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## **Abstract**

The purpose of this thesis is to analyze the online education process and its effectiveness during the pandemic. In this research we mostly looked through international experiences and the issues they faced as well as their similarities or differences. We tried to find out if we can apply one of the solutions that had been applied in one of those countries or not. We have had online survey which was made in Google Forms. According to the responses of the survey we made analyzes related to our research.

In the conclusion you can see our suggestions as well.

**Keywords: Online education, distance learning, covid-19 pandemic**

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## **Abbreviations**

ESG-European Standards and Guidelines

CHIBA-Higher Education Quality Assurance Principles for the Asia-Pacific  
Region

NAA-National Accreditation Agency

## Chapter I. Introduction

There are many definitions of “online learning” given by the scientists. For instance, according to Benson (2002), online learning is a developed kind of distance learning. Khan (2005, p. 3) explained distance learning as “an innovative approach for delivering a well-designed, learner-centered, interactive, and facilitated learning environment to anyone, anyplace, anytime by utilizing the attributes and resources of various digital technologies along with other forms of learning materials suited for open, flexible, and distributed learning environments.” Most studies have found the positive consequences of distance learning environments. Gürsul and Keser (2009) compared online and traditional problem-based learning environments in mathematics. They came to the result that learners in the online problem-based learning class showed better performances than the students in the face-to-face problem-based learning classes. In another study, Hofman (2002) supported the idea that online classes help the students to get the course content more easily and effectively. Students became more independent and charged after having online courses (Schoech, 2000).

**Purpose of the study:** the purpose of this study is related with the distance education and the quality of it during this pandemic. Here it is talked about the assessing methods and their effectiveness of it. The online education let the students get many chances and opportunities besides having challenges. Because the situation is new and sudden, the governments made some compromises in order to let the students get used to the process easily. This process not only influenced the students, but also the teachers and the parents and to the additional tot this the educators as well. But of course, not every country could deal with the situation with the same method as they didn't have same strength in both financial level and also technological (Kirik, 2014). Staying home or going to the educational institutions, using electronic equipment, such as tablets, smartphones or notebooks, computers or just sitting in the class and listening to the teacher directly and asking questions and etc. we can show many other examples like these, but Valentine (2002) believes that, distance education is a method which has got very different structure than others, such as it has its own

special issues that should be paid attention, special platforms and areas, opportunities and challenges and so on.

**Significance of the study:** As the technology has been improving it has impacted the way the education improvement process too. So as the time goes by the education process has become easier to reach for all from all over the world. Distant education is one of these ways. A person from China can get a chance to study in the USA but it would be that hard to travel to the USA. If it would happen in the past, I would say it is impossible to study then, but for today it is just an ordinary situation. Whoever wants to study wherever he wants he can do that without travelling kilometers. This gives us the opportunity both for studying higher levels of education and saving time and money, as when we travel, we have to spend for both living expenses and transport expenses as well. So, this also gives us the opportunity to relate the education, technology and the economy together. It is the fact that, the 21<sup>st</sup> century is the century of technology development, but however there are still many countries which don't have enough equipment in order to make it possible to have distant education or even online education possible. Applying the online education on the whole education system of the country is a long-term process and the countries such as I mentioned above might have need much more time than we can guess. But in case of the pandemic like we faced nowadays it gave no chance to think about it or even have a research before applying or make some detailed reports in order to be able to have the best version. It was an urgent case, and the governments didn't have time to wait and apply this new method step by step seeing if there is any emptiness or any additional need and etc. so this made a lot of hardship for both learners and teachers and educational managers for both controlling and keeping the level of education in a better level.

The countries which were already using this distant-online education system didn't face so much complicated hardships, but the countries that didn't use it before such as Azerbaijan, had to deal with many challenges. First of all, this was the first case for Azerbaijan facing a global pandemic in this wide level. So, new experience brought new challenges and cases as well. And all these cases were demanding urgent



solutions. There was no time to wait, no time to investigate, no time to get any experiences. So, everything happened at once. All these sudden cases made the educators give sudden and effective decisions as well as other managers from other sectors. Education system is one of the most important part of a country's development and economy. So, no country would like to have backwards on it. They tried to produce as effective solutions as they could in order to make it continue. Many decisions were made, many choices, ideas were there, but the most crucial and hardest choice is to decide which one to choose in the sustainable development process of the education system.

Online education in Azerbaijan had more challenges compared to the traditional one. The reasons for this are a lot. The most important one is technological knowledge of the teachers and students. Our education system is more traditional, so, being busy with technology while teaching and studying so close confused educational members a little bit. Some older teachers weren't capable using these apps in order to teach their classes online and some of the students who were living in the villages had some internet and computer problems which made nearly impossible their participation. And besides all these there was a psychological side too. Like people used to think that this pandemic was going to be over soon and there was no need to learn, get used to this new form and they were rejecting online education, they weren't taking seriously it. So, this also was one of the reasons why the adaptation process took that long. For the first try yes, the affect can be called quite successful as despite of all these challenges the amount of the people who could involve and use effectively online education was high too. Some schools or universities or courses or any educational institutions had some programs to help the students and enable them to study. Some gave free internet, some shared laptops, tablets and so on. So, during this period everybody (educational institutions) were trying to find out new solutions in case of having this pandemic for a long-time period and unfortunately this happened.

As the time goes by, day by day both students and teachers were accepting the situation and trying to follow the instructions in order to be involved on the process of online education too. Thus, this factor shows that Azerbaijan adopted online education

as a result. But if we look at the universities individually, we can have some differences too. In some, the percentage of the involving in online education is really high as well as the countries which apply this system for a long time and in some this percentage is as low as a new beginner. The universities which were collaborating with foreign universities had some experiences. They had an idea of distant education organizing and in the case of pandemic happened they began to apply it more easily in the compare of others. Khazar could deal with this case more easily, the university gave the students new user names in order to use a new platform Teams and all the lessons were on time and under control. As master students we did not face serious issues. But some universities such as Culture and Art had difficulties because in this university the lesson formats are a little bit different. I am going to give more detailed information about it in my survey part.

What are the main limitations that educators face on distance form it? When and in which level do we face with these limitations? The limitations are not only for educators but also for learners. In my example, at this university many majors are practical such as actors, theatre, musical majors, filmmakers etc. they learn how to act at the scene, in front of audience. Therefore, it is hard to perform or learn how to perform while the learning process is not traditional but online. For these students it is important to observe the emotions, expressions and while they are performing, the teacher should be able to watch them carefully. Because even one single expression can be wrong or extra. In the situation of online education, it is nearly impossible to do it. In addition, unfortunately, it is not only case that we should discuss in the direction of solving this problem. Another thing that we should think about is equipment problem. Some students do not have instruments as they do not live in Baku but in regions and they are here on rent. They use the opportunity of the university and in case they are not allowed to come to the university and just join via internet they have no chance to practice. Some students even do not have enough financial situation in order to have a good qualified internet or technological equipment. That is another case of deal that we should get busy with.

Universities play a huge role in the process of development of a country. For both economic and political and financial etc. growth, we need good educational institutions. However, education is not the only factor that is needed by a country. We need art, culture as well. The high level of the improvement of these sectors are essential as well. The people who are talented in various sectors get the chance of getting education related to their interest. Therefore, these universities give them an opportunity to study and get the experiences from ones that are more qualified.

Distance education is getting knowledge in long distance as the face to face education is not available because of different reasons. In this type of education students get the education via internet or different kinds of technological equipment. It has a crucial role in education process and we observed it during this pandemic period more exactly. But before it there used to be distance education in many countries too. The students who want to study abroad but somehow because of any reasons they cannot do it, by this they get a great opportunity to do it. Distance education is more economical for the learner as she or he shouldn't spend money on food or any other living expenses in foreign country and at the same time time-saving. Because the learner shouldn't waste his or her time by going to the university or stuck in the traffic or look for a place to live and etc.

That's why I did my research inside a university among several students from various educational years in order to have a general understanding which challenges are faced and which solutions are introduced.. In this research, I also tried to to evaluate the effectiveness, quality of online education. My research gave me a chance to understand which differences exist between the traditional educational process organizing and with the current one.

At the same time, in this research I did a survey in the university where I am working as an exam constructor and besides this, an electronic department manager. My duty is related with my research directly, so, it also became my opportunity. From the beginning of this pandemic till now I could have a chance to observe every step myself. We, as the whole department discussed all the issues we were facing, analyzed all the possible solutions and gave the best appropriate decisions. This process was

really challenging at first, as it was a hard and sudden situation we had to deal with, but as the time went by, we got adopted and could manage it perfectly. Thus, I mentioned all my experiences, difficulties and our actions against them. In a word, this dissertation relates to a real case observed by the writer herself and all solutions are according to her research about this topic and at the same her real observations. In addition, this research is one of the few researchers conducted on the topic in Azerbaijan.

In the universities which are based on art mostly the distance education is organized differently. The students train with the scene or theatre studios and etc. but in online education they don't have this opportunity so the universities do some activities in order to make the lessons as effective as possible for the students, even it is online. However the term Distance education is used widely nowadays because of the obligation, the real meaning of it wasn't understood correctly yet. Even in the journal, which belongs to 1991 year, it is said that the term is not recognized correctly.

As we mentioned there are many beneficial sides of distance education for different majors. But when it comes to art the case turns to a little bit different direction. Because the majors, which require theoretical knowledge, are easy to study online but the practical majors are not that much easy. The art students, such as actors, musicians, artists and etc. need to see their teachers directly. Because they need to observe every single movement and expression but while it is online it is nearly impossible to do it perfectly.

In my example, at this university many majors are practical such as actors, theatre, musical majors, filmmakers and etc. they learn how to act at the scene, in front of audience. So it is hard to perform or learn how to perform while the learning process is not traditional but online. For these students it is important to observe the emotions, expressions and while they are performing the teacher should be able to watch them carefully. Because even one single expression can be wrong or extra. In the situation of online education it is nearly impossible to do it.

