

## Challenges and Perspectives of Online Teaching: A Lebanese Empirical Study

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### **Abstract:**

*From traditional classroom to distance learning, to online learning, an evolution throughout the years. Schooling systems in Lebanon this year differentiate from any systems adapted previous years and that is what the situation provoked. What is e learning? Education is to be active with your mind, but is it necessary active with your body also? That is the question: Do we have to be present mind and body in order to learn effectively? On the other hand, is online education in fact, better, worse or as good as traditional education? Well, in this pandemic, the whole world is fighting Corona virus (Covid-19), it is indispensable to ask these questions. The pros of traditional studying, we mention accessibility, structure and discipline, the feeling of sociability and solidarity, ability to work in groups, eye contact, and the physical interaction. The cons are schedule stiffness, higher costs of money and time, loss of individualization in a large group of people. Online education on the other hand has its positives from time and cost effective, flexibility, more learning opportunities (wide range of courses), and access to the material anytime anywhere. The negative side for it is the lack of any social interaction, lack of experience and the most spread problem is technology and technical issues. Many theories support traditional classroom versus many studies and experiments defend online education. As part of our research methodology, what we used in this research is a mix between both qualitative and quantitative methods to reach the designated results. A qualitative study has taken part of our work, online forums are considered one of the most used internet research methods. A quantitative methodology with probabilistic sampling is used next, numerical data needed to make this comparison and test the hypothesis of which learning method is preferred by the students. An online survey was conducted online and sent randomly to university students across Lebanon only who learned and took courses online during the closing of the country. We needed their testimonies on online learning during this pandemic. We can conclude how most people are confused with these newest strategies concerning online learning, it is not strange to feel and be neutral with everything new. For some people (35%), online learning is time consuming and not very effective when it comes to time management. For others (65%), thought that online learning is more efficient than traditional classrooms. We manage to see people balancing in the middle and evaluating online learning closer to similar traditional learning when it comes to effectiveness. While the second best answer was "worse" when people affirmed how bad their experience was in the following questions. When online learning, students face many problems besides internet issues well expressed in this survey, furthermore, students account on different factors to determine their success or failure at the end of academic years. Following recommendations and actions that came as propositions of solutions to online learning problems at the Legislative Level, at the Educational and Social Level, at the Technical and Digital Infrastructure Level, and finally at the Practical and Performance Level. The most prominent option for the following stages, already universities implemented this newest strategy which is Hybrid learning or Blended learning. When it comes to a conclusion, there is no right or wrong answer in case of online versus traditional education, the decision is yours. True it reflects your personal preferences and the ways that best suits you, but you cannot ignore nor deny that some learning methods are more effective and efficient than others.*

**Keywords:** Education, Online learning, Traditional classroom, Students, Instructors, Pandemic of Covid-19, Online platform, Teaching, Evaluation/assessment, Blended learning.

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### **I. Introduction**

"E-learning shouldn't be a casual joy ride on a Sunday afternoon with the cruise control engaged. The sole purpose of eLearning is to teach" (Christopher Palm)<sup>1</sup>. When it comes to eLearning, content means everything<sup>2</sup>. Life is education, learning and a nonstop process, as long you live. In the world we live in today in 2021, learning and education were shaped to match the requirements of this century. From traditional classroom to distance learning, to online learning, an evolution throughout the years. And here, is the center of life and the fruit of any change is adaptation, we welcome change, we seize opportunities and we adapt in the best way

we should. The unexpected events happening worldwide affecting our closest environments, our lifestyles and surely our mindset will lead us to change. Although, change is received differently by each one and not accepted in the same level<sup>3</sup>; it is mandatory. Educators, students and parents learning to accept it even in the hardest ways. Schooling systems in Lebanon this year differentiate from any systems adapted previous years and that is what the situation provoked. For that, the Ministry of Education and Higher Education has launched a National Distance Learning project to provide e-learning support for public schools that uses national television and YouTube to deliver lessons during the global pandemic of Covid-19<sup>4</sup>. Learning remotely has become the only resort for all the schooling systems, universities and other educational institutions<sup>5</sup>. Nevertheless, was Lebanon ready for online higher education? Here, we are talking about university degrees when online teaching was the only harbor.

Many serious events happened during the academic year 2019-2020, that had direct and indirect implications on the present and future of the educational sector in this country. Lebanon has a considerable number of higher education institutions that reach 50<sup>6</sup>; this may drop due to the deteriorating of the socio-economic situation. Lebanon has been suffering from many crises years ago, it reached its peak since October 2019, till date, we are witnessing an accelerated inflation fueled by the ongoing depreciation of the Lebanese pound, that led to a rapid increase in the poverty rate that reaches 45%, with 22% of the Lebanese population expected to be living in extreme poverty conditions<sup>7</sup>. All of that, and the corona virus swept into our borders to shut down the country completely. All public, private institutions, shops, roads and highways are in complete lockdown.

