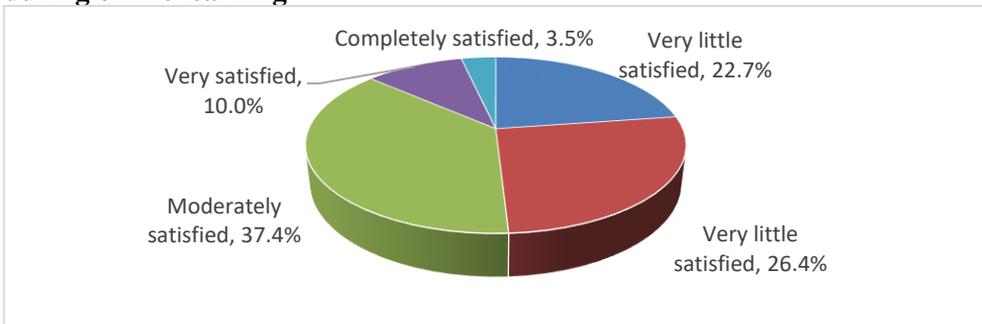
About the encouragement of students in discussions and critical thinking, the compatibility between the thesis of exam and the materials given during online classes, and the creation by the lecturers of a suitable and supportive climate for students in developing new ideas, most of students think they were "Moderately satisfied", with percentages ranging from 37% to 40%. About the

encouragement of students in discussions and critical thinking, approximately 15% were "Very little satisfied" about 20% were "Little satisfied", about 16% where "Very satisfied" and about 8% were "Completely satisfied" . For the compatibility between the thesis of exam and the materials given during online classes, 13% of students were "Very little" satisfied, 15% "Little" satisfied, 18% were "Very satisfied" and 16% were "Completely" satisfied. On the topic of climate that educators created to support students in developing new ideas, about 14% of the students were "Very little" satisfied, 17% were "Little" dissatisfied, but roughly the same percentage (17%) were "Very satisfied", 12% were "Completely satisfied" (graphs 18, 19, 20).

Chart 18: Does the pedagogues encourage discussion and critical thinking during online learning?
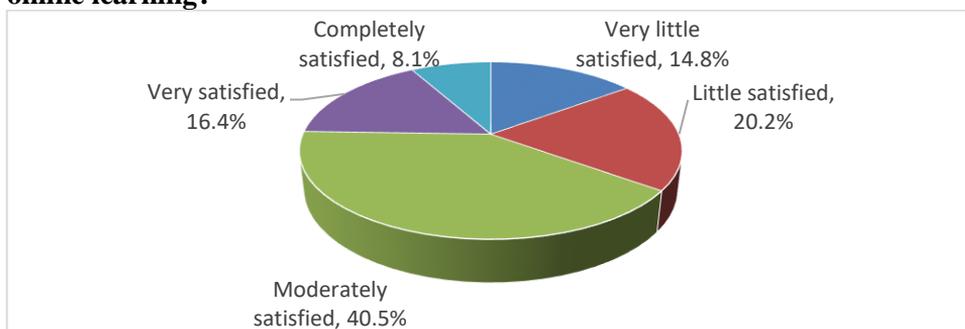
Chart 19: Was it the content of the theses in the exams consistent with the online learning?
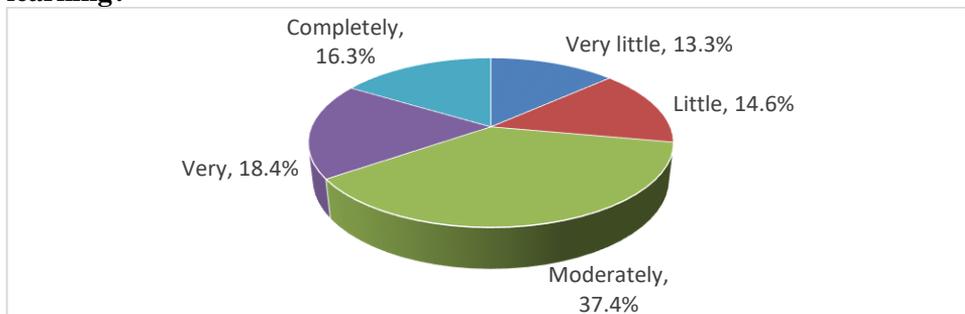
Chart 20: Did the educators create the right climate and support for students in developing new ideas?

Completely, 11.5%
Very little, 13.9%
Very, 16.9%
Little, 17.2%
Moderately, 40.5%
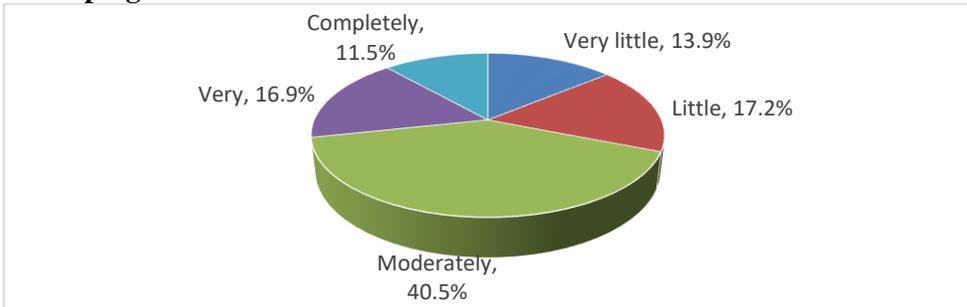
Some of the advantages of developing online learning are the ability to access materials at any time, the ability to stay at home without having to go out, the comfort of being home, the ability to record a lesson, etc. In addition to the advantages, online learning also has its disadvantages, mainly related to technical problems, reduced student-lecturer communication, social isolation, etc. For each of the advantages: the ability to access materials at any time, the ability to stay home without having to go out, the comfort and ability to record a lesson, most of the students from 29% to 36%, think "Moderately", Regarding the possibility of accessing materials at any time, 14% of the students where "Completely" satisfied, 17% "Highly" satisfied, about 19% "Little" and about 16% "Not at all" satisfied with this opportunity.