## **Chapter II. Literature review**

The study reviews the assessment of online education from international perspective as well as demonstrates the effectiveness of online learning from students' perspectives. The topic is a new one for all of us. That is the reason why I couldn't find a well-researched, wide information to use as my references, but some conference materials, articles related with this topic and some surveys, statistics from other countries' authors were found.

*International criteria for assessment of accreditation of educational activities/ E3S Web Conferences 210, 180070 (2020) ITSE-2020* in this literature we'll look through the universal models of assessing methods, such as European Standards and Guidelines, European Standards and Guidelines, European Network for Quality Assurance (ESG). The second one is Asia-Pacific-The "CHIBA Principles", Higher Education Quality Assurance Principles for the Asia-Pacific Region (CHIBA) and the last one is Russian-National Accreditation Agency (NAA, Rosakkredagency) then we will analyze all these more detailed and see their qualifications deeply. Additionally, with the help of this literature we'll learn about three macro blocks, their indicators and the meanings of theirs.

*Assessing Distance Learning in Higher Education during the Covid-19 Pandemic/ Hindawi Education Research International Volume 2020, Article ID 8890633* according to this literature we will learn about the general situation in education process because of the coronavirus.

Another literature is *G.Basilaia and D.Kvavadze "Transition to online education in schools during a SARS-CoV-2 coronavirus (COVID-19) pandemic in Georgia," pedagogical research, vol.5, no.4*. This literature will help us to compare some example countries and see what kind of methods and activities they have done. Here we will learn about the first steps of coronavirus to the education process, the first times of closure of the schools and then we learned about the situation in public schools and at the same time in private schools. We compared them between themselves and then we compared it with the situation in Azerbaijan.

*Distance Learning in Vocational High Schools during the COVID-19 Pandemic in West Java Province, Indonesia Budi Mulyanti, Wawan Purnama, Roer Eka Pawinanto Department of Electrical Engineering Education, Universitas Pendidikan Indonesia Jl. Dr. Setiabudhi 207, Bandung 40154, Indonesia* according to this literature we will analyze distance education process, the opinion and thoughts about it in Indonesia, West Java-the biggest city with population after Jakarta. With the help of this literature, we will be able to analyze the country its private and public vocational high schools. In this literature there is a survey and statistic graph according to that survey, we will look through it and see its explanation. Then we have some laws and rules according to the Ministry of Azerbaijan Republic and by this we will discuss the situation in Azerbaijan.

### **The understanding of distance education**

Distance education is getting knowledge without being face to face. You don't have to go to university or school or any other educational institution. Distance education is organizing with the help of technology and internet mostly. It occurs in many cases. One of the common reasons which is suitable for today's situation is Covid-19 pandemic that has widen all over the world. Another reason can be long-distance and life conditions, including life expenses, living standards and etc. For instance, if a person cannot go long distance for studying because some family responsibilities (maybe she has a little baby or parents who need care and so on) then, the term distance education can be useful for this person. Or if a person doesn't have enough financial opportunity to meet the expenses abroad (including living expenses, food or hostel and etc.) then, he also chooses to stay home and get distance education. *Education Research International Volume 2020, Article ID 8890633* Today, many institutions of higher learning offer online instruction with integrated web-based instructional tools (Rodriguez, Ooms, & Montanez, 2008). According to the Babson Survey Research Group report, Allen and Seaman (2013) stated that "when this report series began in 2002, less than one-half of all higher education institutions reported online education was critical to their long-term strategy. That number is now close to seventy percent" (p. 4)

The sudden spread of Corona virus made the education system get into another direction besides all other sectors, such as economy, medicine and etc. thus, the sudden change in this sector made some issues, challenges to deal with. Neither students nor the teachers were ready to adapt on this new organization standards. So, distance education had different meanings for each individual. For some it was a chance for new beginnings as it made their life easier. For some, it is a backwards in their education life. I was the one who appreciated this situation as a chance, as I worked at the same time with my education, so, distance education gave me a chance to handle them together better. At first, I and some my classmates had some troubles with the internet or equipment, because this system was a new experience and we didn't get used to it. But as the time goes by, we got a habit on it and everything was easier than before. I know some friends who even graduated on distance education. Although it was difficult to research on this situation because everywhere was closed and not allowed to enter and get survey or other things, but at the same time for those who are being shy or excited in front of many people, teachers and other managers, this made their life easier, as they defended their dissertation online in front of just a computer. While I'm working on my own dissertation, I also don't know how the things will get direction. Maybe I also will be one of them who did it online maybe not. It is still difficult to research because nothing turned into its previous situation. But I had just one additional opportunity. As I work at the university, it gave me a chance to get the survey from the students and teachers or workers of that educational institution. So, my research includes a survey according to a real case, real experiences and real thoughts. Students who are on the same opinion with me, assume that, distance education must not be considered as the curse, but a chance. As we know that this corona virus wasn't a thing and still isn't a thing that can be controlled totally. So, there wasn't a certain solution. We had no way to sit and wait it just pass away, it would be waste of time. The only thing was to struggle to deal our plans and duties when the virus still was in our lives, in a word we had to learn to live with it for a period of time. At the beginning of the virus coming to our lives no one expected it to stay this long. Some people even got in depression and lived deep pessimism, some had health

problems. But those who could manage themselves and organize their lives according to this new situation as quickly as possible, they could continue their lives even better than before, as this time they didn't lose their time on sticking on traffic, and being related to this they didn't get stressed. They managed their whole 24 hours among studying, working, exercising, healthily eating and for their activities. Some people even got motivated with their energy and new habits as all these things made good results on their personality, physically body and on their mind. I was one of them and I could appreciate this hard time. In this situation I want to mention about a proverb which is like, "turning crises into opportunities is the real managing skill". Thus, distance education is an opportunity for some and a crisis for some at the same time. It depends on how you understand it or how you give the meaning to it.

In general meaning, distance education is also a kind of education process and this virus taught us that we should think about the methods or solutions or new ideas which will help us to organize it as effectively as the traditional education process. Because when we are forced to have distance education, we shouldn't be doubtful of its effectiveness or quality. We should be sure that the students who are the gradulators of this education process will be as qualified and successful as the students who graduated from the traditional one. The most important thing which should be paid attention must be the quality of education whether it is traditional or distance.

*Education Research International Volume 2020, Article ID 8890633*

According to Boekaerts (2008), majority of the researches about online programs have focused on their technical aspects, not paying attention to the importance of students' perceptions. Bollinger and Martindale (2004) and Tallent-Runnels et al. (2006) argued that the growth in online education should prompt more research that addresses students' satisfaction with online instruction. According to Moore's Transactional Distance Theory (1993), analyzing distance education it is found out that the most crucial parts of it are as follows: attending to dialogue, structure, and learner autonomy. Moore emphasized that these considerations are different from technological ones, focusing on instructional and learning behaviors and the interaction between the two. This (1993) analysis was based on the assumption that



distance learning demands various teaching methods and learning dynamics than does traditional face-to-face instruction. Moore differed among three types of interaction: faculty-student, student-content, and student-student. He also stated about the importance of what he called student character.

In Faculty-student interaction Moore emphasized, educational philosophy, personality, course subject matter, and the environment influences it.

Some other scientists have also stated some ideas about the importance of faculty-student interaction. Tomei (2006) explained it as playing a “pivotal role in student attitudes about online learning and distance education” (p. 532), and Bollinger and Martindale (2004) described it as the only most crucial feature in determining students’ satisfaction in online learning environments. Swan (2001) considered that “students who had perceived high levels of interaction with the instructor also had high levels of satisfaction with the course and reported higher levels of learning than students who thought they had less interaction with the instructor” (p. 316).

Student-Content Interaction demonstrates the “rigidity or flexibility of the program’s educational

objectives, teaching strategies and evaluation methods” (Moore, 1993, p. 3).

Course

structure consists of learning experience because it determines how well a current course meets the varied expectations of every students. Course structure influences

communication—specifically, how much dialogue is permitted or supported (Moore,

1993).

Student-Student Interaction

According to Dobbs et al. (2009), though most researchers have studied the structure of online programs, a little part of them have analyzed interaction among students. In traditional education, student-student interaction is organized in the form of face to face. In online education, it is made electronically, via email, discussion boards, instant messaging, Skype, and document sharing (Jackson et al., 2010). Several

distance learning institutions demand residencies, where students physically can get together at a given location for seminars and communication with faculty and peers.

### Student Character

The other feature of transactional distance that affects students' learning experiences is the characters of students themselves. A crucial feature of personality for distance learners is autonomy—the ability to work by themselves alone. Moore (1993) defined learner autonomy as “the extent to which in the teaching/learning relationship it is the learner rather than the teacher who determines the goals, the learning experiences, and the evaluation decisions of the learning program” (p. 5).

Most scientists on distance education have stated the importance of age as a variable in student satisfaction and success (Dobbs et al., 2009; Jackson et al., 2010; Sanders & Hirshbuhl, 2007). As Roach and Lemasters (2006) stated, age is an indicator of a person's coziness with computers. Undergraduate distance learners tend to be older than their mates at brick-and-mortar schools (Sargeant, Curran, Allen, Jarvis-Selinger, & Ho, 2006).

### **Different results on applying distance education (online education) in different countries**

As we mentioned at the beginning of our dissertation the transition process on going from traditional education to online education various countries lived this process in different ways. The methods for this transition process were different. Thus, the results also were different. In this part of the dissertation, we will look through several countries and their adaptation process.

Firstly, according to the research *G. Basilaia and D. Kvavadze, “Transition to online education in schools during a SARS-CoV-2 coronavirus (Covid-19) pandemic in Georgia”, Pedagogical Research, vol. 5, no. 4, <https://www.researchgate.net/publication/340560537> Transition to Online Education in Schools during a SARS-CoV-2 Coronavirus COVID-19 Pandemic in Georgia* I want to talk about Georgia.