Concerning university students, over 190,000 went home<sup>7</sup>. Since universities are always on the fastest pace when it comes to technology, we can imagine the disaster of the schools suffering.

Before jumping to conclusions, it is necessary to highlight some key points that reflect the role of the educational systems and purposes.

Since the beginning of time, and learning is the tool, the mean and the purpose. Perceived in many different ways from philosophers, thinkers and specialists. To begin with, Socrates talked about the theory of learning by questioning everything<sup>8</sup> and the unconventional inquiry to always learn, as the process of learning does not fade away unless we are dead. Knowledge is the ultimate virtue for people to improve their lives<sup>9</sup>. As learning comes from within for better understanding of oneself and the surrounding and live peacefully with it. This knowledge brings you to awareness so you will live in the now. "The only good is knowledge and the only evil is ignorance" (Socrates). Well, knowledge is deliberate, treated and explained by philosophers, authors and thinkers throughout ages. Epistemology is the philosophy of knowledge<sup>10</sup>, and because there exist no absolute truth, it is perceived in so many definitions. A process of interpretation, understanding, awareness and familiarity of situations and people that lead to conclusions and assumptions<sup>11</sup>.

Knowledge and learning are two inseparable, complementary paths<sup>12</sup>. When learning is the process, knowledge is the experience, and knowledge becomes the power of absorbing what you learnt and benefit from it. Education is the recipe for the knowledge is to bake. The ongoing process of change is a person's knowledge, mind and behavior is learning. This process evolved through time and took different forms of actions and establishments.

Learning was perceived as a product (between 1960-1970)<sup>13</sup>, later on as a process, and the concept continued its development until our days through different learning theories.

Table no 1: Shows the five orientations to learning.

In this table, the development of the learning concepts, perspectives and theories is obvious. We are in a constant changing world, and that is how the human being developed from apes 5 to 8 million years ago.

**Table no 1: Shows the five orientations to learning.**

Aspect	Behaviorism (1913)	Cognitivism (1930)	Humanism (1940)	Social cognitive theory (1986)	Constructivism (1995)
Learning theorists	Thorndike, Pavlov, Watson, Guthrie, Hull, Tolman, Skinner	Koffka, Kohler, Lewin, Piaget, Ausubel, Gagne	Maslow, Rogers	Bandura, Rotter	Bruner, Dewey, Lave and Wenger, and Vygotsky
Learning process	Change in behavior	Internal mental process (including insight, information	A personal act to fulfil potential.	Interaction with and observation of others in a social context	Learning is creating meaning from experience

		processing, memory, perception			
Learning locus	Stimuli in external environment	Internal cognitive structuring	Affective and cognitive needs	Learning is in relationship between people and environment	Individual and social construction of knowledge / understanding
Purpose in education	Produce behavioral change in desired direction	Develop capacity and skills to learn better	Become self-actualized + autonomous	To learn new roles + behaviors	To build understanding and knowledge
Educator role	Arranges environment to elicit desired response	Structures content of learning activity	Facilitates development of the whole person	Model and facilitate new roles and behaviors	Works to help build settings in which conversation + participation can occur.
Manifestation	Behavioral objectives Competency - based education Skill development and training	Cognitive development Intelligence, learning and memory as function of age Learning how to learn	Andragogy Self-directed learning	Socialization Self-directed learning Mentoring	Experiential learning Transformational learning Reflective practice Communities of practice

Education, here comes as the tool for learning, the methodology that leads to information acquisition. The evolution of civilizations through history is accompanied with the building and rebuilding of education by itself to adapt with the societal, environmental, humanitarian resources. The prehistoric stages were characterized by the paintings on the walls, in caves, that how the education system grows and follows.

From writings on the wall, to cave paintings, to the second prehistoric stage where the emergence of educational pseudo systems appeared. Students, teacher and a classroom constitute the model of the educational system from years until nowadays. A classroom under a tree, to an internal room, to a building with different classrooms with a chalkboard, to a white board, to a virtual room with online access.

With the internet evolution, all has changed since then. From classical schools and traditional education to virtual classrooms and online schooling. This situation revealed the benefits and limitations of teaching practices confronted with the digital transformation challenge<sup>15</sup>.

First, traditional educational system with traditional face-to-face classrooms is a teacher-centered instruction given with face-to-face interaction with students in a physical place. It developed from recitation and memorization techniques to more interactive ones over the years<sup>16</sup>. Here we can say that the population moved from conventional educational system to a more modern one.

Second, distance education started more than a century ago, although it was not accepted universally relatively to face-to-face education. A more clear definition, when the instructor is distant (geographically separated) from the students and provides the content of the education through media and other forms of technology<sup>16</sup>. Distance learning was viewed as part of higher education learning, but with time, is became integrated in all levels of education and all educational institutions and systems. According to Fox<sup>17</sup>, what is in dispute is not whether distance education is ideal, but whether it is good enough to merit a university degree, and whether it is better than receiving no education at all. The argument propose itself, the student learn far too little when the teacher is not personally present, because the students learn from the teacher far more than textbooks.