Regarding the possibility of staying at home, approximately 16% of students rated this opportunity provided from online learning as "Completely" satisfactory, about 23% "Very much", 29% "Little" and "Not at all" satisfactory. Related to classroom interactivity, in contrast to other advantages, a large proportion of students rated as "Not at all" and "Little" (respectively 27 and 25 percent of students), only 7% of them rated it "Very much" and approximately 6% of students rated it "Completely". The opportunity to record in course was rated as "Completely" by 14% of students, "Very much" and "Little" was rated each by 20% of students and "Not at all" by 15% of the students. The comfort created was rated as "Completely" by 13% of the students, "Very much" by approximately 15%, while 21% and 18% of the students expressed were expressed "Little" and "Not at all" (Table 5).

Table 5: Evaluation of online learning advantages

	Not at all	Little	Moderate	Very much	Completely	Average
Possibility to access materials at any time	6.5	18.5	34.1	17	13.8	2.93
Possibility for staying at home	15.0	16.8	29.1	23.2	15.9	3.1
Classroom interactivity	26.9	24.6	35.8	6.9	5.5	2.4
Possibility to record a lesson	15.4	19.7	31.2	19.8	13.9	2.97
Environmental comfort	18.2	20.5	33.5	14.6	13.2	2.84

Table 6: Evaluation of online learning disadvantages

	Not at all	Little	Moderate	Very much	Completely	Average
Reduces communication with the lecturer	10.2	18.2	26.4	25	20.2	3.27
Technical problems	7.4	13.4	26.8	30.2	22.2	3.47
Poor study conditions at home	16.3	18.4	30.9	17.8	16.6	2.99
Social isolation	8.6	13.7	25.4	22.5	29.8	3.51
Lack of self-discipline	15.0	19.7	30.9	18.2	16.2	3.01

Regarding the disadvantages of online learning, the students evaluated the technical problems and the social isolation as the main disadvantages. Regarding technical problems about 30% of the students evaluated it as "Very much". Social isolation have a similar evaluation with 30% of the students considering it "Completely". Regarding of the reduced communication with the lecturer a high percentage of students think it is "Very much" and "Completely" disadvantage, respectively 25% and 20 % of the students. Lack of self-discipline as well as poor conditions at home, have the same distribution of the percentage of those students who consider "Not at all" / "Little" versus those who think it as "Very much" / "Completely" disadvantage (Chart 25).

Analysis of the data of the pedagogues' questionnaire

In order to consider the problems, challenges and achievements during online teaching from the perspective of the pedagogues, it was developed a questionnaire for the pedagogues to have their opinios about such issues.

The questionnaire was distributed online to 245 pedagogues (35 for each faculty) based on random selection. In the end of the process, it was received feedback from 233 pedagogues with a 4.9% rejection rate (the rejection rate varies from 0.0% to 11.4% of the interviewed pedagogues based on the selected universities).

Chart 21. Distribution of interviewed pedagogues according to HEI
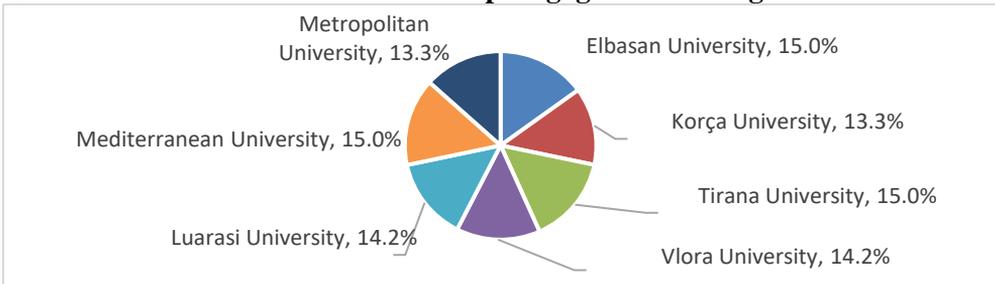
In the following charts it is presented the distribution of interviewed pedagogues by gender and by age groups. We notice a predominance of female pedagogues, 68.2% were women. We think that this structure is similar to the structure of pedagogues in universities and it is related to the fact that women dominate in the universities organizational structure.

Regarding the age, more than half of the pedagogues are from 31 to 50 years old and only 3.9% are more than 60 years old. We think that this structure is representative of the age structure in public and private HEIs in Albania.