The general education system in Georgia is based on compulsory programs for all citizens. Children start school from the age of 6 and study at the elementary level for four years, they continue to middle school from fifth to ninth grades that are the mandatory level for everyone. From the tenth to twelfth grades are treated as secondary education. The expected years of schooling for the country is 15.4, while the mean years of schooling is 12.8 (UNDP 2019). In this country there are several types of learning methodologies and one of them is online education. This type of education also has some indicators inside, such as Knowledgebase, online support, asynchronous training, synchronous training, hybrid training. Knowledgebase type is a set of lessons that are published on the website and have general instructions of learning that a student has to follow, with no support available. Online support type is a modified version of the knowledge base, where the support is available so there is a discussion board, web forum or another communication way available to get support on some topics. Asynchronous training is the one where the lessons do not take place in real-time, but the students are provided with content regularly. Instructors are assigned and provide support through email or other communication platforms. Synchronous training is done in real-time with a live instructor and optional moderator. There is a pre-set time to log-in to the online education environment and participants can communicate directly with the teacher and other group members. Hybrid training is a combination of online and in-person interaction. *G. Basilaia and D. Kvavadze, "Transition to online education in schools during a SARS-CoV-2 coronavirus (Covid-19) pandemic in Georgia", Pedagogical Research, vol. 5, no. 4*

As the first cases began to occur because of the virus Covid-19 the education process had been stopped on 2th of March till the 16<sup>th</sup> of it with the decision of Education Ministry of Georgia. After that as the number of people who are infected increased, the lock down longed till the 1<sup>st</sup> of April and for a month all the country went on a strong pandemic regime. For the year of 2020 the country has 592900 students in 2313 schools countrywide. There are 2086 public schools with 530100 and 227 private schools with 62800 students (*Geostat 2020*). By the information of the National statistics office of Georgia for July of 2019 a total of 79.3% of the Georgian

homes are connected to the internet, where the city population of 86.1 has access and the villages have 69.9%. (Geostat, Share of households with internet access, 2019). As for the computer access the country's 62.0% has the computer at home where the urban percentage is 74.6 and the rural is only 44.7% (Geostat, Share of households with computer access, 2019). People who have computers in rural areas were under 50 percent, so that was a challenge for having online education effectively and the government had a statistical research about smartphone users in order to see if this number will satisfy them to use online education, as, they assumed that smartphones are also somehow enough to be able to participate at the lessons at least for beginning. And the Georgian National statistics office of Georgia gives information on the share of the population age 6 and older who use the mobile phone is 91.4 countrywide with 93.7% in urban and 88.0% in rural areas (Geostat, The share of the population aged 6 and older who uses mobile phone 2019). In Georgia the platform that is used for online education for schools is Microsoft Teams platform and The Ministry of Education, Science, Culture and Sport of Georgia gave all 2086 public schools access in order to be able to use this platform for online education during this pandemic. The Education Management Information System had created accounts for both teachers and students at these classes (55000 teachers and 530100 students) and at the same time made virtual classes by default, so that, the students or teachers just were added to the classes which were suitable for them and they just participated at the lessons when it was the lesson time. Besides this, as it was a new experience for both teachers and students, there had been made instructions in a written way to be helpful for them in the way of how to use it. (MES 2020, Ministry of Education, Science, Culture and Sport of Georgia to strengthen distance learning methods). It was the first step in the favor of covering education program at schools, but to be additional to this step, the Ministry of Education, Science, Culture and Sport of Georgia, in cooperation with Georgian Public Broadcaster's First Channel has launched the educational project titled - "Teleskola" (TV School). By this, students could have watched TV and learn their lessons even in case their internet connection is low and because of it they cannot understand the teacher well or totally they don't have access to the internet. EL.GE - a platform

supported the Ministry of Education, Science, Culture, and Sport has hosted the thematic resources based on the national curriculum. (UNESCO 2020, National Learning Platforms and tools).

During this pandemic, as well as many countries in the world, in Georgia, some big software companies made some opportunities for the educational institutions in order to be capable of covering it and not being backwards. Microsoft, Google, Zoom and others were such companies which supported education system strongly. They gave access to many features that are needed during the lesson process of their platforms for free. Microsoft is offering anyone its premium version of Teams for free for six months and lifted existing user limits. Google has announced that it is offering its enterprise video conferencing features such as larger meetings up to 250 people and recording functionality for free to G Suite and G Suite for Education customers through July 1, 2020. Zoom has lifted the time limit of video calls in China, Japan, Italy and the US by request. (Rani Molla, VOX. 2020)

We should mention that all these solutions that are made by government were for public schools, but private schools had to deal with the issue by themselves and they did similar things like the Zoom or Google meet platforms like the public schools did. The education management information system has reported on 24. March that the number of users in Microsoft teams was March 10 was only 750, while on 24 of March it has reached 138 698 showing a significant growth in the activity. (OECD, 2020).

The second I want to analyze vocational high schools in Indonesia. A vocational high school (VHS) is a formal high school step that prepares human capital to have the knowledge, abilities, and attitudes as middle-level skilled employees. (<http://psmk.kemdikbud.go.id/konten/4125/standar-nasional-pendidikan-smk-dan-ak>). Currently, West Java has the highest number of VHS's in Indonesia with 2,942 schools (287 public VHS's and 2,655 private VHS's) out of the total of 14,327 VHS's in Indonesia. After the capital city, Jakarta. West Java is the city which has the most population, so we are going to research about it. In terms of the Expertise Spectrum of VHS, there are 9 expertise areas of VHS in Indonesia, namely (1) Technology and

Engineering, (2) Information and Computer Technology, (3) Health and Social Work, (4) Agribusiness and Agrotechnology, (5) Maritime, (6) Business and Management, (7) Tourism, (8) Energy and Mining, and (9) Arts and Creative Industries. (*Distance Learning in Vocational High Schools during the COVID-19 Pandemic in West Java Province, Indonesia Budi Mulyanti, Wawan Purnama, Roer Eka Pawinanto Department of Electrical Engineering Education, Universitas Pendidikan Indonesia Jl. Dr. Setiabudhi 207, Bandung 40154, Indonesia*)

Because of the pandemic which took place in Indonesia (infection began in January and February, but it officially announced in March) as well as the other countries in the world the Minister of Education and Culture, Nadiem Makarim issued a policy as outlined in Circular Letter No.4/2020 on March 24, 2020 ( <http://www.datadikdasmen.com/2020/03/semendikbud-no-4-tahun-2020.html> )

In order to be able to understand which learning facilities are mostly used in VHS, the researcher made a survey and let's firstly see and then analyze this survey.

The following statements were asked to the respondents:

1. I have my own computers, laptops or smartphones.
2. I have textbooks, worksheets, and other supporting books
3. I have an Internet service at home with good connections and an adequate speed
4. I am able to pay for my Internet service
5. The local government/school assists me with an Internet service
6. My school provides online vocational subject practicum materials, and virtual laboratory facilities.

The results of the survey of learning facilities are summarized as the following:

1-respondents strongly agreed, it means that most of them have all this equipment and they are able to use them in the educational process.

2- respondents agreed, it means that majority have all these staff, the situation is not for to complain.

3- it is the same with the previous one.

4- respondents strongly disagreed, in this part the graph has the big gap to be different from the other ones and it means that most of them are not able to pay their monthly internet service. Because of this graph the educators must pay attention to this part and give their decisions in this direction in order to be able to solve the problem.

5- respondents agree, it means that not all of them but some of them are provided with the internet service, so it gives us the result that the government is aware about the issue that we observed in the 4<sup>th</sup> step and it works on the strategy that tries to solve it.

6-respondents disagree, it means that the schools can not provide the online vocational subject practicum materials, and virtual laboratory facilities. We can understand it from many perspectives, such as because it was a sudden change to distance education and that's why the schools weren't ready for this program totally, or maybe these schools are not financially enough strong in order to be able to provide them with the sufficient technological materials or virtual laboratories and etc. All these results that we showed are for public schools, not let's have a look at the private schools and see which differences there are.

In private schools the results are as the following:

1-Most of the respondents agree with this statement, it means that, most of them are capable to meet their need on technological side and that is good news.

2- Most of the respondents agree with this statement as the first one and it means that they are able to meet heir need on material, book and other things like that as well as the technological ones.

3- Most of the respondents disagree with this statement, a big part of the respondents doesn't have a good internet connection at their homes in order to be able to take part at the online lessons. So, this is a factor that we face which should be taken into consideration by the government.

4- a huge part of the respondents strongly disagrees with this opinion, because a huge number of them cannot pay their internet bills, so, it is a fact that they need a strong financial aid for being capable for doing it.

5- Most of the respondents disagree with this statement, they claim that most of them are not provided with the internet service by local governments and from this graph we face another factor that should be paid attention as well as the 3<sup>rd</sup> one.

6-Most of the respondents disagree with this statement, this situation is as the same with public schools. The reasons can be the same or different, or partly different but the result is quite similar. Maybe the public schools have more opportunity on those days of pandemic, but in general all we know that private schools are in better conditions in the compare with public schools. As, these schools have school fee and this amount is high enough we should consider them to be more ready with all these technological staffs. So, I consider that here the reason is more depended on the sudden arrival of coronavirus. It was a shock for these schools as well as other public ones and they couldn't make it on time. They couldn't make the virtual laboratories or libraries and etc. for a good conditioned education process even in online kind of it.

From this analyze we saw that to be different from public schools in private ones the 5<sup>th</sup> statement is agreed and that is the evidence of the support of the government to the transition process from traditional to online education. As we said above that government signs contracts and does some activities in order to be able to organize the education system effectively, but the private schools should be able to find a way by themselves. Here we can mention about one big reason of financing themselves. These schools get school fee and they have the opportunity to deal with these problems by themselves. Another difference is on the 2<sup>nd</sup> statement. Here, while public school respondents disagree, the private school respondents agree with this statement. Maybe the reason for this difference also can be related with the financial opportunity and structure of the educational institution. In many private schools the materials are included in the school fee and they are shared with all the students individually. So, many of these students are provided with the materials, books and other educational facilities. But in public schools, there are times even one book is shared with two or more students because of having lack of material. So, in public schools, specially in those countries where the population level is high, it is being hard to be able to provide



every single student with the sufficient material and making the education process a hundred percent completed. So, the reason for this difference is quite understandable.

