



# Critical Perspective on Lebanon's Response in Education during COVID-19

TAREK SHAL

Faculty of Education, Lebanese University

## Abstract:

*The purpose of this paper was to investigate the response of the Lebanese Ministry of Education and Higher Education (MEHE) toward COVID-19 pandemic in order to prevent learning disruption across Lebanese schools. The paper is built on data collected by the Regional Educational Offices (REOs) across Lebanon. It describes the pathways made available by MEHE for the public educational community in Lebanon. Moreover, it offers an in-depth description of the challenges confronting such pathways, which are: technical, logistical, socio-economic, besides the resistance to change, and inclusive education. The paper provides recommendations for leveraging the provision of distance learning.*

---

**Keywords:** COVID-19- distance learning - hybrid learning- e-learning.

---

## 1. Introduction

The multi crisis that Lebanon is suffering from since October 2019 had left the education sector in Lebanon under massive strains. The economic collapse has impacted deeply the education and health sectors. The fall of different systems in the country was intersected with the COVID-19 pandemic in Lebanon. This added more pressure on the Lebanese citizens who are suffering from a variety of problems and stresses. The overall inflation hit 84 percent in 2020 and food inflation hit 670 percent, also over half of the population forced to live in poverty. (UNESCWA, 2021).

In fact, Ministries of education around the globe adopted different ways, approaches and strategies, to face COVID-19 and its effect on their education system. These can be classified into two clusters with no third. The first cluster of countries had the insights and understood that the pandemic is long-term, so they adapted and developed the methodologies and approaches associated with their educational systems to fit with the new circumstances imposed by COVID-19; at the forefront of these countries were East Asian countries (Shokoohi et al., 2020). On the opposite side, the second cluster preferred to wait, thinking that the pandemic would last for a few months, so the first school year ended, and another followed, yet the achievements of ministries of education in these countries were limited (Bazzi et al., 2021).

The McKinsey report states that the true impact of COVID-19 on the educational system cannot be precisely visualized, and that it would take a long time to understand that impact (Dorn et al., 2020). Meanwhile, countries are currently rushing to monitor budgets for what they call 'going back on track'(Mann et al., 2021). Britain has allocated 1 billion pounds to restore learning in schools, while the United States of America has allocated 40 billion dollars to restore learning in universities (Ghamrawi, 2021).

In reality, COVID-19 put the already "exhausted" Lebanese educational system (Jalbout, 2015) under additional pressures and challenges (Bizri et al., 2021). As is the case across the globe, the system had no other option but to adopt the distance or virtual learning. While some private schools were ready to

make this move smoothly, this move was not a smooth one for some private and all public schools (Mouchantaf, 2020; Fawaz et al., 2021; Rouadi & Anouti, 2021).

The first case of COVID-19 in Lebanon was confirmed on February 21, 2020 and the Government of Lebanon (GoL) took immediate and significant action to prevent its spread. On March 2, the Inter-Ministerial Committee for COVID-19 mandated closure of all education institutions. The Lebanese Ministry of Education and Higher Education (MEHE) supervised the provision of distance learning for primary and secondary education secured through an online platform. Distance learning was the only saviour of the education in Lebanon during the pandemic (Mouchantaf, 2020; Fawaz et al., 2021; Fawaz & Samaha, 2021; Rouadi & Anouti, 2021).

## 2. Purpose

This paper examined the response of the Lebanese Ministry of Education and Higher Education (MEHE) to COVID-19 pertaining to education. It focuses on the degree remote learning initiatives utilized were successful in public P-12 schools across Lebanon.

## 3. Method

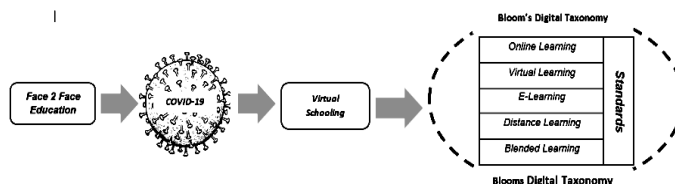
This paper is built on data generated by the Regional Educational Offices (REOs). These offices represent MEHE in the provinces in coordinating activities and overseeing the overall quality of implementation and performance. These offices in each region supervise the public schools in that region and serve as an interface between the latter and the education departments at Ministry headquarters in Beirut. Decisions are routed to these departments and then passed on to the schools<sup>1</sup>.

## 4. Distance learning and schooling

Distance learning has been used as a main approach for schooling during COVID-19 pandemic times (Schneider & Council, 2021). Through this mode of learning, students and teachers do not meet in classroom but rather use the internet or other document resources to learn.

One form of distance learning is virtual online learning that uses digital content designed for self-paced (asynchronous) or live web-conferencing (synchronous) (Mahoney & Hall, 2020). Studies have shown gaps in the application of this learning mode between countries, specifically between countries with developed and under-developed economies (Lorente et al., 2020). This is largely due to technology readiness of the education sector of the countries with developed economies, the internet access, the preparedness of the teaching and administrative bodies at schools, the social and mental effects of confinement to the students and parents and the enriched curricula (Burgess & Sievertsen, 2020).

Moreover, while different terminologies were used interchangeably by the education communities during the pandemic, to describe their adopted methodologies of delivering learning, it is very important to distinguish the differences amongst them. These are illustrated in figure 1 and table 1.