Chart 22: Distribution by gender of interviewed pedagogues

Chart 23: Distribution by age groups of interviewed pedagogues
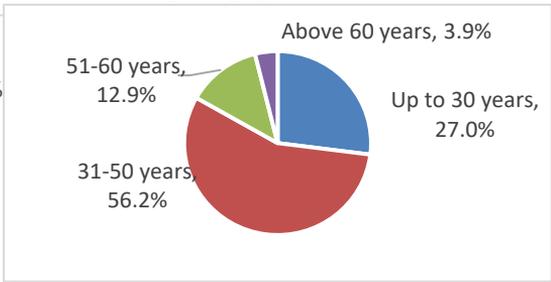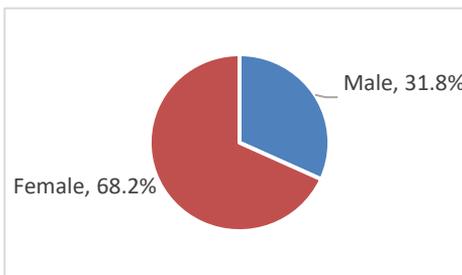
One of the questions of the questionnaire was "Where did the online teaching classes took place ?". The results are presented in the following graph. The data show that, influenced by the pandemic, most of the online teaching took place at home (86.7%) and in 9% of cases the teaching process took place in offices, while only in 4.3% of cases it took place in auditorium. We think online teaching process at home on one hand is beneficial with the comfort of being at home but on the other hand this may cause secondary problems compared to teaching in the working environments.

Chart 24: Distribution of interviewed pedagogues according to the location of online teaching
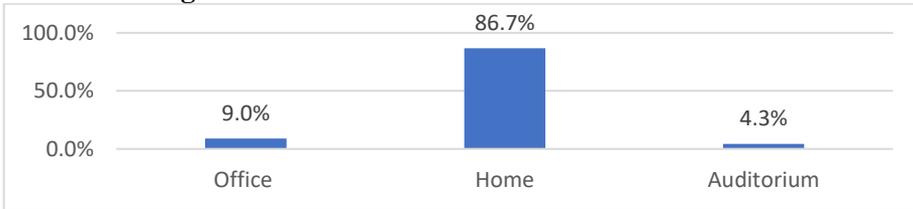
One of the question was : "How many hours per week did you teach online?". It is noticed a wide dispersion of answers but for most of the pedagogues it was 7-8 hours per week. The average hours for a lecturer is 7.7 hours per week, a normal teaching load (about 230 teaching hours in an academic year).

Chart 25: Distribution of interviewed pedagogues according to weekly teaching hours
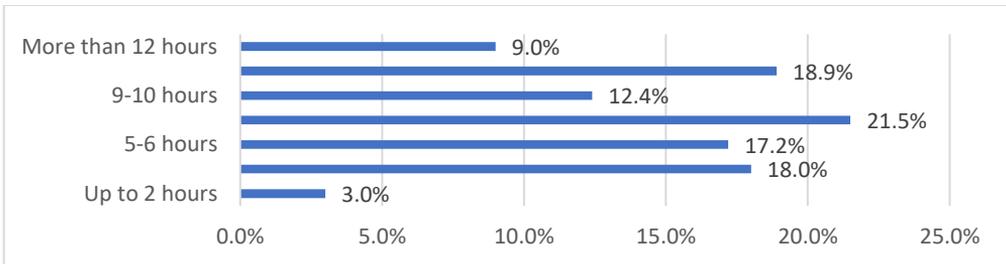
The responses on the question "Do you have previous online teaching experiences?" show that half of the pedagogues have not had previous experiences on online teaching and only 9% of them (6.9%+2.1%) have been familiar with this form of teaching.

Chart 26: Distribution of interviewed pedagogues according to the online teaching experience
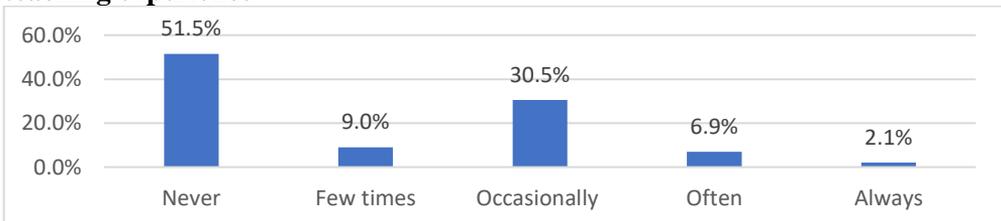
Analysing the data fo the question " how many courses did you have to adopt to the online methods?" we identified two problems. First, the difficulties faced by the pedagogues, whom in a short period of time had to prepare several

courses for online teaching (the average is 2.8 courses) and second, we must consider that we are dealing with violations of the legislation, as according to the law a pedagogue cannot teach more than 3 courses during the academic year. Assuming that all pedagogues did not have other courses in the first semester, which is unlikely to be true, then as descriptive statistics it turns out that at least 24% of the pedagogues are in violation of the law (pedagogues who have declared 4 and more courses in the second semester of the academic year 2019-2020).

Chart 27: Distribution of interviewed pedagogues according to the number of online courses
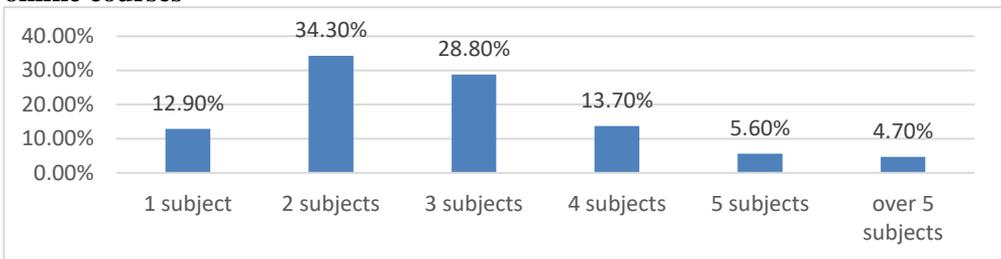
As expected, a more positive assessment was obtained regarding the question "How would you assess your prior knowledge related to online learning before the Covid -19 situation ?". We say this because it is considered a human tendency to present the degree of knowledge somewhat higher than the reality. However, the answers received correlate with the previous question, not only because 41.6% of the interviewed state that they have no knowledge or had very little knowledge, but also because only 20.2% stated that their knowledge was very good.