## II. Literature Review

Online education derived from distance education where the instructor is also distant from the students and the delivery of information happens online using the internet and various platforms. A variety of platforms recently includes video conferencing and other chatting methods between the teachers and the students.

Well, in this pandemic, the whole world faced together fighting Corona virus (Covid-19). Even if, you are not a supporter for the online education system, everyone was obliged to practice. No one had the choice but to continue and put more efforts into it because the danger was real, fast and invading the world without any remedy for stopping it.

For us to know which path to take, we ask, what are the advantages and disadvantages of each learning methodology, what the implications of each one are and what can be done better for the sake of teachers and students. Many research were done concerning the above issues especially in Europe and the United States of America, studying the effectiveness of online learning by doing experiments and testing theories that support traditional and online education.

When going through the pros of traditional studying, we mention accessibility, structure and discipline, the feeling of sociability and solidarity, ability to work in groups, stability and organizing study plans and most importantly is the eye contact, the physical interaction between the students and teachers that cannot be attained online (defenders of traditional education). The cons are schedule stiffness, higher costs of money and time, loss of individualization in a large group of people<sup>18</sup>.

Online education on the other half has its positives from time and cost effective, flexibility, more learning opportunities (wide range of courses), and access to the material anytime anywhere. The negative side for it is the lack of any social interaction, lack of experience and the most spread problem is technology and technical issues<sup>19</sup>.

Theories supporting tradition classroom learning are the behaviorism, cognitivism and constructivism. Each of these theories support the definition of how, what and why people learn.

- Behaviorism “WHAT”: focus on observable measurable behaviors (memorizing)
- Cognitivism “HOW”: focus on how people learn (problem solving and mind mapping)
- Constructivism “WHY”: focus on the learners role in their own learning (social and connected learning)<sup>20</sup>

The experiences and examples of these learning theories are what we and every child experience in the daily life inside a classroom. If it has been schools, universities, or any kind of educational institution. Trying to fit in this wood chair, your eyes straight focus on the board in front of you, rushing into notes and all the textbooks on your table, trying to manage the space and listen carefully to the sound of explanations. We all have been there, somehow at a different period in our lives.

Now, we cannot neglect the importance and the implications of these traditional theories over the time when they ensured the continuation of education and the road to knowledge. Nevertheless, with all the new technology in networking, the electronic devices and the internet, we cannot neglect how they make our lives easier and cut down long hard road into smaller easier shortcut.

Different studies, experiments were done all over the world to test the effectiveness of introducing the technology into learning and education<sup>21</sup>. In other words, distance education and next, online education were a dilemma and a research project over the years. In many different countries like US, India, China, South Korea, UK etc., this problematic was tested decades ago and researched for better guidance and long-term goals such as higher quality education<sup>22</sup>.

The international efforts on online education shows that the latter is a global phenomenon. With globalization, internet infrastructure lines, UNESCO’s motto “education for all” made the spread of online education even bigger<sup>23</sup>. A worldwide initiative “Global Virtual Organizations for Online Educator Development” details how the World Association for Online Education (WAOE) focuses on professional ethics with enjoyable online cultural activities. Its work is not centered in one geographical area but distributed as a virtual learning environment (VLE) and an open source-learning environment<sup>23</sup>.

Recent studies and experiments to defend the online learning theory and support its strengths. During the 1990s and until now, the approach of online learning as an online participation emerged to support the online education system. That is, if we want to enhance online learning, we need to enhance online learner participation. Differently than simplistic research on the measures of online participation, this newest study propose that online participation that is online learning is<sup>24</sup>:

- A complex process of maintaining relations with others
- Must be supported by physical and psychological tools
- Is not the same as talking or writing
- It involve peer collaborations

In this perspective, the current state of practice of online learning can be flipped by the potential of the theory of online learning as online participation.

According to a recent MIT study, massive open online courses (MOOCs) are just as effective as what has traditionally been taught in a classroom or a lecture hall<sup>25</sup>. There is a renaissance occurring in higher education right now, and that is how students choose online experience and that the number of nontraditional learners is increasing worldwide<sup>25</sup>, for so many reasons. Most convenient recent one is that online learning prepares you to life learning when it comes to independency and self-discipline, acquiring new skills and learn to grow while on the job.

Moreover, many theorists and practitioners state that online learning constitute one a subset of learning in general<sup>26</sup>, and two a more flexible substitute to education in times of space and schedules.

A very recent study done jointly by NRUHSE researchers and US researchers and published in Science Advances, shows that online learning expands access to a higher educational level with the ability to increase students enrollments by 15-18% without any additional costs<sup>27</sup>.