In traditional education time, there are some differences between public and private schools, in its education process structure, in material providing process, in organizing the lesson structure and etc. When it comes to online education organizing all these differences even get bigger and we get sometimes new ones as well. For instance, if on traditional lesson, in private schools there are maximumly 20 students in the class and 45 students in the public-school class, we surely say that it influences the quality of the education process. And in pandemic time, on distance education, on online platform-classes if we have 45 students at once and if we pay attention to the fact that the internet connection isn't at the same level for everyone, the quality level even gets worse. It is the same situation for private ones, so this time things get another level to discuss.

The previous analyze was to see the level of the facilities. Now let's see how well the students and the teachers are able to use them. The research includes the following questions:

1. The teachers have utilized e-learning facilities for distance learning
2. I have enough time for distance learning
3. The teachers use learning applications (such as Google Classroom, Zoom, and Webex)
4. I am able to use learning applications
5. I use learning applications provided free from the Ministry of Education and Culture
6. My teachers and I use electronic media and social media to enhance the learning materials
7. I am able to use software of Electronic Circuits simulation
8. I am able to use many Electronic Circuits applications to calculate voltage, electric current.

According to these research questions, let's see the answers and analyze them.

1- Most of the respondents strongly agree with the 1<sup>st</sup> statement, it means that the teachers' majority are able to use technological facilities and etc. in the online education. They have this skill of utilizing it and at the same time this level of survey graph demonstrates that in this process the issue related with this is low in this country.

2- Most of the respondents agree with this statement and this result is really high. So, the idea that we supported as one of the beneficial sides of distance education, saving time is being real for this example as well. It illustrates that, teachers or students don't complain about time issue, as they also spend time on traditional education process, so, this is not an additional time wasting and they are okay with this situation.

3- Most of the respondents agree with this statement. They say that, yes, the teachers, majority of them use the applications, platforms which are useful for the distance learning.

4- Most of the respondents strongly agree with this statement. This answer rate is really high and we understand that our research responders can use the learning applications. They struggle and they do their best in order to have the general understanding about all these new online education platforms and to be able to take part on distance lessons and not stay aback from the education. It gives us the result that they show desire, not bring excuses in order not to participate and do laziness.

5- Most of the respondents disagree with this statement, but this result is really near to agree, so, it means that nearly half of them agree and the other part disagrees, but as the conclusion, in the compare the number of the ones who disagree is little bit more. Thus, here we have the result that they don't use these applications free from the Ministry of Education. They use it according to the demand of the ministry. But, at the same time some of them do it being independent from the ministry because of their own interest and favor.

6- Most of the respondents agree with the following statement. Here most of our students and teachers use the electronic media and platforms in the transition process of the educational materials and books or questions and so on. It is also a good way of supporting and making the distance education quality get higher. This situation should get better level in case the pandemic and distance education process get longer.

7- Most of the respondents agree with the next statement. Here we see that the number of our respondents who can use Electronic Circuits simulation is high enough. It is also one of the factors we should be grateful with.

8- Most of the respondents agree with the last statement. It demonstrates the result that they can use many Electronic Circuits applications to calculate voltage, electric current. Thus, this is also one of the results that we should feel satisfied with.

So, we analyzed the public schools research according to our questions. Now, let's learn how the situation is for the private schools and which differences there are and which gives us a cheerful consequence. As we see from the previous research that we had done between public and private schools in the direction of the facilities and their situation for distance education, there are too many differences. I am interested how the situation is for this research between public and private schools.

In private schools our research results are as the following:

1- Most of the respondents agree with this statement and this agreement rate is really high. So, this result show that as the public-school teachers in private schools the teachers are good at utilizing them. Just there is one difference that, in public-schools this factor was showing in the rate of strongly agree, but here, in private ones it is just agree, even the rate is high. I consider the reason as if in public schools every single teacher has to deal with the technological issues individually by themselves, but in private ones there are maybe special departments in some of them and there are employees who deal with this kind of issues, so there is no need to learn an extra knowledge in order to be able to use them.

2- Most of the respondents agree with this statement and here, in this factor again the rate is high. The responses to this question are very close to the one in public school part. So, we get the idea that this statement is true for both the private and public-school teachers and students. It is one of the ideas in distance education that is accepted beneficial for all. Most of the teachers and students from the public or private schools consider this situation (saving time and spending less time while getting education as they don't waste their time on the way or sticking in the traffic and etc.) beneficial for themselves, while some of them consider it to be demotivated. These ones assume that

going to the educational institution building and sitting in the classroom seeing the teacher and the classmates, having eye contact with them gives more motivation and desire and atmosphere to study more effectively. Otherwise, they don't feel themselves like studying or understanding or being productive. In my opinion it is related with the psychology and it is necessary to change it. Because in case the pandemic takes long and we have to continue our lives with distance education it will be just waste of time and even it can bring a great depression to the person. Thus, the ideas about this step as we mentioned above is nearly the same with the one in public schools.

3- Most of the respondents agree with this one, but this agreement is very close to the disagreement. It means that teachers are not fully able or just desirable to use the applications for learning. It can have some explanations. Firstly, they might not be capable of using them, they don't know how to use them, and the reason for that in private schools might be the one that we have already mentioned above. There might be a special department for Information Communication Technologies and during the traditional lesson period the teachers didn't feel a need to know how to use them and in case of any need the department solved the issue. No one felt like to learn about them. The second reason can be about desire. Maybe these teachers don't love to use these applications, because they don't find them effective or interesting. In case they understand the importance of these tools and the obligation to use them, maybe then the number of the teachers who use these applications would be higher. But this number is not that much low at the same time. There are a few teachers who can and use them. But in compare with the agreement, the disagreement rate is higher.

4- Most of the respondents agree with this statement. It demonstrates us that as well as the public schools, the private school teachers and students use learning applications. Here the difference is this that, in public schools this rate was strongly agreement and the rate was differing in a high level. In public schools the students are more interested and educated about using all these applications being different from the students in the private schools.

5- Most of the respondents disagree with this statement. Here in private schools the teachers or the students do not use the applications independently from the

Education Ministry of the country so much. They use it according to the demand of the pandemic situation mostly. But the case for the public schools was a little bit different, as there although this rate was mostly disagreement, it was close to agreement which means there are enough people who use it at the same time. But in private schools this rate is just disagreement.

Till this step we can have a general overview that, teachers and students in public schools can use and use these facilities better and more than teachers and students in private schools. Maybe we can show the reason of government support with the trainings to the teachers, instructions to them made their learning process easier. Maybe there is another reason. So, let's look at the next factor.

6- Most of the respondents disagree with this statement. After analyzing the previous research questions and their answers, it is not surprising that we got the answer disagreement. We see that in private schools using all these applications, platforms, showing desire to learn or use them by teachers is not common. In other word, they don't do it very often. In this case, students are not good as much as they need to be either. As the participants of the distance education process are not eager to take part effectively, do their best, struggle to organize the learning and teaching process as good as the traditional one then we cannot reach our goal as well. In this research question, we come to the result that as well as other parts of online education organizing process, here also they are not active. They don't share their ideas, questions or materials that are needed during the lesson process in order to learn. We all got upset, depressed when the pandemic began and the closure of the schools, universities and other educational institutions began to occur. But, if we just stay and wait for everything turn into previous form, it will not be helpful. The teachers should be motivated and should motivate their students in order to be motivated in learning process in distance education during this pandemic.

7- Most of the respondents agree with this statement. Here we see that the number of the teachers and students who can use Electronic Circuits simulation is quite high enough. It is also one of the factors that satisfies us. So, this factor is as the same as the public-school research. That's why I will not explain it again.

8- Most of the respondents agree with the last statement. It illustrates the consequence that they are able to utilize many Electronic Circuits applications to calculate voltage, electric current. Thus, this is also one of the results that we should feel grateful with. And as well as the 7<sup>th</sup> factor, this one is also the same with the public-school research results.

We understand from here that, in both cases, the situation of the facilities and also the capability of using them by teachers and students have some differences and similarities at the same time. Now let's look in general at our Indonesian example.

From the results of this study, it was found that the available online learning facilities, the utilization of facilities, and the online learning process in VHS's were better than those in Private VHS's. In general, students of Public and Private VHS's stated that online learning is not more interesting than ordinary learning, although most of the students can understand the provided lesson and are given an opportunity by the teacher to actively participate during the learning process. (*Distance Learning in Vocational High Schools during the COVID-19 Pandemic in West Java Province, Indonesia Budi Mulyanti, Wawan Purnama, Roer Eka Pawinanto Department of Electrical Engineering Education, Universitas Pendidikan Indonesia Jl. Dr. Setiabudhi 207, Bandung 40154, Indonesia*)

We looked through 2 countries in this chapter and learned their organization process of distance education. We saw the methods they used in order to have the process made effectively. We saw which strategy they chose and follow, what plans and activities they did in the direction of having a better education system in its distance form. While analyzing all these methods that are applied, we saw some similarities on our own country and at the same time some effective new methods that could be beneficial for our education system as well. Georgia had more similar activities and strategies to Azerbaijan, as it is our neighbor country and at the same region with it. So, its situation somehow reminded us Azerbaijan distance education process. Even the closure was nearly at the same time with Georgian schools. Indonesia even is far away from Azerbaijan, but we saw some similarities with it as well. Such as, the challenges about being capable of utilizing the platforms and applications or not

being eager to do it. According to these two example countries and their challenges, at the same time their solutions, methods and activities to solve them, next I want to show the example of my own country, Azerbaijan. Firstly, I would like to talk about the challenges from the beginning of the pandemic, how the closure took place and then which steps took place one by one. Then, I will demonstrate my research on this part, students and teachers and at the same time other education workers' ideas about these challenges and their solutions. As I am also an education worker, I will also give my own suggestions and opinions about what was wrong and what could be done in order to have more effective and efficient education process.