Chart 28: Distribution of interviewed pedagogues according to the previous knowledge of online teaching
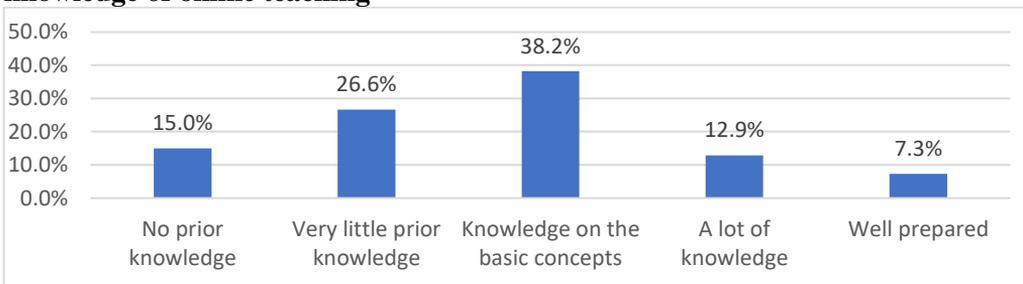
The strained situation of performing the teaching process online has simulated an increase in pedagogues' knowledge of the online teaching method. This can

be confirmed from the answers received regarding the question "In numerical terms, starting from your initial level, how much do you think your knowledge on online teaching has increased?". For this question, 63.5% of the interviewed pedagogues stated that their knowledge has increased by 50%. If we consider in this group the professors who in the previous question stated that they had good knowledge (as a slight increase of the knowledge level was expected from them) then we can emphasize that the experience gained is a very good basis to enhance the quality of online teaching that is currently taking place.

Chart 29: Distribution of interviewed pedagogues according to the degree of increased knowledge of online teaching
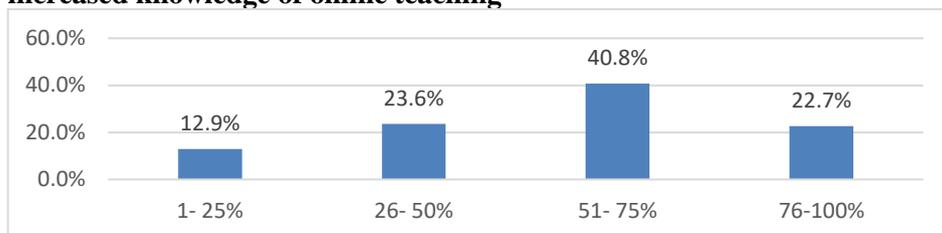
In the survey, to have information about the instructions provided by the universities regarding the online teaching process, we have the question "After the closure of schools, did you receive from the university the necessary instructions for online teaching?". The responses show that universities have worked relatively well in providing information regarding online learning platforms because the average level results at 3.2. In more general terms, the assessment made is slightly above the average level (coded with the number 3). Anyway, it must be emphasized that 27.1% of the respondents stated that the information was insufficient and if we add the 3.9% of respondents, who state that they have not received any information, then it goes to 31%.

Chart 30: Distribution of interviewed pedagogues according to the degree of the level of instructions received on online teaching
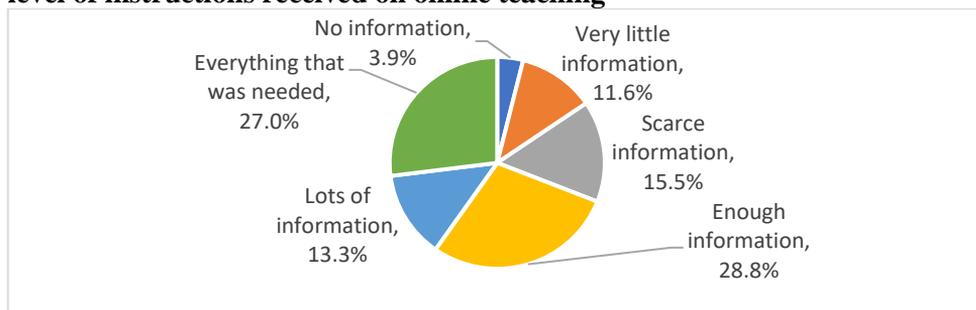
Following the previous question, we asked on "How difficult was for you to understand the instructions provided by the university fro online classes ?". From the answers received it is noticed that the level of difficulty is calculated at 2.5 (between "Easy" and "Moderate"). About 40% of respondents stated moderate difficulty on understating the instructions, while only 12% stated that instructions were "Difficult" and "Very difficult" to understand. It can be concluded that it has not been very difficult for the pedagogues to adapt to online teaching and the platforms to be used.