**Figure 1. Variety of Terminologies for Learning Delivery during COVID-19**

(Source: Ghamrawi, 2021)

<sup>1</sup> [http://timss.bc.edu/TIMSS2007/PDF/T07\\_Enc\\_V1.pdf](http://timss.bc.edu/TIMSS2007/PDF/T07_Enc_V1.pdf) (EN)

**Table 1. Illustration of Terminologies Used for Learning Delivery during COVID-19**

Name	Description				
	Mandatory Features				
	Technology	Real Time	Internet	Classroom	Anywhere
Online Learning	X	X	X		X
Virtual Learning	X		X		X
E-Learning	X		X		X
Distance Learning	X		X		X
Blended Learning	X		X	X	X

(Source: Ghamrawi, 2021)

### 5. Lebanon and distance learning for COVID-19

In Lebanon, some private schools made the move to online learning smoothly as technology was already embedded in one way or another in their classrooms (Ghamrawi et al, 2020). Their technological infrastructures and the preparedness of their teachers, administrative team, and even students was in place. On the other hand, for some other private schools and for all the public P-12 schools, this was a great challenge (Mouchantaf, 2020; Fawaz et al., 2021; Fawaz & Samaha, 2021; Rouadi & Anouti, 2021).

Schools were not equipped, teachers were not trained and not all students had access to technology (Mouchantaf, 2020; Fawaz et al., 2021). International donors and education agencies provided support to MEHE in order to develop an appropriate response to save the education sector in Lebanon and to assure the minimum acceptable level of learning for Lebanese students during the pandemic. The initial efforts of MEHE focused on the following:

- To assure the minimum level of education to pupils during the crisis.
- To prepare the background for the remote learning, mainly guarantying the connection between teachers and students.
- To ensure that students sitting for the national exams i.e., 9<sup>th</sup> grades and 12<sup>th</sup> grades are secured with the minimum sufficient skills and competencies required to pass the national exams.
- To customize the curricula in a way covering the main topics/subjects required.
- To reach the maximum number of students through setting in place multiple distance learning approaches.
- To train the teaching bodies on the use of available e-learning platforms (mainly Microsoft Teams)
- To digitize what is possible from the national curricula
- To evaluate the scenarios and approaches in hands, and effectively make improvements.

While the above points consisted the backbone of the responses of MEHE during Covid-19 times, international experts, stated that there was a limited evidence of effective learning outcomes by virtue of distance measures, recommending maintaining education routines to prevent dropouts and support children.<sup>2</sup>

### 6. MEHE governance responses

There is no endorsed national Information Communication Technology strategy for Lebanon up-to-date. The COVID-19 revealed the weaknesses of the system in mitigating the risks of the pandemic and its effect on the education system in Lebanon. The hypocrisy is that MEHE who refuses to certify and accredit certificates and degrees earned through online and distance learning worldwide, up-to-

<sup>2</sup> Susannah Hares, Centre for Global Development blogs and on Skoll Conference Panel: Friday 3 April, 2020.

date found itself a facilitator and even an advocate for this mode of learning. The initial response focused on the following:

- Organize a timetable led by the minister of education and higher education to develop a national distance learning strategy.
- Keep track on the support provided from multilateral agencies such as UNESCO, UNDP, WHO etc. and bilateral donor partners.
- Assure equitable distance learning to all pupils in Lebanon via networking with other ministries such as ministry of telecommunications to assure free connectivity (zero rating) to the education community i.e. students and teachers.
- Establish significant external partnerships with the global education technology community, specifically Microsoft who provided 1 million licences for Microsoft (MS) Teams to run distance learning.
- Form a task force inside MEHE to follow on the distance learning and advise the minister accordingly.