The first closure in the schools and universities in Azerbaijan happened on 3th of March for a couple of weeks hoping that till that time it could be found in order to be able to continue the education process. But the things couldn't continue as it was thought. (ORDERS | March 2, 2020 - 4:30 p.m. Rules for suspending the teaching and training process of all educational institutions that have started operating in the Republic of Azerbaijan)

As the virus began to be infected by many and many people and the time of the closure got longer. So, the Ministry of Education had to stop the lessons in a traditional way. The educational institutions made some decisions in order to organize the education process in online format. So, over the country most of the educational institutions, schools, universities and others mostly used Microsoft Teams and Zoom platforms. The institutions made accounts for teachers and students and gave their log in names and passwords. After this, every department inside the educational institution made virtual classrooms and at the participants (students and teachers) there. The workers of these departments arranged the times of the lessons and informed the students and teachers about it. So that they could take part at the online lessons. For the first times there were many issues than there are now. First issue was that, not every student or teacher had enough equipment which will be enough to take part at the lesson. So, some of the schools (which were in a worse situation) began to be provided with laptops or tablets in order to be shared to the students who need it. But this wasn't for all and it was impossible to make it happen for all. So, it didn't solve the problem

completely. And at the same time, equipment wasn't the only issue for those. Internet was also a problem. Some mobile operator companies, such as Bakcell, Azercell or Nar mobile, began to have some discounts to be helpful in this hard time to the development process of distance education. Another problem was the closure among the regions, because there were some people who could go to the regions but because of the closure they couldn't get back for some weeks and in regions all the issues we mentioned above were even worse. Thus, this factor also made their life harder. At the first year of the implementation of online education there were made many compromises by the government. Many limitations were cancelled in these times. Besides this, at the beginning of the second online education term, the Azerbaijan Republic had war in its land and for its land. During this period, both psychologically and physically the students were under pressure and danger. Because other cities far away from the war zones were being attacked at the same time, many civilians, including children were killed. That's why, in order to protect the privacy inside the country the internet connection was deducted and education was stopped for a period at the same time. Now, neither traditional nor online lessons could be done. After the victory of the Azerbaijan Republic, the internet connection came back and lessons continued online. The next term some universities cancelled many compromises after considering that, students had enough opportunity to take part at the lessons and study in a normal way. They thought, continuing to apply these compromises would influence the quality of the education in a bad way. Some universities which have practical lessons began to accept the students for some certain days a week at the university in small groups in order to support their education process.

In the universities which are based on art mostly the distance education is organized differently. The students train with the scene or theatre studios and etc. but in online education they don't have this opportunity so the universities do some activities in order to make the lessons as effective as possible for the students even it is online. However the term Distance education is used widely nowadays because of the obligation, the real meaning of it wasn't understood correctly yet. Even in the journal which belongs to 1991 year, it is said that the term is not recognized correctly.



(<https://www.tandfonline.com/doi/abs/10.1080/08923649109526758?journalCode=hajd20>) Azerbaijan State University of Culture and Art is one of these universities. Let's look through the main limitations that might be met in those universities. As we mentioned there are many beneficial sides of distance education for different majors. But when it comes to art the case turns to a little bit different direction. Because the majors, which require theoretical knowledge, are easy to study online but the practical majors are not that much easy. The art students, such as actors, musicians, artists and etc. need to see their teachers directly. Because they need to observe every single movement and expression but while it is online it is nearly impossible to do it perfectly.

In my example, at this university many majors are practical such as actors, theatre, musical majors, filmmakers and etc. they learn how to act at the scene, in front of audience. So, it is hard to perform or learn how to perform while the learning process is not traditional but online. For these students it is important to observe the emotions, expressions and while they are performing the teacher should be able to watch them carefully. Because even one single expression can be wrong or extra. In the situation of online education, it is nearly impossible to do it. We can have some suggestions in order to be helpful to solve these issues.

Decreasing level on education caused by covid-19 is the topic, that, should be taken into consideration. For some, distance education is hard to join, while for others it is easier and more practical. My example university did some projects and events in order to give good solutions to the problem. First of all, according to the decision of Education Ministry of Azerbaijan Republic the universities which have practical lessons meet with the students in a special schedule. So that at least the students can revise practically the things they learned online. To the additional to this I want to give my own suggestions which can be helpful in my opinion. The first thing I would do is giving students a chance which they can use to enter the university. For instance, the dean office can get a list of students who don't have a good opportunity about technology. And the dean office can divide these students to the schedule which will give a permission to use the equipment inside the university. So that, students can come to the university and get busy by themselves one by one. With this, they will not get

crowded and at the same time they will not stay aback from the learning process. Some mobile operators made a chance in order to allow the students to use internet efficiently and so that they cannot be worried about not being able to join the lessons. But the universities can have a contract with these mobile operator companies during this pandemic and they can ask more companies which will be suitable for all of them. Or if it is not possible to sign such a big contract, agreement then the university can do some activities by itself. For instance, it can approximately calculate the monthly expense of internet using for taking part at online lessons in a normal way and can give that amount of money as a kind of scholarship during this period of covid-19. So that none of the students will not be upset or will not be able to use this situation as an excuse in order not to participate. This strategy can be applied to the teachers in another form as well. For teachers the university can get corporative numbers which is easier as the number of teachers is less than students. With the help of these numbers the mobile operator can have one single company and the problem for the teachers will be solved as well. In case the students cannot pay the expense with the amount that the university gave them it will be their problem, because this will mean they used it for other purposes and it will be resulted with absence or low marks. The other solution would be similar to one case which is about completely different deal. However, I think it can be applied in this situation too. In foreign countries there is a system in which the students who study well get a team with the one who studies worse than him or her and she begins to help him or her in his or her lessons. In case at the final this student can teach her partner and he or she becomes successful it is added to her document as a plus. I think this strategy can be applied in this way: a student who has an opportunity of participating at online lessons easily, she invites her friend or share her equipment with her partner and at the final if they are both successful the student who helped the other one can get a plus to her reference and etc. this method would both motivate students to help their classmates and at the same time, they will feel the goodness of sharing and it will make a better education atmosphere. Because not only educated people but also kind people are all we need nowadays. At the end, the results should be able to give an overview how important and threat these limitations are and how

much we should care about them. If this pandemic takes long time, then all these limitations will be more dangerous. Because it will weaken the education level and in this case everything, including medical sector, economy, ecology, sport, art and etc. will be worse. So, we should work and try to find out new solutions and new methods which are more professional, reliable and sustainable. If we are sure about what we can do in case everything turns into worse than we don't need to be worried about the influence of pandemic in education system. We should get ready our weapon before the "enemy" is stronger.

## **Chapter III. Methodology**

### **3.1. Research Method**

Questionnaire is one of the most common methods. The main purpose of this method is to have a major participant during it and get more exact results as near as to the reality. ( De Vaus, 1996) The effectiveness of distant education was assessed through online questionnaire and observation.

Questionnaire: I, with the help of Turxan Suleyman, my director with the International Relations background and a head of the Electronic Management of the Education and Organizing Exams department, put some questions in order to be able to give general view and understanding to my research. The questions were made according to the common and mostly global challenges and ideas which were sounded by the educational participants, such as teachers, students, education workers, parents and so on.

The questions were as follows:

1)What is your role in online education? The choices: a) Teacher, b) Student, c) Education worker, d) Parent 2) What are your challenges in online education? The choices: a) Technical issues and equipment, b) Network and internet, c) Distraction and atmosphere, d) Psychological 3) What are the advantageous sides of online education? The choices: a) Saving time and money, b) Being less stressed and anxious, c) applied compromises 4) Would you like traditional lessons to continue even in the high level of pandemic? Why? The choices: a) Yes. I think any of the measurements cannot be helpful to stop the pandemic and it causes failure in education b) I assume it should have been according to the choice individually and every person had to choose his own education form.

5) In case the pandemic takes long, do you consider it is going to be improvements in online education? Why? The choices: a) No, the online education will never be as effective as the traditional one, as the students are not honest in this situation, b) yes, the long-term necessity will make us accept and improve it, c) I assume that nearly 2 years of online education experience means its sufficient

progress 6) Do you have any idea or suggestions in order to make the online education more effective and productive?

We have five multiple questions and additional to these choices we have one option where the responder can give his or her own idea in case, he or she has a different one. And at the end of the survey, there is one open-ended question, where we wish the responder to be free and say his or her suggestion. This survey is made anonymous and shared with as many people as we could. It was shared via the teachers' social network groups and at the same time education workers and students of these participants. These students are asked to share them with their parents as well.

Observation: this method is used when we want to be sure and stay away from the errors while the evaluation process. Observation method has two types: controlled observation and naturalistic observation. Controlled observation is when the researcher chooses his own place and time and makes his research inside this certain place and period. But naturalistic is when the things happen and you as a researcher just watch out the things and take notes which are needed for yourself. Naturalistic observation requires more time as you don't have a certain time that you can observe the things that you need. But it is beneficial that I didn't have such a limitation of time period. I could have the opportunity to observe all the challenges, the solutions that were discussed and accepted and the implementation process of these solutions to the challenges and watch how they affected to the issues slowly. When you become a witness, who sees all the process from zero to a result, then everything gets clearer in your mind. In this moment I want to notice one more thing that, besides naturalistic observation I was also a participant observer. Because I just didn't stay away and watch what happens, I took part in all these processes that I mentioned. In the decision making, researching about experienced solutions and analyzing their sufficiency into our own case and at the end applying methods of them. If you work on people, you cannot just have a try and see if it will be successful or not, you should have already known this before giving decision to apply or not. As the decision might damage their psychology. So, when we had any decision, we didn't just tell them to do anything, we stayed with them, stand

with them and helped them, the whole university and their teacher and students in order to be sure that they are got used to the process. Because of this factor I should say that I did participant observation as well. (*Observation methods-definitions, types, examples, advantages Hitesh Bhasin 5 March, 2020* <https://www.marketing91.com/observation-method/> )

As I work on the educational institution, I made it according to a real case. During this pandemic I have observed many cases which I have already mentioned above. I used this method because I consider that the most real assumption is the one from real life. During the pandemic, when we first began to apply the online education, to be honest students were nearly happy because of the compromises they were going to be given. They stopped protesting by words and complaining when they heard about the good news. I noticed that, most of them assumed it like a holiday more than a closure or quarantine. Some of them had issues related with technology, network and internet. Students who live in the villages sometimes lived electrical deductions and that made them stay aback from the lessons. But the educational institutions decide an obligation about recording of the lessons so that students who cannot take part on time they can have a look later when the connection problem is solved. The only problem unfortunately wasn't about students but at the same time it was related with teachers. According to my example university, I want to say that the teachers who work here are interested in art and culture, they don't love to do anything related technology and etc. so, it became a real problem to train them how to use all these online platforms where the lessons were going to take place. They were getting anxious and impatient. They weren't making effort in order to learn, so that made our work harder. We used to instruct them, invite them to the university (those who were old and couldn't accept and learn these platforms by themselves at their homes). Thus, step by step we could be able to make them learn slowly and organize the distance education.