Chart 31: Distribution of interviewed pedagogues according to the degree of understanding instructions
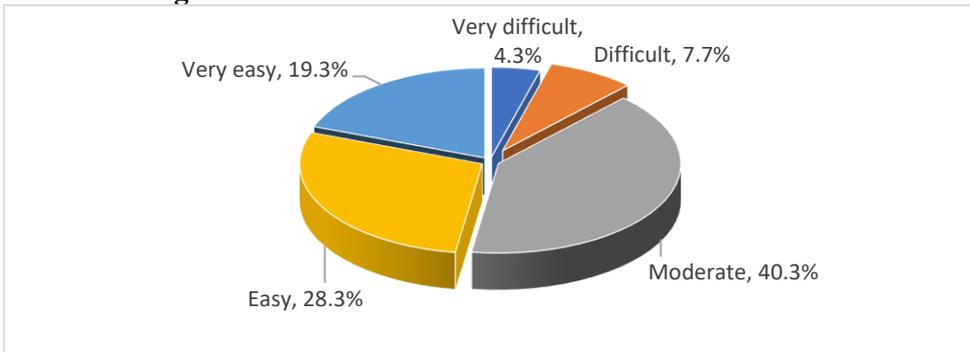
In line with the above questions, it was the question "How difficult has been for you to organize the online course?" From the answers received it is noticed that most of the pedagogues, 56.7% of them, declared moderate difficulties and only 21.7% of them have declared "Difficult" and "Very difficult". The average level of all the answers was 3.0 (i.e. average difficulty).

Chart 32: Distribution of interviewed pedagogues according to the degree of increased knowledge of online teaching
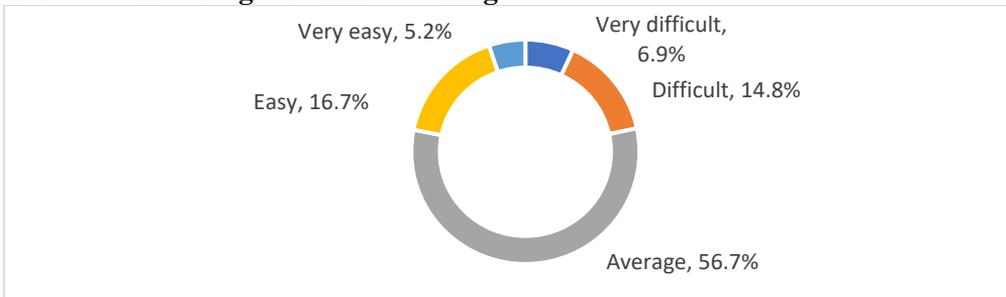
A section of questions is related with the way of gaining knowledge and the conception of the online process . For the question "How did you gain the

necessary knowledge on online teaching?" (this was a multiple choice question, thus there were received more than 233 answers), it is noticed that the main alternative chosen is self-taught efforts. Despite all the training and knowledge received, the self-taught application and the adaptation to the different situations created during classes has been the principal way of knowledges on the topic, followed by the alternative "Support from my colleagues, experts and tutorials".

Table 7: Distribution of interviewed pedagogues according to the knowledge gaining approach

No	Approach to knowledge gain	No	In %
1	Autodidact	146	41.6
2	Supported by my colleagues, experts and tutorials	115	32.8
3	Through trainings and courses offered from the university I'm employed	65	18.5
4	Through trainings and courses offered from various universities	25	7.1
Total		351	100.0

Searching for the reason why it was used a certain platform compared to one other it was the question "What was the main reason for choosing your method?" It is noticed that half of the pedagogues stated that they have used the platform suggested by the university. While, the other half of the pedagogues stated different reasons, as presented in the table below.

Table 8: Distribution of interviewed pedagogues according to the reason of selecting the online learning method

No	Reason of selection	No	In %
1	It is easier for students to use	63	27.0
2	It is the most used platform	31	13.3
3	This is the method I know best	25	10.7
4	This method has been decided by the faculty to use	114	48.9
Total		233	100.0

The question "Do you feel prepared for your online classes?" was introduced in the questionnaire with aim to obtain information on how much the experience already gained has qualified educators to continue with online learning. 15.5% of the pedagogues say they do not feel prepared, which shows that the experience gained is a good basis for developing online learning process more qualitatively in the future.

Table 9: Distribution of interviewed pedagogues according to the preparation for online learning

No	Do you feel prepared for online classes	No	In %
1	I do not feel prepared	13	5.6
2	I feel little or very little prepared	23	9.9
3	I feel sufficiently prepared	115	49.4
4	I feel well prepared	70	30.0
5	I feel Extremely well prepared	12	5.2
Total		233	100.0

The great need for digitalization is also noticed by the answers to the question "How important do you think is digitalization for teaching at university?" The

majority of respondents, 77.2% of them, are in favor of increasing the level of digitalization as they declared it an "Important" or "Very important" component, while only 4.3% stated that the digitalization process is of "Little or very little importance" or "It does not matter".

Table 10: Distribution of interviewed pedagogues according to the digitalization level of importance

No	Digitalization	No	In %
1	It does not matter	3	1.3
2	Little or very little importance	7	3.0
3	Somewhat important	43	18.5
4	Important	97	41.6
5	Very important	83	35.6
Total		233	100.0

To the question "what way of teaching do you feel more comfortable with?" respondents naturally are in favor of teaching in auditorium (face to face with students) as the best method (60.5%). But also, a considerable part of the respondents (27.5%), would like the application of both methods, the hybrid method. This shows that universities need to take actions over time and apply the online learning alternative at different levels and for different reasons.

Table 11: Distribution of interviewed pedagogues according to the most comfortable teaching method

No	Most comfortable teaching method	No	In %
1	Teaching in auditorium	141	60.5
2	Teaching online	5	2.1
3	Hybrid method, combination of auditorium and online teaching	64	27.5
4	It does not matter	23	9.9
Total		233	100.0

The answers to the question "In general, how would you rate the experience of adapting teaching in the auditorium with the online teaching ?" show that a combined teaching approach, both in the auditorium and online, is a method preferred by many pedagogues (43.3%). Still, many respondents (42.1%) answered that they are neutral and this answer is somewhat difficult to interpret. Thinking positively, it can be interpreted as an experience which can be used in the future as well.