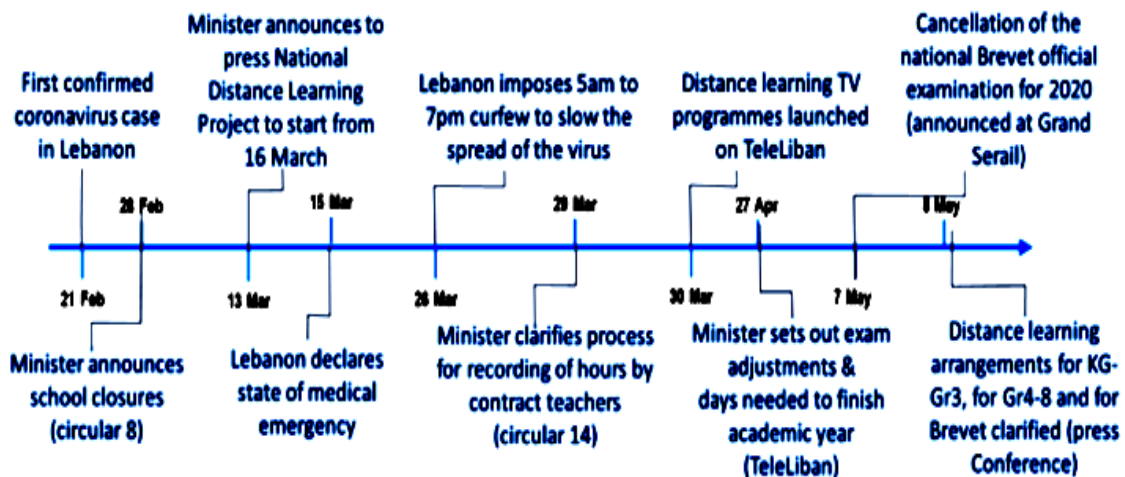


Figure 2. A Summary of Lebanon’s Initial Response to COVID-19 in Education

Figure 2 summarizes the initial response of the ministry of education and higher education to the COVID-19. The enlisted activities were overarched by a detailed list of circulars to support distance learning. The circulars outlined the possible learning tracks and requested schools to prepare for distance learning provisions. They also arranged with other ministries such as ministry of telecommunication to provide necessary support to distance learning.

### 7. MEHE’s distance learning proposed solutions

The ministry of education announced three official pathways to the distance learning to save the academic year:

Pathway number 1: Educational TV- Television broadcasting

This track aimed at securing the delivery of educational content to the largest possible number of learners across Lebanon. This was formulated in collaboration with the Ministry of Information. TV lessons were broadcasted through the national TV channel “Télé Liban” and other television stations. The episodes were filmed at MEHE and the Center for Educational Research & Development (CERD) mainly for the Brevet and Baccalaureate classes (official exams). Volunteers and teachers were filmed free of charge presenting the lessons and then the episodes were broadcasted at specified times. After episodes, follow ups were made through WhatsApp groups created by the teachers of each class in each of the public P-12 schools across Lebanon to respond to the questions posed by the students.

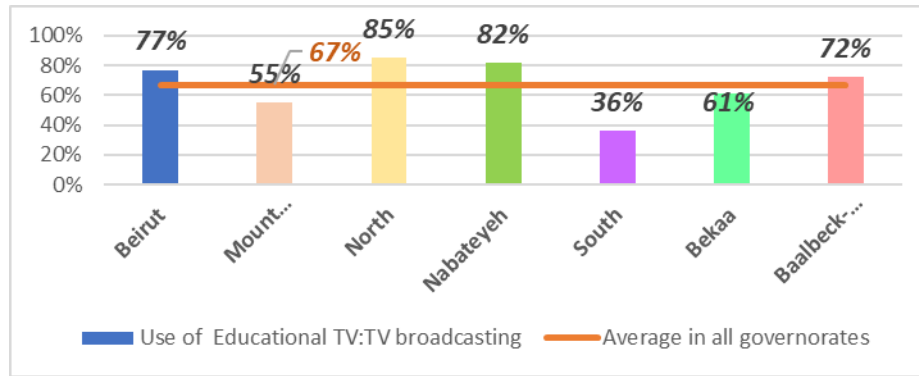
**Table 2: Educational TV as Response of Lebanon Towards COVID-19 in Education**

<b>Pathway number 1: Educational TV- Television broadcasting</b>	
<b>Advantages</b>	<b>Disadvantages</b>
Possibility of access to the largest population of students across Lebanon that do not have internet access or technology readiness.	Electricity availability during the broadcasting of the lessons. Student X, grade 9, Denneyeh “It was hard for me to benefit from this pathway as the electricity was not available during the broadcast on Télé-Liban.”
Free of charge	There were no live broadcast and thus no interaction between students and teachers. Student Y, grade 12, Chyah “ I was able to watch the educational episodes at Télé-Liban but the problem that was not able to ask any question about the concepts/ideas that are not clear to me and no directions were given to us on whom to ask.”
It allows audio and video broadcasts in the same time	No national plan or vision to define what content of each educational sphere or programme to broadcast. Teacher A, grade 12 “I volunteered to film episodes in math for grade 12 at MEHE but the problem that there was no clear definition of script from MEHE about what to cover specifically in each episode but it was left to teachers to decide what to cover and how.”
	Does not target all the students’ population but only the brevet (grade 9th) and Baccalaureate II (grade 12) i.e. the national exams classes only. Teacher B, Tyre “This track was targeting only 9th and 12th grades but what about the rest of of the students in different cycles and tracks.”
	The time dedicated for each lesson broadcast was between 20 to 40 minutes maximum with irrationality between if the time allotted for the educational content broadcasted is enough to explain it. Student Z, Beirut, grade 12 “.... In fact we felt that time was very short for many concepts explained in the TV broadcasting...”
	This track did not take into consideration the conditions of living of households and thus the existence of many students in the same time from the same family in different classes.

Rates of participation in pathway #1

Data recorded by the general directorate of education showed that secondary schools were making more use of TV and WhatsApp follow-ups than of the online platforms. The TV programming was predominantly for grade 12, with episodes catering for Brevet, but there was a variation between the regions in terms of the most used channel. The rate of usage across the Educational Offices (REOs) on Lebanon is presented in Figure 3.