With all the alterations and chaos worldwide, instructors and leading educators in this field need to stay up-to-date and always trying their best to accomplish this humanitarian cause, which is Education. In Lebanon, research and experiments started and doubled during the corona pandemic. From the beginning of 2020, when the entire world was going upside down due to corona virus, we were in a middle of an academic educational year when everything was forced to stop. Although, and similar to any country, schools and universities were forced to continue the education online. In addition, research studies, forums and experiments were executed more frequently to follow these sudden changes and integrate new strategies in the newest forms of learning.

### **III. Research Methodology**

To do that, to search and research, to upgrade all educational systems, experiments are needed. To check how traditional learning was done, how online learning was integrated, what are the difference between those two? We needed to do a comparison and test if they are the same, which is better and which is worse. Put them against each other and analyze the data of our research.

Since March 2020, and many studies have been made in Lebanon to upgrade and pursue the education in this pandemic. Most universities in Lebanon have already existing Learning Management Systems (LMS), considering various platforms to deliver online contents to their students, but also most of them too, cannot shift to total online modality systems. Well, yes that is the hard truth here in Lebanon, we lack of modern technology and other supporting systems to face all kinds of pandemics going through all kinds of crises we have (political-geographical, socio-economic, financial-banking, and health crisis at last). Universities in Lebanon are in short of resources to act immediately and move directly to teaching online<sup>28</sup>.

As many private universities are struggling to continue the online teaching experience, it is important to understand what the public university did and is doing to reach over 80,000 students in all majors and across the country. Making the online experience reachable for all, and delivering the appropriate content is a struggle that all universities are facing. With close to half of the population living in poverty, it is expected that a bigger number of students in higher education is suffering economically and cannot even afford performing online<sup>28</sup>.

As part of our research methodology, a qualitative study has taken part of our work by launching an online forum on E-learning Ecosystem and Modern Educational Technologies that was held on September 2020.

Senior academics, researchers and experts participated in high-level discussions about the impact of the Covid-19 crisis on the educational sectors, they evaluated and shared their experiences and visions on all aspects of sustainable e-learning, especially the components and modern education technologies, in order to build a realistic vision to save the next academic year.

We worked jointly with many universities, faculties, organizations, administrations.. for consecutive days intending to reach several purposes, research the possibilities and attain certain recommendations in different fields of study, which are:

- Government responsibilities to build a national e-learning strategy discussed between members of the parliament, CRDP consultant, President of the Public University
- E-learning system components (content providers, consultants, and infrastructure) discussed between the Chairman of the Parliamentary Communications committee, Former minister of Telecom and

chairperson of UK-Lebanon Tech Hub, General Director of Ogero Telecom, General Director of the Ministry of telecommunications, Academic Innovation Manager at American University of Beirut

- Blended Learning: combining human and E Learning to enhance education proposed and featured by Professors and advisors from public and private universities in Lebanon
- The e-learning experience in Lebanese universities: challenges and prospects debated between Professors and advisors from public and private universities in Lebanon
- E-learning experience in America and Europe shared by the vice president of online education at Florida State College, Jacksonville, USA, in cooperation with International vice-chancellor, UNED, SPAIN, and a linkup with the president of the CRE, SIRG, University of Craiova, ROMANIA

Online discussions could generate quality data, similar to face-to-face interviews and focus groups when they were attainable. Achieving methodological rigor, complying with the principles of an ethical research.

In fact, the methodology used in this research is a mix between both qualitative and quantitative methods to reach in the best accurate way the designated results.

Every research and new study is structured in the best fit to reach the designated search aims and objectives. Any researcher should be aware of to design systematically the study. First, what data to collect, who to gather these data from (sample sizing), next, how to collect and analyze the data by choosing the right data collection and analysis methods. Here, our purpose study is to check statistically how much online education was accepted by the students and do the right comparison between the traditional classroom vs online classes.

A quantitative methodology is used next, numerical data needed to make this comparison and test the hypothesis of which learning method is preferred by the students. So a quantitative study with probabilistic sampling where the sample is chosen randomly to represent the population. Our main objective was to test online courses taken by university students and their effectiveness comparing them with the older form of education. A generalizing population of university students in Lebanon. According to qualtrics.com, sample size calculator, the ideal sample size was calculated<sup>29</sup>:

- Population: 10,000
- Confidence interval: 95%
- Margin of error: 6%
- Ideal sample size: 260

An online survey was conducted online and sent randomly to university students across Lebanon only who learned and took courses online during the closing of the country. We needed their testimonies on online learning during this pandemic.

In addition, we are aiming to test this specific hypothesis, with large numeral data so large-scale survey is the most adequate data collection method. The ideal sample size was successfully attained and we reached a total of 307.