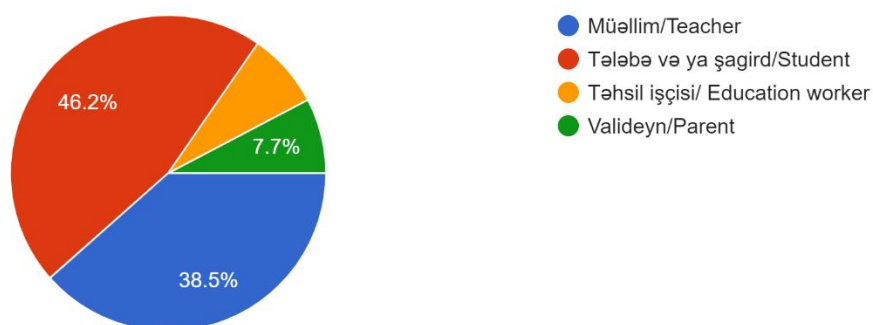
## Chapter 4. Findings

### 4.1 The results according to the online Google survey

The questionnaire were conducted in two universities. Azerbaijan State University of Culture and Art and University of Economics participants took part.

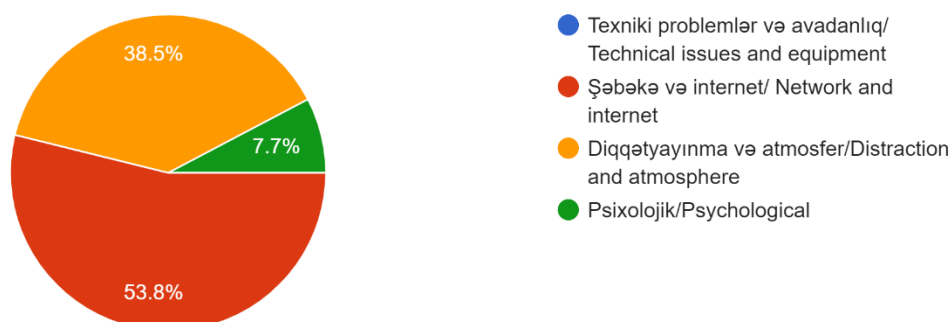
**Diagram. 4.1.1**

Onlayn təhsildə rolunuz nədir?/ What is your role in online education?  
13 responses



**Diagram. 4.1.2**

Onlayn təhsildə çətinlikləriniz nələrdir?/ What are your challengens in online education?  
13 responses

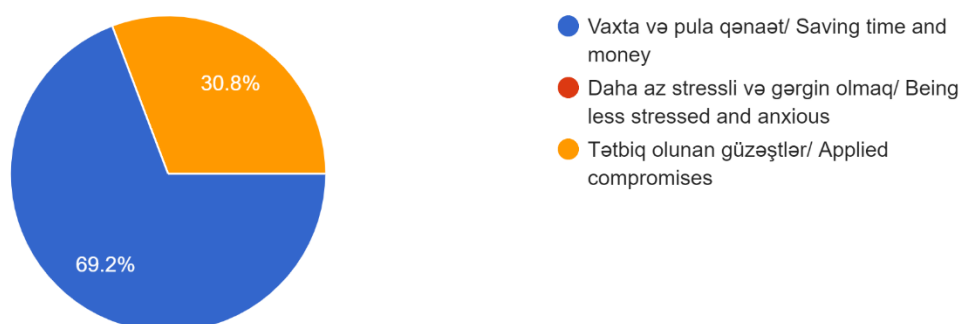


From first diagram we see that in our online survey only 13 respondents had taken part. It is also one of the features which show the interest in online education. The major part of the participants is students and the second place is for teachers. From next diagram we find out that the most widely faced challenge is about network and internet, which about we mentioned in our research. In Azerbaijan it is really a huge

problem for most of the students and even teachers who don't live in the city centers. This feature is more than half percent. The second place is for distraction and atmosphere. Most of the students consider that they don't feel themselves as if they are at the lesson when they are in front of the computers and smelling the meals from the kitchen. This situation is same with some of the teachers as well. A small part only had answered as it was psychological. I would say it is somehow the same with the distraction issue, but there are some differences as well. In this part participants might feel of depression or anxiety because of long lasting pandemic and the issues that are brought because of it.

### Diagram. 4.1.3

Onlayn təhsilin müsbət tərəfləri nələrdir?/ What are the advantegous sides of online education?  
13 responses



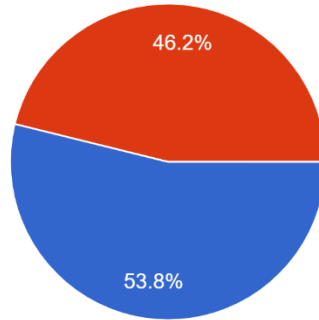
From this diagram we see that our participants have nearly common idea about the advantageous side of the online education. They consider that it is beneficial for saving time and money. When they don't go to the educational institutions, they don't pay for the bus fee or food for lunch or they don't waste their time on traffic. So that is the most important thing they found useful about the distance education process. The second thing is about compromises which are made during this pandemic by the government. These compromises were made both in financial sides and others. The students who study paid were given a chance to pay their annual fee later and some of them were got free of this fee. Other compromise is about the marking system. During the online exams the students weren't behaved that much tough because of the limited lesson conditions during the term.



#### Diagram. 4.1.4

Hətta pandemiyanın yüksək həddində belə ənənəvi dərslərin davam etməsini istərdiniz mi? Niyə?/  
Would like traditional lessons to continue even in the high level of pandemic? Why?

13 responses



- Bəli, Düşünürəm ki, alınan tədbirlər pandemiyanın bitməsini sürətləndirmir və təhsildə gerilik olur./ Yes. I think any of the measurements cannot be helpful to stop the pandemic and it causes failure in education
- Düşünürəm ki, bu individual olaraq seçimə bağlı olmalıydı və hər bir fərd özü təhsil formasını seçməliydi/ I assume it should have been according to the choice individually and every pe...

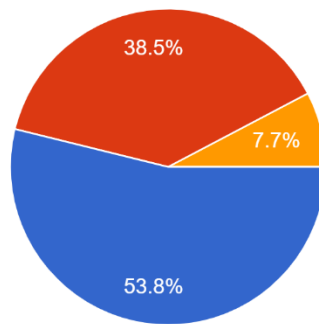
In this diagram, the results are very close to each other. Participants consider that the traditional education shouldn't have been stopped even in the pick level of infection. They assume that in case none of the measurements in the direction of solving or stopping the Covid-19 works, the break in the traditional education will not make a sense. It will only be waste of time. Thus, they consider it causes or will cause failure.

The other half think that, this had to depend on the individual choice. During this pandemic every single learner had to choose himself what to do, to continue education distance or traditional and that would make the people who are lack of equipment or technology luckier as they didn't have to care about this issue anymore. In this case the government wouldn't have to deal so many cases either.

So, my observation was about one single example where I work. All solutions that I mentioned were also the result of the research that I did. So, applying other strategies into my case will be practical, effective and efficient in my opinion. Somehow, I also assume this statement more relevant to the solution process of the issue.

### Diagram. 4.1.5

Pandemiya uzun müddət davam edəcəyi halda onlayn təhsildə inkişaf olacağını düşünürsünüz? Niyə?/ In case the pandemic takes long, do you c... gonna be improvements in online education? Why?  
13 responses



- Xeyir, onlayn təhsil heç vaxt ənənəvi qədər effektiv olmayacaq, çünki tələbələr bu zaman dürüst olmurlar/ No, the online education will never be as e...
- Bəli, uzunmüddətli məcburiyyət artıq onu qəbul edib inkişaf etdirməyimizə səbəb olacaq/ Yes, the long term necessity will make us accept and impr...
- Hesab edirəm ki, 2 ilə yaxın müddətli onlayn təhsil təcrübəmiz artıq onun kifayət qədər inkişafı deməkdir/ I assu...

In this diagram, more than half my respondents assume that online education will never be able to be as effective as the traditional one. As they think that the students are mostly eager to cheat during it. They use the situation to their favor and not struggling to get education in a qualified level they just try to level up and pass the exams with every method they can use. So, this factor makes our respondents think that the effectiveness in distance education is not good enough. The second part believes that as if this situation takes long then the system will get an obligation to be improved. As, we get depended on it we will have no other choice and this will lead us accept it as the traditional education and do our best both as students and teachers in order to make it progressive.

At the end of our online survey, I had an open question and the answers are as the following.