**Figure 3. Rate of Using TV Educational Channels across the REOs of Lebanon**

The use of pathway number 1 was surveyed across the eight<sup>3</sup> active Regional Educational Offices (REO) across Lebanon. Figure 1 summarizes the usage of the educational TV by the schools all over Lebanon. It shows that the average of usage across all governorates was 67%. The highest usage rate was recorded by the North's REO 85%, followed by Nabateyeh 82%, Beirut 77% and Baalbeck-Hermel 72%. On the opposite side, the lowest usage was recorded in South 36%, then Mount Lebanon 55% and Bekaa 61%. In fact, the main factor of the variation of usage of this pathway might be due to the differences of living conditions between different directorates which affected directly the usage of this channel. The ownership of one single TV by households having many children in schools and the availability of electricity during the show might were the main factors against using this pathway.

#### Pathway number 2: E-Learning platforms

The aim of this track was to ensure learning via free of charge applications that secure interactive communication between the teacher and the learner such as Zoom, google classroom, Microsoft Teams...

In reality, MS Teams was the main platform used by the Lebanese public P-12 schools, as well as colleges and universities in Lebanon. Microsoft offered free Microsoft Teams accounts for educators and learners. This came consequently to the fact that MEHE was a main client for Microsoft, where all its computers and other business products were purchased and licensed by Microsoft. MEHE's ICT Unit prepared and dispatched free accounts to teachers and learners (Lebanese and non-Lebanese students) to use this application. The ICT unit provided also the necessary technical training and support to accompany this pathway and organized remote meetings with different necessary directorates and supervisors at MEHE.

<sup>3</sup> Beirut, Mount Lebanon, North, Nabateyeh, South, Bekaa, Baalbeck-Hermel.

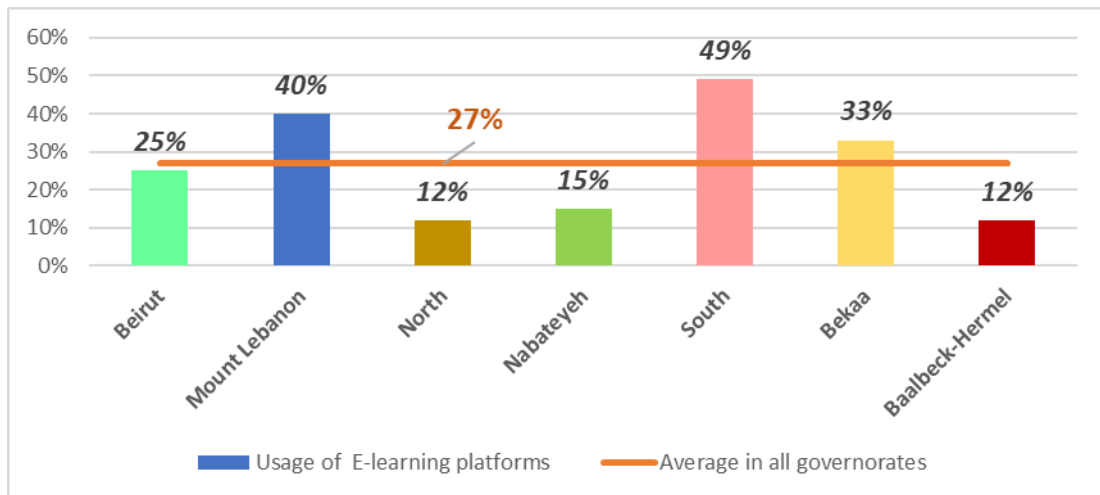
**Table 3: E-Learning Platforms as Response of Lebanon Towards COVID-19 in Education**

Pathway number 2: E-learning platforms	
Advantages	Disadvantages
Interactive and easy solution to use for both educators and learners.	It requires internet.
Easy access via mobile, laptop or desktop.	It requires ICT tools, desktop, laptop or mobile.
Synchronous and Asynchronous tool (i.e. students who were not able to attend during the live sessions can get access to the recordings later on).	Video and use of camera are not possible unless internet bandwidth is very high.
It is somehow monitored via the recordings and access to attendance.	It requires minimum ICT skills by the teacher and learner on the usability of the application itself.
Free of charge, MEHE pays for the license and neither the teacher nor the learner.	E-mail for teacher and learner is a prerequisite to use this application.
No time limitations for use.	
It allows to run class activities i.e breakout rooms, flipped classrooms etc...	

Rates of participation in pathway #2

The pathway #2 which is the usage of E-learning platforms was the second favourable tool recorded by schools after the TV broadcast.

Figure 4 illustrates the rate of participation of public P-12 schools in this pathway



**Figure 4. Rate of Using E-Platforms across the REOs of Lebanon**

Surveying the use of E-learning platforms as a tool of distance learning during Covid-19 times showed that the governorate of south topped the governorates with a rate of usage of 49%, it was followed by Mount Lebanon with a rate of 40%, then Bekaa by 33%. On the other side, we can see that the remaining directorates' usage of the E-learning platforms was below the average recorded across all the governorates, which was 27%. Subsequently, Baalbeck-Hermel and North registered the same rate of participation 12%. It is worth to say here that the North governorate is topping all the governorates

in the number of students (132675<sup>4</sup> students in year 2020). Nabateyeh governorates registered a rate of participation of 15% and Beirut a rate of 25%. The main reasons behind the low participation in this pathway might be due to the lack of technology devices for some households accompanied by the lack of internet connectivity availability.