The questionnaire was prepared after a long research to be able to ask the most effective evaluative and timesaving questions. It is divided into three sections: the first was personal questions about oneself and their own learning specifications (like the language, educational year, how much time spent on the internet per day), second part, questions for each one's knowledge and experience with online learning with some open questions at the end for the public to reflect and express their opinions about the problems they faced, what could be better and last part is one question that came as an evaluation of the situation, in order to offer help, support and recommend future research. The analysis for this data in a quantitative research is done via excel sheets and software, through calculation, charts and other descriptive statistics forms.

It is important to state that after choosing a suitable mixed research methodology that serves the objective of this study that is knowing if online education is in fact better, worse or as good as traditional education, among university students in Lebanon.

#### **IV. Finding and Analysis**

The survey is an Online Education Assessment across Lebanon, since online education has become indispensable in the world we live in now, especially during covid-19 pandemic, this survey will help us assess online courses given at universities and provide help and solutions when needed.

First of all, section 1: “Information about you”, in this survey showed us:

- 77.6% who filled the survey are females, 22.4% males
- Most university students are between the ages of 18-22 (51.3%)
- From all faculties and majors in different universities
- Languages vary between English, French and Arabic
- Bachelor degree is studied mainly, second is the master’s degree and 13.4% study other degrees with basically four courses and more per semester.
- 39% of the people completing the survey spend more than 10 hours per day on the internet for educational purposes, 32.6% spend between 6 and 10 hours per day
- 55% spend between 1 and 5 hours per day exploring the internet and social media

Table no 2 Shows answers on survey questions, people were asked about their position against statements; how much they agree, disagree or stay neutral for different questions concerning the experience of online learning and comparing both experiences together (traditional vs online classroom).

**Table no 2:** Shows answers on survey questions

Scale 5 to 1 (5=Strongly agree, 4=Agree, 3=Neither agree or disagree, 2=Disagree, 1=Strongly disagree)	Scale over 5	Scale over 100
I am able to easily access the internet as needed for my studies	3.31	66%
I am comfortable communicating online and using laptops	3.37	68%
I am willing to actively communicate with my classmates and instructors virtually	3.05	61%
I am able to manage my study time effectively and easily complete assignments on time	3.21	64%
I prefer a lot of intervention with my instructors and/or teachers	3.56	71%
I feel comfortable communicating online in English	3.31	66%
I feel comfortable composing text on a computer in an online learning environment	3.42	68%
I can ask my teacher questions and receive a quick response when it comes to online teaching	3.23	65%
I feel that face-to-face contact with my instructor is necessary to learn	3.87	77%
Learning is the same in class and at home on the Internet	2.4	48%
I believe that learning on the Internet outside of class is more motivating than a regular course	2.64	53%
I believe that a complete course can be given online without any difficulty	2.87	57%
I have a computer, or am able to get access to one easily on a regular basis	3.96	79%
I am able to access the internet from my house	3.88	78%
I am self-motivated and able to work independently	3.9	78%
I think it would be exiting to attend classes with people rather than online courses	3.81	76%
I am interested in new technologies which may require new approaches to learning and problem solving	3.9	78%
I believe that high quality learning can take place without face-to-face interaction	3.09	62%
To what extent the internet and the industry of informational technologies enabled the continuation of education during the corona-virus pandemic	3.51	70%
Do you think schools and universities can last for only in e-learning form	2.67	54%

It is interesting to see that most people don’t agree that learning is the same in class and at home on the internet, online coursing isn’t as motivating as classroom learning, and not an entire semester and all courses can be fully given online. In other words, schools and universities cannot last for only eLearning strategies (scale less than 3 over 5).

On the other hand, people agreed that even if they have access to their computers and internet networking, they are more excited to attend classes with other people rather than online courses. Even though, most of them believed that internet enabled the continuation of education during pandemics, they needed face-to-face interactions with the instructors to feel more engaged and learn effectively (scale more than 3 over 5).

What is not very surprising to see is that most scales are “3” with certain decimals, and that represent “Being Neutral”, we can conclude how most people are confused with these newest strategies concerning online learning. It is not strange to feel and be neutral with everything new, because everything seem unusual, scary at first until our brain see it more often and get used to it. We need time to accept everything new, and adapt to this change; that is why everything seems so confusing and perplexing at the beginning. Since, in Lebanon we did not experience that much of online and distance learning before the global pandemic.

Chart no 1 Shows distance learning’s time management. For some people (35%), online learning is time consuming and not very effective when it comes to time management. For others (65%), thought that online learning is more efficient than traditional classrooms, maybe because they can avoid traffic and transportation expenses. Manage different issues while staying at home and taking online courses. We see it is a controversial topic where is it time saving for some, facilitating their life and developing skills and inefficient, uncontrollable for others.