Table 12: Distribution of interviewed pedagogues according to the online teaching experience

No	Online experience	No	In %
1	Negative	34	14.6
2	Neither positive nor negative	98	42.1
3	Positive	90	38.6
4	Very positive	11	4.7
Total		233	100.0

Of great interest in the questionnaire it is the information received from the section of questions presented in the following table. The nine questions of the section are ranked based on the average level of answers received by coding

the alternatives based on the Likert scale (1 = Strongly disagree, 2 = Slightly disagree, 3 = Average, 4 = Agree and 5 = Strongly agree). From the answers received it is noticed that switching from traditional teaching process to online one was not an easy process because the answers tend to be to the alternative "Slightly disagree" followed by the level of answers for the flexibility of online learning compared to the traditional one, where the answers are almost at the same level (between "Slightly disagree" and "Average") and in the same range are the answers received for the active involvement of students in online learning. On the other hand, the pedagogues have rated as "Average" the ability to supervise the students and the possibility to evaluate students' performance during the online classes. Almost in the same level it is evaluated the level of students' involvement during the online classes as well.

The most positive assessment (with a tendency to "Agree") is provided from the answers to the questions related to the reliability of the technology employed in online learning and related to the communication means used during the online learning process.

The pedagogues have naturally lacked the direct contact with students (one of the drawbacks of online learning) where only 9.4% of them answered that they did not have a problem with the lack of direct contact with students.

For the question "What surprised you more during the online teaching process?" the answers show a wide range of options. Pedagogues where mostly surprised by the possibility to innovate and the ability to adapt. These where followed by accessibility, autonomy, flexibility and the ilarity of tools that can be used during online learning. As expected, the lowest ranked options were the facility and the utility of online teaching , because these are the most problematic question of online teaching.

To the question "Do you think you will use online teaching even after returning to the auditorium?" almost 2/3 of the interviewed pedagogues responded positively, thus indicating that this was a valuable experience and that it will be used as an alternative teaching method even in normal teaching conditions. Pedagogues have had a lot to learn from the online teaching experience and from the combination with the traditional classroom teaching method.

Table 13: Distribution of interviewed pedagogues according to their opinion on the following topics:

No	Statement	Strongly disagree	Slightly disagree	Average	Agree	Strongly agree	Average assessment
1	The full transfer of the tutorial process completely online was smooth	25.3	21.9	33	14.6	5.2	2.5
2	The flexibility offered by online teaching is higher than the traditional one	21.9	32.2	19.7	20.6	5.6	2.6
3	My students during online sessions are actively engaged	9.9	24.9	43.7	17.2	4.3	2.8
4	I have no problem checking out my students while teaching online	8.6	26.6	30.5	26.6	7.7	3.0
5	I am able to assure a better feedback from my students regarding their performance during online learning	7.3	22.7	38.7	22.7	8.6	3.0
6	My students are very active in communicating with me regarding subject content topics	5.6	21.5	40.7	27	5.2	3.1
7	The technology I use in teaching online is reliable	6.9	14.6	27.9	37.3	13.3	3.4
8	I am satisfied with the means of communication used during online teaching (e.g. class rooms, etc.)	4.3	13.3	30.9	36.5	15	3.5
9	I miss the direct contact of traditional teaching	3	6.4	25.8	24	40.8	3.9

Table 14: Distribution of interviewed pedagogues according to the question "What surprised you the most while teaching online?"

No	What has surprised you?	No	In %
1	Flexibility	29	12.4
2	Numerous tools that could be used	27	11.6
3	Accessibility (platforms, content, sources)	31	13.3
4	Innovation (e.g. freedom to experiment with the teaching practices)	45	19.3
5	Adaptation (ability to personalize teaching for students)	43	18.5
6	Autonomy, motivation, self-regulation among students	29	12.4
7	Ease of use	15	6.4
8	Usefulness	14	6.0
Total		233	100.0

Table 15: Distribution of interviewed pedagogues according to the use in continuity of online teaching

No	Should online teaching continue?	No	In %
1	Yes	146	62.7
2	No	87	37.3
Total		233	100.0

The answers to the question "How difficult has been for you to organize the courses online?" show that most of the interviewed pedagogues have experienced moderate difficulties and there is almost an equal percentage of

those who claim that the difficulties have been "Great" and "Very great", 21.5%, and for those who claim that is has been "Easy" and "Very easy", 21.9%.The average is 3 a moderate level of difficulty.

Chart 33: Distribution of interviewed pedagogues according to the degree of difficulty in organizing online teaching
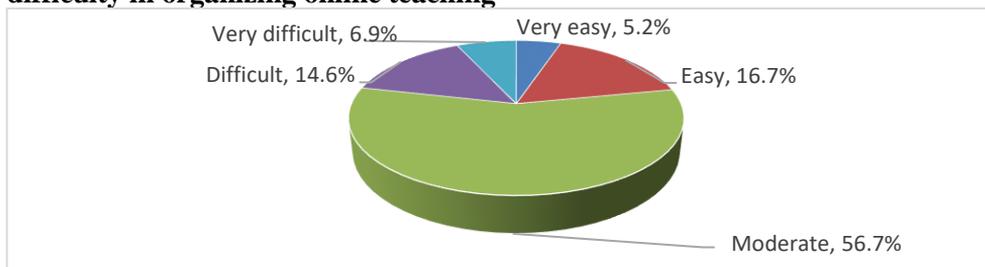
When asked "What do you think was the reason / reasons that brought difficulties for you?" respondents listed the difficulties such as : lack of time (online learning started immediately without preparatory time), lack of tools and technological resources, lack of knowledge. The list continued with other less significant difficulties.