Pathway number 3: Low tech- paper/traditional

This track targeted learners who were unable to get access to education via pathways number 1 and 2. The objective of this path was to deliver hard copies i.e. papers of educational content via the school principals and administrators to the learners. It means that on a weekly basis, the teacher was asked to prepare a pack for the class he/she teaches, he/she delivers this pack to the relevant school principal and this one will circulate to learners via specifying one or two days a week to allow them to pick up these hard copies contents from school.

Pathway number 3: Communication via traditional means	
Advantages	Disadvantages
Does not require internet or technology.	Costly (money and time)
	Draining both teachers and learners.
	Not interactive.
	Impossibility to monitor.

Rates of participating in pathway # 3

Communicating the lessons and the learning materials via the traditional way i.e., through formal papered administrative mail between schools and students was also surveyed across the different governorates. Figure 5 below showed that this pathway was mostly used by the schools of the south governorate at a rate of participation of 14% whereas Beirut, North and Baalbeck-hermel were identical in terms of using this pathway with a rate of 4% which is equivalent to the average of usage of this mean across directorates. Mount Lebanon showed no interest to this mean with a 0% rate of participation whereas Bekaa occupied a 2% and Nabateyeh 3%.

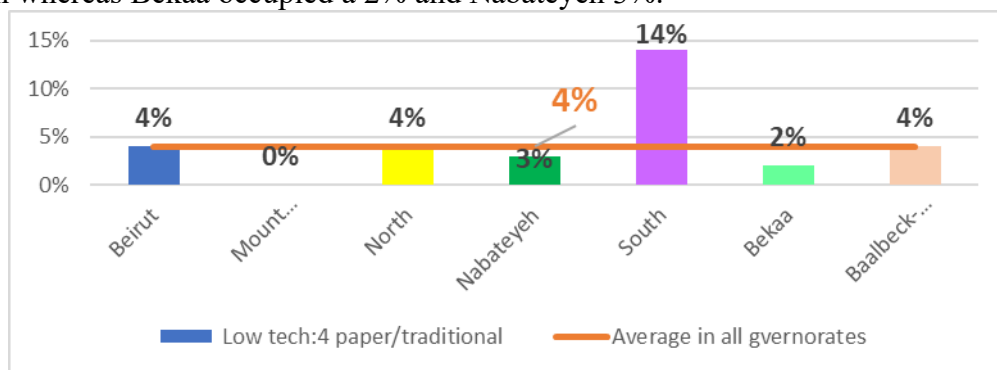
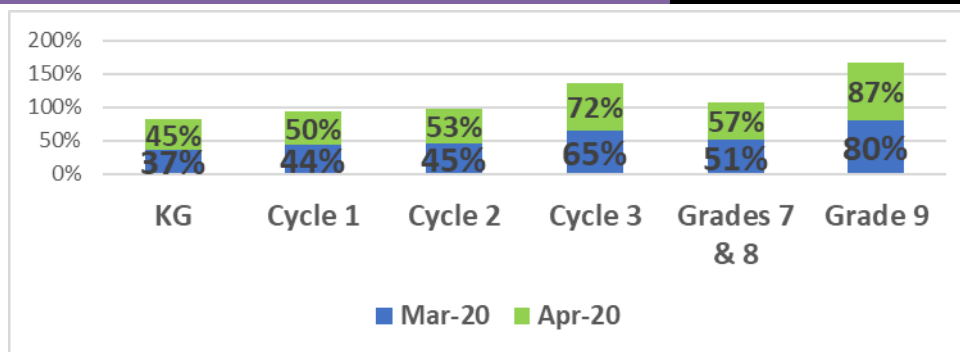


Figure 5. Rate of Leaning on Traditional Approaches in REOs of Lebanon

On the other hand, MEHE’s public school system has been operating in two shifts since the emergence of the Syrian crisis in 2011. Public P-12 schools, with the support of the international community, had no option but to open their doors to the large influx of Syrian refugee students in the afternoon shift. As such schools were managing and operating in two shifts. In terms of the second shift schools’ engagement in distance learning, figure 6 below summarizes their response to distance learning.

<sup>4</sup> SIMS 2020- number of enrolled students reached 133675 students for 2020 (113007 in the primary education and 19668 in the secondary level)





**Figure 6. Afternoon shift response to distance learning in Lebanon**

Surprisingly, figure 6 showed relatively a higher rate of participation of the second shift in distance learning during the two months March and April 2020. Cycle 3 participation was the highest, with 65% rate of participation in March 2020, which increased to 72% in April 2020. This was followed by cycle 1, cycle 2 and cycle 3. It is interesting to see that the rate of participation of grade 9, which is a national exam class, was 80% in March reaching 87% in April 2020. This may indicate that learning remained a priority for Syrian refugees who were living in very difficult conditions. In fact, no data was available to address the usage of the three pathways enlisted earlier by the second shift school.