**Chart no 1:** Shows distance learning's time management.

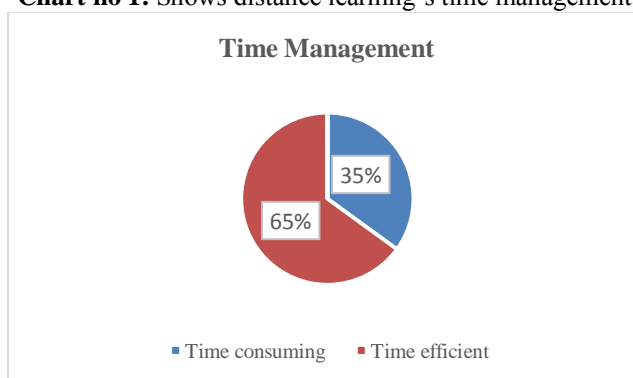


Chart no 2 Shows students perception towards online education, when asked if online learning is in fact better, worse or as good as traditional learning. We manage to see 46% of students balancing in the middle and evaluating online learning closer to similar traditional learning when it comes to effectiveness. While the second most rated answer was not "Better" for 37%, when people affirmed how bad their experience was.

**Chart no 2:** Shows students' perception towards online education.

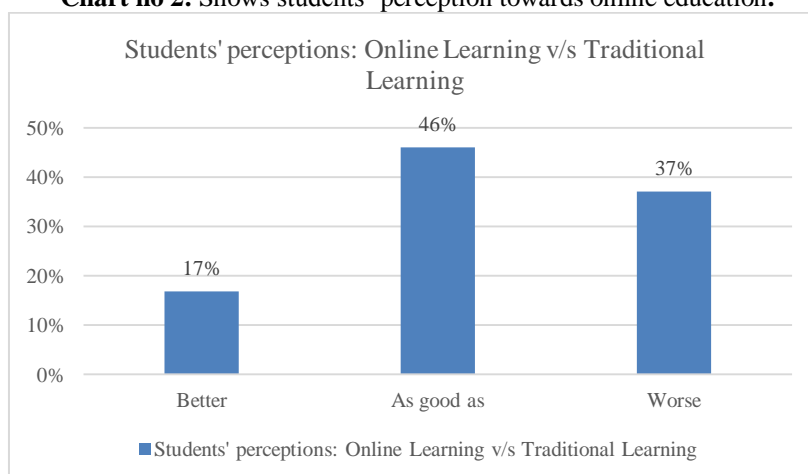
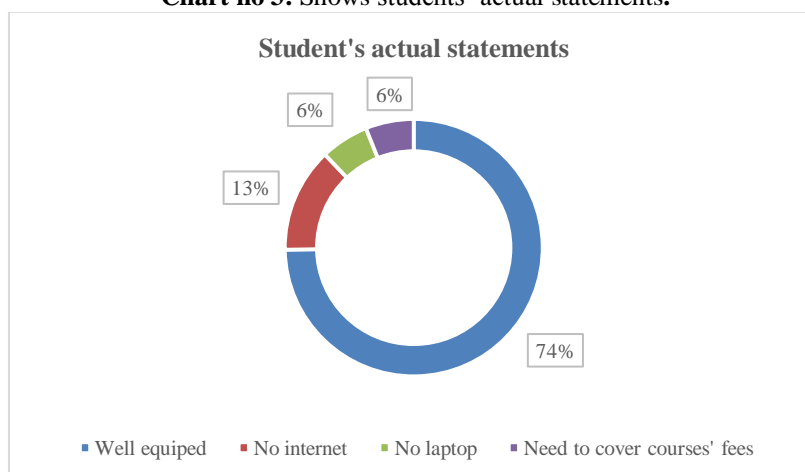


Chart no 3 Shows students' actual statements.

- 74% agreed upon: "I have a laptop, internet and everything is normal"
- 13% agreed upon: "I need someone to cover the internet fees"
- 6% agreed upon: "I need a laptop"
- 6% agreed upon:
  - "I don't have a laptop, and need my courses as hard copies"
  - "I need someone to cover my copying fees"
  - "I need someone to cover USBs prices to get my courses as soft copies"



Chart no 3: Shows students' actual statements.



Even though, 74% of the people stated that the situation in their homes are most probable to normal, help is needed on different levels in different households.

Furthermore, probably most Lebanese students are struggling from one main problem covering all Lebanese territories from North to South with no exceptions, which is electricity cuts<sup>30</sup>, bad infrastructure with bad connections and internet problems all the time.

When online learning, students face many problems besides internet issues:

- Lack of interaction/ Involvement with the teacher
- Miscommunication/inexpression in the right ways from both sides (students and teachers)
- Distraction by the smallest details/loosing focus
- Not suitable environment to learn (house noise, etc.)
- Mismanagement of time
- Motivation deficiency

According to data, students account on different factors to determine their success or failure at the end of academic years:

- Efforts combined together (students and professors)
- Self-dependency, need to find motivation to learn
- Ask questions, interact for better understanding
- Time management skills
- Give feedback, evaluate and reevaluate
- Discipline and commitment
- Isolation for better focus
- Adaptation to change
- Take exams and quizzes
- Planning/preparation and a will

## V. Conclusion and Recommendations

A number of parliamentarians, members of Parliamentary Education Committee, the head of the Parliamentary Telecommunications Committee, the General Director of the Ministry of Telecommunication, the General Director of Ogero telecom, in addition to students, Lebanese and foreign researchers shared their experiences on eLearning. They have discussed the legislative, technical, social, and educational aspects of eLearning, as well as the international and Lebanese experiences in this field.