Table 16: Distribution of interviewed pedagogues according to the reasons of difficulties

No	The main reason for the difficulty	No	In %
1	Lack of time to organize the online methodology	117	33.1
2	Lack of technological tools and resources (computer or internet)	81	22.9
3	Lack of knowledge in the online methodology	79	22.4
4	Lack of accurate instructions about what to do, confusing instructions	30	8.5
5	Confusing instructions	30	8.5
6	Difficulties (on my part) in understanding the university instructions	16	4.5
Total		233	100.0

Of great interest it is the analysis of the answers to the question "What equipment did you use to teach online?". It is noticed that laptop was the predominant one (57.8%), followed by the use of mobile phones (21.0%), computer (18.4%) and tablet (2.9%). We think it would be interesting to judge how easy it is to teach through a mobile phone!

Table 18: Distribution of interviewed pedagogues according to the equipment used

No	Equipment	No	In %
1	PC	58	18.4
2	Laptop	182	57.8
3	Cellular	66	21.0
4	Tablet	9	2.9
Total		315	100.0

For the question on the platforms used ("What platform did you use for online teaching?" (for this question more than one alternative was possible to be selected), it is noticed that the most used platform was Google Classroom. In the following table are presented the platforms iused by the pedagogues .

Table 17: Distribution of interviewed pedagogues according to platforms used

No	Platform	No	In %
1	Google Classroom	182	31.4
2	Zoom	88	15.2
3	E-mail	82	14.2
4	WhatsApp	55	9.5
5	Go to Meeting	54	9.3
6	Microsoft teams	44	7.6
7	PPT recording	33	5.7
8	Moodles	22	3.8
9	Skype	10	1.7
10	Onedrive	9	1.6
Total		579	100.0

The interviewed were also asked "What can be improved for online teaching?". The most emphasized were: the improvement of digital materials content and physical infrastructure but also that students and pedagogues should try harder in order to increase the outcomes of this process.

Table 18: Distribution of interviewed pedagogues according to the opinions on improvements

No	What can be improved	No	In %
1	Digital content of materials	171	38.3
2	Students' capacities	95	21.3
3	Physical infrastructure	113	25.3
4	Lectors' capacities	68	15.2
Total		447	100.0

In the end, the interviewed where asked for the challenges faced: "In your opinion, which have been the main challenges during the online teaching?" (respondents could choose more than one alternative, in this question too). From the answers received it is noticed that the primary concern has been the students' access to technology, followed by interactive communication and the lack of digital materials and other factors according to the ranking in the following table.

Table 19: Distribution of interviewed pedagogues according to the challenges faced

No	Challenges	No	In %
1	Students' access to the technology	98	20.2
2	The interactive communication with the students	74	15.2
3	Lack of digital learning/ teaching materials	70	14.4
4	Access in technology (PC, platforms, internet etc.)	66	13.6
5	Time management and organization	65	13.4
6	Low technological knowledge from the students	62	12.8
7	Scarce guidance/ support from the university	26	5.3
8	Low technological knowledge from the pedagogues	25	5.1
Total		486	100.0

Conclusions and recommendations

Conclusions of the information received from the pedagogues

The questionnaire was distributed online to public and private university pedagogues. Out of the total answers that were received 15% were from the Universities of Tirana and Elbasan, 14.2% from the University of Vlora and 13.3% from the University of Korça, 15% from the Mediterranean University of Albania, 14.2% from Luarasi University and 13.3% from the Metropolitan University of Tirana. Regarding the distribution by gender, it resulted that 68.2% of the respondents were female lecturers and we think that this is a structure similar to the structure of university lecturers and is related to the fact that women dominate in this structure. In terms of age, it was observed that more than half of them are aged 31-50 years old and only 3.9% are aged over 60 years old. This structure is representative of the age structure of teachers in public and private HEIs in Albania. Below is presented a summary of the findings from data gathered from the pedagogues' questionnaire:

1. Online teaching is mainly carried out at home.
2. Online learning program is conducted for 7-8 hours per week and half of the lecturers state that they have had little or no previous experience and knowledge of online teaching.
3. Among the main difficulties faced by the pedagogues was that in a short period of time they had to prepare for teaching several subjects online (almost 1/4 of the pedagogues state that they have taught 4 or more subjects and the average is that they have taught 2.8 subjects). It must be considered that this might be in violation with the legislation in force, which states that a lecturer cannot teach more than 3 courses during an academic year.
4. There is an increase in the knowledge related to online teaching methods by an average of 55.8%.
5. The instructions received from the universities are evaluated at the average level and also the comprehensibility of these instructions as well as the difficulty of doing online teaching are evaluated on this same level.
6. Lecturers gained knowledge on online teachingmostly through self-learning and by collaborating between colleagues. Lecturers already feel sufficiently prepared to develop online teaching. The level of difficulty is estimated at 2.5 (between easy and medium) where 40% of respondents stated "Moderate difficulty", but only 12% stated "Great" and "Very great difficulty". So, it has not been very difficult for lecturers to adjust to online teaching and the use of e-learning platforms.
7. The need for digitalization is very large.