Do you have any idea or suggestions in order to make the online education more effective and productive? This is the last question which requires open ended answers. So, no let's look through these answers. First answer owner says that, in case the distance education is individual then we might get the effectiveness,

otherwise group lessons in this situation is impossible to be effective. Because of distraction problems in internet connection or audio and video might cause waste of time and not being able to appreciate the lesson time as it should be. The next answer is like, “I consider that, first of all as students or teachers or education workers, we have to be able to understand the importance of the situation. We should know that education is the core of the country’s development strategy, so, we should take care of it in every situation. We must be honest to each other, while lesson process and exams. Only by this we can deal with the problem better” here the responder believes that if we can be sure about the integrity then we can say that we have or will have the effective distance education system and we can add or create new strategies for it. Every single person should take its responsibility. The following responder believes that the distance education platform also plays a huge role in the effectiveness factor of distance education. He says that, we should pay attention which platform is used, which functions are available in this platform and how useful and beneficial these functions are. Why do we need them or do we need them at all? All the lessons should be recorded so that those who cannot take part will get a chance not to miss the lessons. And instead of getting radical decisions against those who don’t take part, there can be done some creative activities for those who have weak internet problem and solve them. The next answer owners assumes that, some students lie about their internet connection in order not to take part at the lesson and that’s why they get the same marks and compromises with the ones who really struggles to study and that spoils the justice principle while the exam process and at the same time it demotivates the students who love studying and they assume it is meaningless to show desire and have a try to do their best because the results for all will be nearly the same.

These answers are also proofs that this research ideas depend on many factors, such as technology, motivation, psychology and etc. These were the results according to the online survey and we have the common idea that the respondents don’t stand with the idea of continuing with distance education.

In a word, this research show us that people from different positions such as teachers, students, parents and education workers have different ideas about distance education.

## **Chapter V: Assessment of education quality**

### **5.1 International Criteria of quality assessment of education**

Education process has many steps. In order to have a well-organized, efficient, effective and productive education process we should pay attention to all these steps. Besides giving a qualified education, we, as administrators of educational institutions should be able and attentive to assess it as well. Otherwise, we can never be sure about its quality and success. In all the materials for the higher educational institution students who are in the major related with education, this statement is pinned. In this part we are trying to find out the main accepted standard or experiences which are the best on assessment of education.

According to the conference material these criteria are those: the quality of educational programs, the quality of educators (including teachers, directors, trainers, tutors and so on.), the innovative and technological level and at the same time the capability level for research of the educational institution, the demand and the need of the students who are the graduates of the educational institutions in the market, the quality of the consequences of the students or we can say their learning outcomes quality and at last the success or achievements of those graduates in their sector. (*E3S Web Conferences 210, 18070(2020)*)

We saw the list of the criteria but how can we analyze it according to our own understandings? Let's discuss it a little bit. First criteria mentioned above is the quality of educational programs. A strong, well-thought and experienced or researched program is the main part of the educational assessment. Before beginning to assess, we should be able to give a right decision on choosing which program to use. In the institutions where used the curriculum system we should apply this program to assess as well. For other programs we apply others. Doing opposite would be the same like checking the exam results by the different teacher who didn't teach the students during the term at all. It will not give us the reliably result, as we don't know what is taught so we cannot check the knowledge. The program choosing is very similar case. We know that the applied program is curriculum and we know all about the curriculum

system standards, what the advantageous and disadvantageous sides are so we know how to assess, what to assess.

The second criterion is the quality of educators. This criterion is as crucial as the first one too. In the assessment process we should pay attention on assessing the teachers as well. Because in case we have majority of qualified teachers in our educational institution then we can have a good educational process, otherwise we'll face many problems waiting to be fixed. A good teacher, a highly-educated teachers will give his or her knowledge to his or her students and make them educated too. So, in order to make the teachers not be relaxed we should assess them regularly. This will make them more responsible and they will want to develop themselves according to the demand of modern educational world. But although, we shouldn't miss that, having good knowledge doesn't mean being a good teacher or educator. As, a good teacher also should have the teaching, managing skills. Otherwise, he cannot control his class and cannot give them the information, knowledge they need. So, this case is also faced a lot during the educational process and on assessment process we have to pay attention to evaluate not only the knowledge level of teachers, but also their ability of being capable of controlling his class. Many methods can be used on assessment process of teachers. For instance, testing their knowledge, simulation exams to demonstrate how experienced, sustainable they are under pressure or in emergency cases (this is especially needed for the teachers who are mostly busy with the teenagers or psychologically weak students), observation their teaching and etc. for those teachers who can pass all these levels and come to the last we can give them a class and a month of practice in order to see how well they can deal with it.

In a word this assessment is very important in the purpose of having a qualified educational process. As the teachers are the most irreplaceable indicators of the educational process.

The third criterion is the innovative and technological level and at the same time the capability level for research of the educational institution. Let's look more detailed why this criterion is that important. We cannot deny that technology has a great place in our lives nowadays as we all know it. When the situation is that crucial, education

system requires this technological support and progress as well. Because the reason why the technology improves is the education itself and vice versa. So, this circle is turning and making each get more improved. This mutual dependence seems like the key to the success. Thus, we cannot close our eyes to innovation, its situation on the institution. It is one of the main things which demands attention. The institution where technological equipment, the qualified staff who are able to work with this equipment are major then the result of the assessment of this criterion will satisfy us. In another case we should get busy with reaching that satisfying level, should struggle in order to make that level sufficient to be able to get the progress on this part. How much the education institution is engaged with the innovative progress, how much it tries to follow, to achieve it, that much it will be successful. Because of the cycle we mentioned above. In 21<sup>st</sup> century innovation is the factor that is needed and got attention in every sector. In economics, medicine, art and also educational sectors are cooperating with the innovation. Innovation helps us to find out new methods, new and easy, safer ways to have experiments and at the same time to get more exact results. Research capability is also included in this criterion. A good educational institution should have a good research capability so that the students or the educators can have different type of researches about their own interests and get more informative and progressive. If the knowledge doesn't change, if don't have new information as the time goes by then we cannot develop. We cannot solve existing problems, find out solutions to the diseases and it would lead us to the end soon. Human needs are infinitive, they never end. According to this economic theory we can say that in case our wants, needs are infinitive, our progress, and innovation should be like this as well in order to have the balance. New things give humans new desire to discover, new excitement. So, assessment of this part is necessary in the educational process.

Let's say that our assessment on all the criteria we mentioned above is satisfying. The next step we should pay attention is about the gradulators and how much they are needed in labor market. Educational institutions may have many different majors and can teach students in these directions. But the question is, how much effective, useful is this major, does the country or the humanity need it? The students who study the

majors which are not useful, needed or preferable cannot be employed after they are graduated unfortunately. In this case no matter how well they studied, how much successful they are, they will not be able to get the work or salary they deserve. So it is one of the main issues that should be paid attention about assessment process. In order to have a qualified, useful educational institution we must choose every single detail with attention. We, as educators must have a research on labor market and see which sectors need qualified specialists and we should turn our rotate into that direction. This will make our institutions more useful and beneficial and also will give a great chance to the students in order to find their role in life and get progress, success and the promotion they deserve.

The next criterion is about student assessment. As well as the teachers, students are also the main part of educators, as the education process is made mostly between them. There are many methods to assess the students. One common method is to test them. Students are tested from different subjects in order to assess their knowledge. The other methods are just talking to them individually. This method is generally used for language knowledge or literature which requires to find out their skills in different sectors, such as speaking, listening, reading and etc. nowadays in different countries and in different universities different methods are used. For instance, in the US universities, in most of them students from colleges or schools are requested to have a research paper in order to be accepted to the university. By this they are not only shown their technical knowledge but also, they demonstrate their skills on using all the knowledge they got at the universities. I'll not be able to show literature for this information but I have a cousin who studied from her 10<sup>th</sup> age and entered university by this method, so I can definitely say it. Thus, we can mention many ways of assessing students' knowledge, the main matter is that, it doesn't matter what we use, how effective it matters.



## **5.2 The effectiveness and growth in online education**

There are some researches about distance education but very few of them are on the direction of the learning experiences and perceptions of the learners in distance education. (Bennett, Maton, & Kervin, 2008; Lane & Yamashiro, 2008; Song et al., 2004)

There has been an observational progress in distance education during last years. (Allen & Seaman, 2008; Taylor & Mc Quiggan, 2008; Varvel, 2007; Wolf, 2006). Allen and Seaman assumed this progress being related with the economic. The growth in online enrollments made discussions about the quality of online course, trainings of faculty and students' learning experiences. (Taylor & McQuiggan, 2008; Varvel, 2007). Some scientists consider students as the most crucial stakeholders in distance education (Greener, 2008; Rodriguez et al., 2008) and another part assume this importance belongs to faculty expertise and dedication. (Abel, 2005; Varvel, 2007). In general, these all are the most important components while the evaluating process of online education environments as Moore (1993) considers.

Varvel (2007) came to the result that most of the instructors cannot deal with online classes well because they got used to face-to-face educational environment. Varvel stated that college and university administrators mostly state training faculty in online instructional delivery. In addition to it, learners' perceptions of online instruction have received little research attention (Glass & Sue, 2008; Powell, 2007).

With the influence of last progress in information and communication technology (ICT), in the twenty-first century, the Internet plays an important role for reaching information from anywhere (Davies, Dean, & Ball, 2013; Jones, Johnson-Yale, Millermaier, & Pérez, 2008; Means, Toyama, Murphy, & Baki, 2013).

The level of using the Internet in higher educational institutions has grown up at an exponential rate (OECD, 2010). There is a high level use of the Internet, particularly in university education (Judd & Kennedy, 2010). Crook (2008) emphasized that the Internet is not only giving a chance to be able to get the large learning contents but also providing opportunities to connect and make discussions with others by sharing their ideas and taking part in forums or conferences over the

world. The integration of the Internet in a traditional learning environment has shown a positive effect on academic achievement (Bernard et al., 2004).