In this regard, we propose the following recommendations and actions that came as follows:

1. At the Legislative Level
  - The need to issue the essential laws that meet the demands of distance learning.
  - Forming an accreditation board for higher education and e learning that sets the standards for electronic programs.

- Establishing a national institute specialized in distance learning, which constitutes educational and scientific terms of reference for educational institutions that want to foster this model of teaching.
  - The necessity for legislations to list specific types of degrees in various sectors that are compatible with this new teaching model in Lebanon, and determine the technical and human requirements that educational institutions and students must provide before launching this model of teaching.
2. At the Educational and Social Level
- Establishing modern instructive foundations compatible with this new teaching model by equipping the teaching staff with the skills in demand in distance learning, especially in terms of content and presentation.
  - Emphasizing the importance of educational institutes to generate competent graduates who have the abilities to overcome unfamiliar obstacles or tasks and use inaccessible techniques.
  - Focusing on reforming and restructuring the educational system that would be able to anticipate obstacles and maintain sustainability in various circumstances.
  - Training the teaching staff to use techniques specialized in evaluating students in e learning, particularly by addressing innovative questions that fosters critical thinking, analyzing and researching.
  - Reconsidering the requirements of distance learning starting from the general digital infrastructure to studying learner's behavioral changes.
  - Designing academic curricula in compliance with distance learning.
  - Focusing on offering a master degree in the Faculty of Pedagogy specialized in training university professors on modern teaching methods.
  - Studying the social reality in the event that hybrid learning is adopted in the future, especially in pre-university levels
  - Reevaluating the role of the university in case of adopting hybrid learning, considering its function as an interactive platform for students on the academic level, in addition to political, intellectual and sporting activities.
  - Motivating students to engage in distance learning through a constructive and dynamic interaction between teachers and their students, in addition to insuring consistency in teaching materials and supporting concerned stakeholders by all possible means.
3. At the Technical and Digital Infrastructure Level
- It is imperative to change the pricing principles and the tariff of the offered packages, adopted by the Ministry of Telecommunications, so that the various segments of society, notably the underprivileged ones, can have access to high-quality packages (higher than 2 or 4 MB), which could facilitate the process of networking and communication in distance learning.
  - Working on issuing policies carried out by the Ministry of Telecommunications to generate internet packages specific for education at a low-cost.
  - The importance of creating national educational platforms in Lebanon to store educational videos and content in order to alleviate the high cost of the internet as a result of current servers for international educational platforms abroad.
  - Distance learning should be only carried out via the landline network, i.e. "Ogero", and should address the technical issues associated with it.
  - Ensuring that the citizens benefit from the reductions offered by the Ministry of Telecommunications for the service providers, equally with the subscribers of "Ogero" regarding the internet service.
  - The importance of taking measures to deal with the issue of cybersecurity in any digital program designed for a remote assessment.
  - Developing electronic researches and online evaluation systems, analyzing results and disseminating them.
  - Creating advanced and free digital platforms to facilitate students' and researchers' tasks at distance, and organizing scientific events and workshops during crisis.
4. At the Practical and Performance Level
- E learning should combine simultaneously synchronous and asynchronous learning.
  - E learning should be student-centered.
  - Students should perceive the presence of a teacher in a virtual classroom by "operating the video".
  - Lectures should be recorded and duly archived for the students who did not have the opportunity to attend these concurrent sessions, which is highly important to ensure an equal e learning, especially for students with digital infrastructure problems.
  - Teachers should engage students in virtual lectures using interactive teaching and learning approach.

- Strengthening e learning by dividing students into smaller groups, as opposed to bigger ones that could undermine the quality of teaching and knowledge acquisition.
- The importance to shorten the duration of a virtual session in order to enhance students' participation.
- The need to design an evaluation strategy for continuous formative tests (MCQ, short quizzes...) throughout the period to ensure that students have acquired the intended learning goals and objectives.
- Taking adequate measures, such as asking more analytical and critical questions in tests could prevent the "cheating" dropouts in online assessments.

"Distance learning" is a new challenge for Lebanese universities and they will face both its advantages and disadvantages. They have already launched it, and it is their responsibility to highlight its constraints, including the high cost of the internet and its absence in remote villages, in addition to the students' inability to obtain technological devices to keep up with the new system, as well as the diversions that distract student's attention in their house...