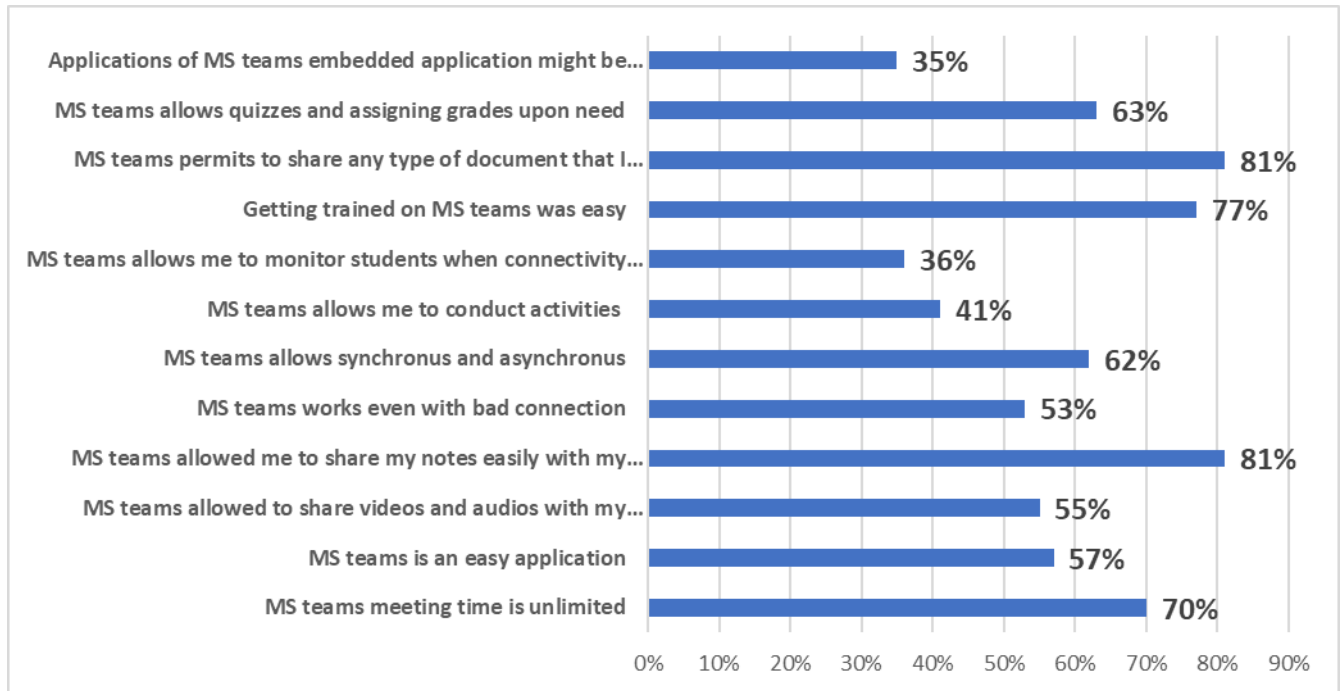
### 8. The Choice of Ms Teams as a Learning Platform

COVID-19 effects on the global economy had been very damaging. It affected both the developed and the undeveloped economies. In reality, the education systems in developed economies were prepared for crisis as the economic growth of these countries allowed them to build a strong technological infrastructure and to invest strategically and wisely in information technology which makes the transition to distance or remote learning easy and applicable at the prick of the fingers. On the opposite side, the undeveloped economies were struggling to find out solutions to ensure minimal learning to students during Covid-19 times. It is worth to say here that Lebanon tried to act proactively to the crisis. The fastest way was to research best practices around the globe and to check what works for Lebanon and what does not.

In fact, this turned back to report that many countries similar to Lebanese context are using MS teams as a unique E-learning platform. Further to this, the bureaucracy and logistics of public procurement in Lebanon made very difficult to “think out of the box” and to look for other alternatives than MS-Teams. We do not have to forget here that as Microsoft is a main supplier to MEHE this made things easy and simple to provide an MS Teams account to every and each teacher and student not only for the Lebanese public P-12 students, but also for the Lebanese university. Consequently, MS Teams was the mostly used application for remote learning during COVID-19 times in Lebanon.

Based on a survey conducted through the year 2020 and targeting around 40% of the public P-12 teachers in Lebanon (n=14181 teachers out of N=35698<sup>5</sup> teachers) from all governorates, the following results were recorded. Results are presented in Figure 7.

<sup>5</sup> MEHE-SIMS-2020. Total number of public K-12 teachers in Lebanon permanent and contractual



**Figure 7. Ms Teams through the eyes of P-12 Public School Teachers**

Figure 7 showed that 81% of the sampled teachers agreed that MS Teams allows them to share easily any notes with their students to facilitate their teaching and learning mission while 77% reported that the training on MS Teams application was easy. When asked about time limitation of the application 70% of the sampled teachers responded that MS Teams had no time limitations for sessions. 63% declared that the application allows to formulate quizzes and assign grades upon need while only 62% indicated that it permits synchronous and asynchronous teaching. On the same page, 57% of the teachers sampled revealed that MS teams is an easy application while 55% said that it allows them to share videos and audios with their superiors. 53% recorded that MS Teams can work even with bad connection whereas 41% noted that it allows them to run activities and only 35% conveyed that the applications embedded with MS Teams might be very helpful if the connectivity allows.

This latter might be due to the fact that almost all of the public P-12 teachers get a bridged sessions by the ICT unit at MEHE on how to use MS Teams but not on the use all its aspects mainly because the ICT unit was asked by the minister to train maximum number of public P-12 teachers on the use the application in a tremendous period of time. When it comes to exploring if MS Teams was used for monitoring purpose, 36% of the sampled teachers notified that it allows them to monitor students by using the camera only when connectivity is good. Overall, we can consider that the population of public P-12 teachers were satisfied with the usage of MS Teams as an E-learning platform.