During recent years, most researches have made tables about students' perceptions in the direction of online learning. Smith, Murphy, and Mahoney (2003) conducted a study to examine the instrument developed by McVay (2000). They considered "comfort with e-learning" and "self-management of learning" as two most crucial components after factor analysis. Then, Smith (2005) again checked McVay's (2000) instrument using a sample of 314 Australian university students. The research found out that this instrument may be applied for research and practice in the place of student preferences towards distance education. However, Hung, Chou, Chen, and Own (2010) weren't at the same opinion that distance education learner readiness should conclude technical computer skills, Internet skills, and student desire to choose course materials, which were not present in McVay's (2000) instrument. Hung et al. improved the Online Learning Readiness Scale (OLRS). The OLRS had some crucial components such as student control, motivation for learning, computer/Internet self-efficacy, self-directed learning, and online communication self-efficacy but didn't include other crucial components such as, instructional design, social presence, instructor characteristics and trust.

Instructor characteristics, which is also defined by Lee, Yoon, and Lee (2009), is the dimension that instructors are kind, trying to be helpful to learners. Lim, Hong, and Tan (2008) stated that learners were not actively busy with in the e-learning system until they were leaded and informed by their instructors that also actively took part in usage the e-learning system.

The main meaning of social presence was brought by Short, Williams, and Christie (1976, p. 65). Social presence was explained as the "degree of salience of the other person in a mediated communication and the consequent salience of their interpersonal interactions." In other words, Tu and McIsaac (2002) defined social presence as "a measure of the feeling of community that a learner experiences in an online environment" (p. 131).

Grandison and Sloman (2000) explained trust as “the firm belief in the competence of an entity to act dependably, securely and reliably within a specified context” (p. 4). Wang (2014) stated that making and maintaining trust are very crucial for the success of distance class because it will decrease the dropout rate. Sahin and Shelley (2008) also emphasized that if the learners are sure that the distance learning is beneficial, they will be more eager to take part in that course. According to the studies above, we summarize that trust in online learning is an important component of learners’ perception about distance learning.

## **Chapter VI. Discussion and conclusions**

This research was made in the direction and purpose of analyzing the online education system, the issues and challenges faced during its application and the solutions that may be helpful to it. We looked through many experienced methods and ways that were used for this aim, but to the additional to this we have our own suggestions as well. First of all, before giving our ideas in this purpose I want to mention about one main matter. I consider that every single solution or try to the solution should be thought according to the situation of the country or the educational institution, as each of them has different characteristics, strategy and policy, so, the issues that are faced are different as well. Before giving any advice, we should know details about it. My suggestions are according to the university I am working right now. The situation is very close and obvious for me here, as I am one of the participants and it is not difficult to claim anything about it.

At Azerbaijan State University of Culture and Art as we know the lessons are mostly practical and organizing them online is harder than others. But if we want to make it as much effective and efficient as we can we have something to do. Firstly I consider that if we make the lessons into small groups which exist 2-3 students then it would be more effective. Like, every sixty minutes is for only these students, then the lesson will waste less time on connecting issues or internet distraction cases. So that, student also can be ready as they will know that they don't have to wait for someone else's internet issue to be fixed. It would be beneficial for the teachers too. They will now feel stressed or anxious while living problems several times during just one single lesson, as it also causes demotivation and losing concentration. When the teachers cannot pay full attention to their lesson organization it directly influences the students as the same way. So having lesson groups which include few students will be helpful to solve this problem partly. At least, for our example university it would be effective in my opinion. For other universities it also can be applied according to the internet level of the students. Like, the universities can list the students who have weak connection problems and give them a chance to connect in small groups in the time of the day when they have this problem in a low level and that would make their

participation get better. For instance in some regions at nights or evenings the electric doesn't work as normal and the students who live there can have lesson during mornings or afternoons.

The other solution that I want to suggest is about marking system during exams. We all know that at the beginning of this pandemic, many countries including Azerbaijan had this experience suddenly and that made us challenges for both students and parents as well as the educators. So, government made some compromises in order to be able to behave tolerant to the students and not make them confused thinking this issue will be solved soon. But as the situation took long, students got relaxed that the deals will go the same and still they don't have to do anything. Government began to see that these compromises might be helpful for the beginning to some students who really need, but most of the students use the situation for the favor of themselves in the purpose of doing laziness and not studying as needed. In order to solve this problem I would suggest to have more creative questions during exams much more than direct factual questions which can be copied from the materials or mates. In case the questions are creative the students must have listened and studied the materials during lessons so that they have information about the case and they can answer all the question using their own words in order to explain their own ideas. For instance, let's say that it is history exam and the teacher asks about the year of the creation of one country. It is just a game to find and copy this information from the internet or anywhere else. But if the question is put in another way which requires more creativity and analyzing skills then it would be impossible to be copied. For instance the teacher might ask like, which conditions made a chance for the creation of the country and which specific characteristics were suitable for the period that this country was created? This question has several questions inside it. In this case teachers even can let the students do open book exams as they cannot find the answers exactly. But they can learn while searching for the answers and it is also the part of the teaching process in my opinion. In order to get a good mark from this question the student should know the whole period when the country was created and at the same time should have information about the conditions

which made possible for this creation too and of course for all of these should know the year as well.

In a word, we can have many suggestions but as this case is new we don't have many experience about this situation, so everyone uses nearly the same methods, thus, it is difficult to find new solutions. But, as a conclusion I assume these solutions are enough for having a well-organized distance education process in case they are applied in a right way. And the other main matter is about acceptance of the situation by the students and educators. If they understand and adapt to the situation and struggle together in order to make it better, they will definitely reach it.

This research demonstrates us the importance of the online education in urgent situation like the one we are living currently. We saw that many different countries have applied various strategies and methods in order to be able to solve this problem effectively and sustainably. All the educational institutions and their managers including teachers and other education workers gave their suggestions in this direction. Everyone was trying to solve it individually as well as organizationally. This period was challenging but at the same time it taught us how to be unite and deal with one problem all together. Here we saw that before trying to find out the solution we must have looked through carefully about the issue itself detailed. If we don't know what is wrong, we cannot solve it as well.

The importance of this thesis is so crucial. Because of the decreasing level on education caused by covid-19 is the topic that, should be taken into consideration. Research was challenging, as it is individual. For some, distance education is hard to join, while for others it is easier and more practical. My example university did some projects and events in order to give good solutions to the problem. First of all, according to the decision of Education Ministry of Azerbaijan Republic the universities which have practical lessons meet with the students in a special schedule. So that at least the students can revise practically the things they learned online. To the additional to this I want to give my own suggestions which can be helpful in my opinion. The first thing I would do is giving students a chance which they can use to enter the university. For instance, the dean office can get a list of students who don't have a good

opportunity about technology. And the dean office can divide these students to the schedule which will give a permission to use the equipment inside the university. So that students can come to the university and get busy by themselves one by one. With this, they will not get crowded and at the same time they will not stay aback from the learning process. Some mobile operators made a chance in order to allow the students to use internet efficiently and so that they cannot be worried about not being able to join the lessons. But the universities can have a contract with these mobile operator companies during this pandemic and they can ask more companies which will be suitable for all of them. Or if it is not possible to sign such a big contract, agreement then the university can do some activities by itself. For instance, it can approximately calculate the monthly expense of internet using for taking part at online lessons in a normal way and can give that amount of money as a kind of scholarship during this period of covid-19. So that none of the students will not be upset or will not be able to use this situation as an excuse in order not to participate. This strategy can be applied to the teachers in another form as well. For teachers the university can get a corporative numbers which is easier as the number of teachers is less than students. With the help of these numbers the mobile operator can have one single company and the problem for the teachers will be solved as well. In case the students cannot pay the expense with the amount that the university gave them it will be their problem, because this will mean they used it for other purposes and it will be resulted with absence or low marks. The other solution would be similar to one case which is about completely different deal. However I think it can be applied in this situation too. In foreign countries there is a system in which the students who study well get a team with the one who studies worse than him or her and she begins to help him or her in his or her lessons. In case at the final this student can teach her partner and he or she becomes successful it is added to her document as a plus. I think this strategy can be applied in this way: a student who has an opportunity of participating at online lessons easily, she invites her friend or share her equipment with her partner and at the final if they are both successful the student who helped the other one can get a plus to her reference and etc. this method would both motivate students to help their classmates and at the same time they will

feel the goodness of sharing and it will make a better education atmosphere. Because not only educated people but also kind people are all we need nowadays.

In Azerbaijan as well as the other example countries we saw that the government had done many activities and compromises in the organizing process of distance education in mostly public schools. Students got equipment, such as laptops, tablets and etc. in order to be able to join the online lessons. This activity wasn't made all over the country, but in the regions where it is needed more. Then at the universities the students who had difficulties to pay the annual fees, were given a chance to cancel the date of the payment and some even got free from these fees till the pandemic finishes. The ones who had lost one of their parents and other was not capable of working with the reason pandemic or other, were free from paying fees. The students who had no parents also got a chance of this compromise. People whose works depended on pandemic and because of it they couldn't work, their children also got compromises, being depended on the conditions some got free some got a chance to pay later. At the same time, during this pandemic, a new decision has been accepted by the Education Ministry about the "Educational credit" which made students' life easier. According to this decision students could get money in order to pay their annual fee and they could pay it after they graduated and they are given 2 years to find a job and pay it back. In addition to this, during these 2 years if the student goes to military or has a baby, he or she is given extra time in order to cover this time and pay the credit back. This was one of the most important compromises which is made during the pandemic for the students. Azerbaijan is one of the countries which did the best activities in order to support the education process in its development. During this time, students, as well as their parents and teachers got psychologically and physically tired and demotivated. They felt like it is never going to end as day by day the infection numbers were getting high and the situation was getting worse. That is why, stopping would be a supporter this depression. Instead of this all the countries and their educational managers as well as other sectors searched about the best solutions and analyzed which way to be the best and then they applied. Still the whole world is trying to get rid of this virus. But



even the countries which are nearly overcome it they also try to protect themselves in order not to go back those days.

As the result of this thesis, it was found out the challenges and solutions which can be appropriate for all these difficulties. At the same time, one more issue is faced as well. The matter is that, all the solutions are not suitable for all the educational institutions. Each university or school or other institute has its own characteristics, strategy and policy which they manage their organization with.

## References