8. It is considered that this has been a positive experience, where difficulties are assessed as average and most lecturers will use online teaching even after returning to normal teaching conditions. Naturally, the respondents are in favor of performing teaching in the auditorium (face to face with the students) as the best method (60.5%), but there are also those who like the alternation of the two methods (27.5 %), which indicates that universities should take measures that over time the online teaching alternative should continue to be present in teaching at different levels and for different statuses.

9. The main problems of performing online teaching, presented by lecturers, are the short transition period from classroom to online teaching, low flexibility, non-active involvement of students in learning and above all the lack of face-to-face contact with students in the classroom.

10. The main reasons leading to difficulties with e-learning are the lack of time to organize the online teaching methodology, the lack of knowledge and the lack of a technological equipment.

11. The most used platform was Google classroom and the lecturers mainly used laptops and mobile phones.

12. Work materials and infrastructure for online teaching need to be improved in the future.

13. The main challenges faced were not only students' access to technological assets, but interactive communication, lack of prior preparation and time management in online teaching.

14. Regarding the use of online teaching 2/3 of the interviewed lecturers think that they will use online teaching even after returning to the auditorium, thus showing that this was a valuable experience and that it will be used as an alternative teaching method in normal teaching conditions. So, lecturers have had a lot to learn from the online teaching experience and from the combination with the traditional classroom teaching method.

Conclusions of the information received from the students

Questionnaires for students were distributed to various universities in the country, where the majority were students of public universities, 58% attending public universities and 42% non-public universities. The questionnaires were distributed to students in different degree levels in these universities, where most of the students surveyed were part of the bachelor level, 80% Bachelor (second and third year) and 20% at Master level. Most of the students (78%) who participated in the study were from urban areas, and 22% were from rural areas. Also, it turned out that 37% of students lived in the municipality of Tirana and the rest of them in other municipalities of the country. Approximately 59% of them came from families with an employed family-head, 27% of students stated that they came from

families with an unemployed family-head and about 3% of them came from families with a disabled family-head. The average age of students involved in the election is 20 years old.

1. Students have good knowledge in IT, but more than half of the students have attended online learning via smartphones which has caused difficulties especially for learning in natural science subjects.

2. Internet access is estimated to be average and above average in most cases. Most of the students, 67% of them, had WiFi or cable Internet in their homes, while the rest accessed it through Internet packages from mobile companies and the cost of Internet is estimated to have been in average about 1800 Lekë per month. 76% of students stated that they did not work during the online learning period even though 16% of them had priorly worked, while 14% of them worked during this period even though they had not worked before.

3. A problem presented by the students is also the lack of a quiet space to attend the lesson in their apartments.

4. As there was a wide variety of learning methods, they were mainly focused on video conferencing and independent learning and in many cases there was no unified online teaching method for different subjects.

5. Evaluation of the effectiveness of online learning is different for different methods, the independent reading and additional materials as well as the use of case studies have been estimated as the least effective.

6. The main difficulties mentioned for online learning are the poor quality of the Internet, the lack of focus during online learning, the high cost of the Internet and the inadequate learning schedules.

7. The performance of seminars during online learning has been done not only through direct online presence but also through the submission of prepared assignments which is somewhat problematic.

8. Students' assessment of the effectiveness of online learning is low and on a scale of 1 to 5 (1, very low and 5 very high) is estimated to be 2.2, hence a low effectiveness. Compared to teaching in the auditorium, the majority of 64% of students think that online learning is either "Not at all" or "Little" effective compared to learning in the auditorium, thus preferring the auditorium learning.

9. Both lecturers and students believe that changes need to be made to digital materials and the physical teaching infrastructure.

10. The combination of lectures with seminars during online learning is evaluated on a scale from 1 to 5 with a value of 2.4, thus one level below average.

11. Encouragement of students by professors for active participation in online learning is evaluated with 2.3, i.e. low level, while the compliance of exam

theses with the knowledge given through e-learning is evaluated somewhat above average (3.2 out of 5, where 5 is the maximum).

12. The main advantages of online learning are the possibility of accessing materials at any time, the possibility of staying at home, the ability to record a lesson ., while the main disadvantages are the reduced communication with professors, social isolation, poor study conditions at home, lack of self-discipline, etc.

Recommendations for central and local government

1. Creating a database of families in need who have children attending higher education and supporting these families in various ways to improve the study conditions of the youth at university. This can be done by donating tablets or laptops to attend online learning and collaborating with companies that provide Internet service to cover part of the Internet cost by the state. This can also be done for families in need who have children in pre-university education.

2. Stricter control over companies that provide Internet service not only to cover the entire territory with Internet, but especially with qualitative Internet service.

Recommendations for universities and professors

1. Standardization of teaching platforms, occasional training of academic staff to use these platforms for the entire range of features they offer as well as stricter control to prevent professors from providing most of the materials for independent studying.

2. Finding forms of collaboration with different companies to provide sponsorships for electronic devices and with the ones offering free or discounted Internet service for students in need.

3. More intensive efforts to adapt to the conditions of online learning and more active participation of students during online learning.

4. Based on the experience gained, reviewing all the materials for online learning with the purpose of improving them.

5. Reviewing assessment methods that may be flexible, including presentations, group projects, standard forms of online testing, various tests, etc.

Recommendations for students

1. Reorganize the expenses they make by increasing the budget share of expense for school, for technological equipment and Internet and reducing expenses that are less necessary.

2. More intensive efforts to adapt to the conditions of online learning and more active participation during online learning.

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