In this context of a new strategy, online education, video lessons or distance learning is indeed a "system" because it requires regulatory frameworks, policies and digital infrastructure specific for information and communication technology, including providing programs and devices, securing networks, websites, and platforms, in addition to supporting psychologically the parents, students...

Whether to teach or not to teach during the Covid-19 pandemic, most of the Lebanese Universities if not all chose to endorse "e-learning" despite the absence of regulatory laws and the discrepancy of appeared equipment and capabilities that exist between various regions and homes. They also took into consideration the necessities of education and health alike.

In this regard, we can summarize the responsibilities and indigence related to elearning:

- The educational process primarily relies on the teacher, whose job lies in the ability to deliver the information to students, draw their attention, and interact with them during the learning process.
- Students' acquisition is considered one of the most worrying aspects in distance learning, which is confirmed by psychologists, given that the cultures of our families are not acquainted with this unfamiliar type of learning.
- The current situation of the digital gap and the preparedness of equipping schools and colleges with modern technologies and digital infrastructure alleviate the chances of succeeding in the digital learning process by significant numbers.
- The absence of regulatory legislations and academic programs associated with digital learning.
- Postponing exams frequently as a result of quarantine decisions and the inability to prepare a credible remote assessment because it requires specific electronic programs.

We would like also to add that there is an urgent need to reinforce digital learning and teaching with:

- Providing the students with technical equipment and an easy access to the internet.
- Developing accessible online courses.
- Developing electronic researches and formative electronic assessments, evaluating results and grades, and then disseminating them.
- Creating advanced and free digital platforms to facilitate students' and researchers' tasks at distance, and organizing scientific events and workshops during crisis.
- Designing academic curricula in compliance with distance learning.
- Training the teaching staff with specific "distance learning" workshops.

When it comes to a conclusion, there is no right or wrong answer in case of online versus traditional education, the decision is yours. True it reflects your personal preferences and the ways that best suits you, but you cannot ignore nor deny that some learning methods are more effective and efficient than others.

It is known; also, that online education became present more and more when the worldwide health crisis began. However, the latter will soon come to an end but this does not mean online education will stop growing. Therefore, universities should continue to develop and implement new strategies with online education. It is equally important for the Lebanese government to consider taking new measures so that university students can move forward into the system and secondary school students will be more integrated into it.

The most prominent option for the following stages, already universities implemented this newest strategy which is Hybrid learning or Blended learning. While blended focuses on the combination between online and offline learning, hybrid is more about finding the right mix for you in all the ways of learning. As it

combines traditional and online learning, though it needs more preparations to equip both teachers and students and provide them with the advanced teaching and learning techniques<sup>31</sup>.

The academic year 2020-2021 started with online classes while the active cases of Covid-19 elevated in Lebanon to more than 130,000 confirmed cases and more than 1,000 deaths till the end of November, 2020<sup>32</sup>. Everyone is very committed to the academic year and the students' safety simultaneously. We are in the face of an accurate crisis that had a major setback on education; therefore, we should all cooperate to get through this difficult stage at all levels.

The current situation demands us to hasten the preparation and creation of virtual and free educational platforms, our failure or success in confronting the "Corona" pandemic in distance learning will be inevitably linked to our perseverance and collaboration.

Moreover, to continue this collaboration in the future, we should mention some of the limitations in this research. Mostly, all educational researches depend on the characteristics of design and the methodology used that influence the application and the interpretation of the results. Apart from the research method one uses, the existence of institutions in which the program is present in different shapes and countries all over the world, plus the way languages change social reality, may be considered a limitation on application. The shortage in time, where the academic year 2019-2020 ended disarranged and the academic year 2020-2021 started confusingly, that led to a margin of error of 6% may be bettered in future similar research. When we are in the middle of a chaotic environment, in the middle of a crisis, everything seems to take so much time and effort, as we are all living in a global stressful unsafe and threatening condition.

Any other research, paper, experiment, forums or actions taken in this field is never enough. We are humans that live in a constantly changing environment that we affect and are influenced by it. So all research in the educational field introducing possible new or expended way of thinking about this problematic is always good for evolving. There is always something to address. Now, we cared about the difference between online and traditional learning and insisted on discovering what the best way is for students. Let us think about what is the opinion on the other hand, the teachers. Let us consider what will be the future of education/learning as an overall project in the near and far future. By the development of artificial intelligence, machine learning, what could be the real-world teaching and learning experiences?

The future of education could be more student-centric learning, responding to a person's need, when all patterns and techniques are personalized and flexible. Other topics may address early childhood education, other learning styles, ability grouping, disappearance of direct instructions with an adaptive learning software that uses AI, etc.

Tomorrow is shaped by what we are doing today.

Briefly, it is important to support any effort done by any kind of institutions all over the world to pursue research on digital learning on a smaller scale and education on the bigger scale to increase the share of best scenarios and practices for the benefits of all. Well, educational institutions build on feedback, after all the quality is the center of higher education, whether it was face-to-face or online education.

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