### **9. Challenges confronting distance learning in Lebanon**

Schools, colleges, and universities relied on distance learning to overcome geographical and time constraints. It is worth to note here that this method of learning is also used by schools to increase their class size without necessarily scaling up their facilities.

Distance learning remain very challenging for both developed and undeveloped economies. Below is an in-depth analysis of challenges faced during distance learning in Lebanon and how we can combat them.

The barriers to distance learning in Lebanon can be grouped around the following:

- 1. Technical.** The infrastructure for distance learning is not ready in the majority of the public P-12 schools. No network and no internet connection are available in classrooms. When available, the internet bandwidth is not very high to run multi classes at the same time. Similarly, it is important to mention that many schools are not equipped with computers. Besides, many teachers and students do not have personal computers (desktop or laptop). Most importantly, the lack of the power supply stands as a main barrier against distance learning. This latter is in fact affecting deeply the TV broadcasting and the e-learning pathways.
- 2. Logistical.** MEHE tried to respond proactively to the pandemic, but in reality, the decision makers were floundering around it. They were not all on the same page. Directors of different departments, school principals, teachers, students and parents were not ready to deal in such emergency. On top of these, teachers were left behind, with no direction on how to make the transition to distance learning and what to cover from the curriculum. On the other hand, despite that, the minister of education and higher education<sup>6</sup> tried to engage the Centre for Education Research and Development (CERD) in customizing the national curricula to cater with the circumstances of Covid-19 and to design an e-learning platform allowing equitable education for all children; unfortunately, this did not happen.
- 3. Socio-economic.** The socio-economic crisis was a major barrier to embedding distance learning in many homes, which are currently confronted with significant challenges. The economic collapse had left families with no enough money to grant education for their children and many kids left schools and were put in the job market to support their families. In addition, many teachers mainly the contractual refused to participate in distance, as they have not been paid since two years. This increased the pressure on the ministry of education and higher education on how to handle the crisis.
- 4. Quality.** There were too many challenges confronting quality. These included: (1) difficulty in evaluating lessons, (2) difficulty in explaining scientific and mathematical concepts via TV broadcast, WhatsApp and even sometimes MS Teams, (3) difficulty in managing students, (4) difficulty in assuring the equality of resources be that digital or in paper form. For distance learning to permeate, MEHE had to make great efforts to support monitoring, evaluation and quality assurance of materials; strengthening teachers' ability to teach in entirely different ways; and supporting families as well as teachers to adjust to distance learning. Definitely, this had to bring drastic changes in the national curriculum to cater for the provision of distance learning.
- 5. Resistance to Change.** Some senior teachers and administrators do yet believe that learning is effective except if it were face-to-face. Likewise, some students and parents refused to cooperate because they were not convinced that distance learning was useful. In fact, there was a deep need to establish a culture for learning remotely by MEHE. However, this was not realized.
- 6. Inclusive education.** Before Covid-19, the Lebanese educational system was struggling to put in place an effective inclusive education strategy granting equitable education to all children. In fact, this dimension was fully neglected during the move towards distance learning during Covid-19 times.

## 10. Limitations of the study

The study examined the transition of the Lebanese education system to distance learning approach during Covid-19 times and to criticize the successes and pitfalls in the response of MEHE towards it. In fact, the paper focused on the public P-12 schools and did not target private schools due to difficulties in collecting data from them. It also did not target neither the TVET nor the higher education which also utilized distance learning in Lebanon since the beginning of the pandemic in 2019. Including all these excluded entities, would have definitely enriched the study. Also, no

---

<sup>6</sup> Minister Tarek el Majzoub

accurate data was available about the achievements of the students who were enrolled in different distance learning streams to test if there is any correlation between distance education and student's achievements. Finally, yet importantly, the paper did not address the distance learning for special needs students, and how MEHE reacted to this as no data pertaining to this dimension is available. This would definitely have added value to the findings of this study.

## 11. Conclusions and recommendations

Covid-19 added pressures on the vulnerable Lebanese education system, which was already exhausted by multiple crises. The bureaucracy of the system stemming from the robust centralization of the administration, the outdated policies and the authoritarian leadership of the ministry, all of these left the ministry far away from a full transition or adoption of remote learning.

For this purpose, the following recommendations can be made:

- 1. A clear distance learning strategy.** Effective distance learning cannot be realized without a strong accompanying strategy. There is a need for a comprehensive distance learning strategy accompanied by a corresponding action plan, to implement and monitor impact and to make quick adjustments when needed. This would allow accessible, quality assured, relevant, affordable and sustainable distance learning opportunities to all students in Lebanon at the highest attainable levels possible. Such a strategy should address equipping schools with the minimum infrastructure and providing beneficiaries with cheapest technology solutions, such as cheap computers for each child, free internet, and free-of-charge connectivity for schools.
- 2. Data driven decision.** Distance learning in Lebanon should be zoomed in at different aspects at different layers. MEHE should have in place relevant data to deal with any new situation that arises. The data should be comparable across regions, i.e., all gathered by school participation, or, better, by student participation (or by both). Data should be broken down by cycle rather than averaging across all school age groups, especially when older children are targeted by certain channels. The same guidelines should ideally be applied to second shift data, enabling a consistent sector overview.
- 3. Monitoring of quality and distance learning outcomes.** During Covid-19 times, the focus has been on access and adjustment to the new settings of learning which distance learning is. There has been much resistance, not only at the national level but also at the global level, to the changes happening in the teaching transition from face to face to distance methodology, especially where internet availability, hardware, teacher readiness or parental time to support is not available. More attention should be also given to gathering metrics on quality and impact, to ensure learning goals are being met and that children can complete their education and move to the next stage. New tools addressing assessment of distance learning should be in place to allow closer monitoring of teacher lessons and plans and to supporting them to assess whether their learning objectives are being met and how to improve their overall teaching.
- 4. Institutionalizing the changes.** Distance learning is not yet endorsed in Lebanon. Students who get their education remotely worldwide do not have their credits acknowledged by MEHE. Yet at the same time, MEHE has asked school and universities in Lebanon to secure learning remotely. As such, MEHE should finally go with the international stream and accept certifying and accrediting degrees earned remotely. It is very essential to review what has been done during the three last years, what worked and what did not work and develop new rules and Standard Operating Procedures (SOPs) accordingly.

## References

1. Bazzi, S., Fiszbein, M., & Gebresilashe, M. (2021). "Rugged individualism" and collective (in) action during the COVID-19 pandemic. *Journal of Public Economics*, 195, 104357.

2. Bizri, A. R., Khachfe, H. H., Fares, M. Y., & Musharrafieh, U. (2021). COVID-19 pandemic: an insult over injury for Lebanon. *Journal of community health*, 46(3), 487-493.
3. Burgess, S., & Sievertsen, H. (2020, April 1). Schools, skills, and learning: The impact of COVID-19 on education. Retrieved from Vox EU CEPR: <https://voxeu.org/article/impact-covid-19-education>
4. Dorn, E., Hancock, B., Sarakatsannis, J., & Viruleg, E. (2020). COVID-19 and learning loss—disparities grow and students need help. McKinsey & Company, December, 8, 224-228.
5. Fawaz, M., & Samaha, A. (2021, January). E-learning: Depression, anxiety, and stress symptomatology among Lebanese university students during COVID-19 quarantine. In *Nursing forum* (Vol. 56, No. 1, pp. 52-57).
6. Fawaz, M., Al Nakhal, M., & Itani, M. (2021). COVID-19 quarantine stressors and management among Lebanese students: A qualitative study. *Current Psychology*, 1-8.
7. Ghamrawi, N. (2021, March 25). The light at the end of the education tunnel. *Al-Akhbar*, 1.
8. Ghamrawi, N., Shal, T., Machmouchi, I., & Ghamrawi, N. A..R. (2020, November 25). Education Inequality Revisited Through the Lived Experiences of Parents During Virtual. *Advances in Social Sciences Research Journal*, 7(11), pp. 416-433. doi:10.14738/assrj.711.9363.
9. Jalbout, M. (2015). Reaching all children with education in Lebanon. Brookings: World.
10. Lorente, L. M. L., Arrabal, A. A., & Pulido-Montes, C. (2020). The right to education and ICT during covid-19: An international perspective. *Sustainability*, 12(21), 9091.
11. Mahoney, J., & Hall, C. A. (2020). Exploring online learning through synchronous and asynchronous instructional methods. In *Exploring online learning through synchronous and asynchronous instructional methods* (pp. 52-76). IGI Global.
12. Mann, M. J., Smith, M. L., Kristjansson, A. L., Daily, S., McDowell, S., & Traywick, P. (2021). Our children are not “behind” due to the COVID-19 pandemic, but our institutional response might be. *The Journal of School Health*, 91(6), 447.
13. Mathes, J. (2020, April 13). Retrieved from Online Learning Organization: <https://onlinelearningconsortium.org/a-defining-moment-for-online-learning>
14. McKinsey. (2021). COVID-19 and education: the lingering effects of unfinished learning. McKinsey.
15. Mouchantaf, M. (2020). The COVID-19 pandemic: Challenges faced and lessons learned regarding distance learning in Lebanese higher education institutions. *Theory and Practice in Language Studies*, 10(10), 1259-1266.
16. Racheva, V. (2017, November 29). What is virtual learning? Retrieved from VEDAMO teach our way: <https://www.vedamo.com/knowledge/what-is-virtual-learning/>
17. Rouadi, N. E., & Anouti, M. F. (2020). The online learning experiment in the intermediate and secondary schools in Lebanon during the coronavirus (COVID-19) crisis. *Online learning*, 7(7), 14466-14485.
18. Schneider, S. L., & Council, M. L. (2021). Distance learning in the era of COVID-19. *Archives of dermatological research*, 313(5), 389-390.
19. Shokoohi, M., Osooli, M., & Stranges, S. (2020). COVID-19 pandemic: what can the west learn from the east?. *International Journal of Health Policy and Management*, 9(10), 436.
20. UNESCWA. (2021). Multidimensional poverty in Lebanon (2019-2021): Painful reality and uncertain prospects. Beirut: United Nations.