The Quality of Online Instruction in Lebanon: Perspectives and Implications

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Abstract

This paper holistically describes the online learning experience from the perspectives of Lebanese students when it was implemented for the first time between March 2020 and May 2020 due to the COVID-19 pandemic. Hence, this study examines the devices and communication channels which were used by Grade 9 and Grade 12 learners while learning online. It also investigates the top five benefits and drawbacks of taking online lessons according to participating students. Moreover, this paper reflects the quality of online lessons as rated by students. The data were collected from 928 respondents through an online survey and the findings were deduced from the statistical analysis of a quantitative study. These results revealed the issues that made online learning acceptable or rejected by learners. Besides, the level of students' satisfaction towards online learning was reflected by rating the quality of online on a five point Likert scale. The quantitative method was used for analyzing the collected data, thus a range of statistical analyses were conducted and tables of frequencies and percentages, as well as cross-tabulations were used to present categorical variables. Chi-square tests of independence also were used to examine the relation between pairs of categorical variables and their strength by Chi- Square measures of association

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Introduction

Due to the Coronavirus pandemic which spread in 2019 (COVID-19), almost all countries including Lebanon took several measures to prohibit or a least limit gatherings. Therefore, schools were closed and it was imperative for teachers worldwide to adopt a new teaching paradigm as they were forced to shift from conventional face-to-face teaching to online teaching. This caused a wide range of unprecedented challenges for the educational system. The main challenge was that no clear policy was delivered by those responsible for monitoring and assessing students, that is, educators, and no data were reported to describe the implementation of online learning in the Lebanese context. More specifically, not all students had equal access to this virtual learning due to poor technology, internet unattainability, and lack of resources at schools. Due to these issues, everyone involved in the educational process including students, teachers, administrators, and parents went into a state of confusion.

Since teachers were not fully prepared to design their e-lessons, this problem is expected to continue - regardless of whether the content will be delivered face-to-face, partially online, or fully online- it is essential for teachers and practitioners to be guided and given insights into how to adopt the best practices in order to reach most students if not all of them in this critical situation. In this respect, studying the effectiveness of online instruction was a must. Hence, the present study aims at reflecting on the perspectives of Lebanese students who went through this experience so as to help teachers develop the necessary skills to provide high- quality education. As a result, the data collected serve to analyze the current situation and subsequently to benefit from the results in order to fill the gaps and give recommendations into how to proceed with this unconventional process.

In the few papers which described online learning in Lebanon, the researchers focused only on the teachers' perceptions (Farah & Frayha, 2021; Hanadi, 2021**),** without reflecting the students' perceptions towards online learning which took place in 2019-2020. Since students are

the center of the learning-teaching process, it is important to take their perspectives into account. Hence, this paper holistically describes online learning as it was experienced by 928 public and private school learners distributed among the eight Lebanese governorates.

In this respect**,** this paper aims to answer the following questions:

1. Before COVID-19, did the Lebanese Grade 9 and Grade 12 learners have prior experience in online learning?
2. After experiencing online learning, what type of delivery mode was preferable for Lebanese Grade 9 and Grade 12 learners?
3. What devices and communication channels were used by Lebanese Grade 9 and Grade 12 learners in online learning?
4. What were the five most benefits and drawbacks of taking online lessons from the students' perspectives?
5. How did Lebanese Grade 9 and Grade 12 learners rank the quality of online lessons?

Literature Review

Remote Learning

With the development of technology, learning started to take different forms including distance learning; a form whose limitations are associated with 'distance', i.e. time and place (Guilar & Loring, 2008; Newby et al., 2000). With time, this term evolved to describe other forms of learning such as online learning, e-learning, virtual learning, etc. (Conrad, 2006). Indeed, what is common among these terms is that instruction occurs between two people: a learner and an instructor; is held at different times and/or places; and uses varying forms of instructional materials. In more specific terms, Chi and Wylie (2014) distinguish the following modes of engagement: passive (receiving knowledge, listening to a lecture and being able to recall information), active (manipulating knowledge, taking notes and being able to apply knowledge to similar contexts), constructive (generating knowledge, comparing and contrasting information and being able to transfer knowledge or procedures), and interactive (dialoguing, discussing with peers, being able to co-create knowledge).

According to the Organization for Economic Co-operation and Development (OECD, 2020), because of school closure, the learning process of students was heavily disrupted. As a consequence, distance learning was implemented as an alternative to ensure the continuity of learning. Thus, it was debated how much students have learned during this closure as it was expected that online education would not match face-to-face teaching because of the time required to adapt and switch to distance learning and the difficulties faced to integrate technology. In order to end this debate, two factors had to be taken into account. The first one is the 'intensive margin' which refers to the efficiency of distance learning as it specifies how much students have learned during school closure. The second one is the 'extensive margin' which refers to the share of students engaged as it designates how many students continued to learn during school closure.

Influencing Factors

In the context of distance learning, current studies are being conducted to examine the characteristics of effective online education. The literature collected clarifies that the effectiveness of online education depends on several factors.

The first factor is *availability and familiarity with technology.* Thus, the shift to online learning means the transition from a conventional class to a virtual class which requires the use of internet connection and technological tools (Means et al., 2014).

The second factor is *instructional support.* Just like in conventional classrooms, the right instructional materials are needed during the process of teaching in virtual classes (Flack et al., 2020). Hence, the quality of such resources matters since learning is highly achieved when students are given the opportunity to interact with instructional materials and draw their own meaning from their interaction (Applefield et al., 2000; McLeod, 2019).

The third factor is *social isolation.* Flack et al. (2020) asserted that social isolation matters more than learning loss since distance teaching cannot compensate for the loss of human social interaction in the classroom.

The fourth factor is the *home environment.* A study conducted by Owusu-Fordjour et al. (2020) showed that more than 50% of respondents agreed on the ineffectiveness of distance learning compared to school physical attendance.

The fifth factor is *parent* i*nvolvement.* According to Okendu (2012), students learn well when they are supervised and guided but most parents think that having the textbooks of the various

subjects being studied in schools is enough to sustain learning at home as stated by Owusu-Fordjour et al. (2020).

The sixth factor is s*ocial background.* Cullinane and Montacute (2020) noticed that the social level of students plays a major role since students who belong to the middle class took a greater part in live and recorded lessons than those who belong to the working class.

The seventh and last factor is p*reparedness.* Christensen and Alexander (2020) explained that preparation involves designing engaging online lessons, training teachers on how to find easily used resources, and helping teachers through the support of teaching teams. The authors also noted that almost all schools were prepared a little or not prepared at all. While investigating the background of the concept of 'e-Learning readiness', Ebner, Schon and Braun (2020) gave special notice to the seven S model which includes the strategy, the structure, the style/culture, the staff, the skills, and shared values/ beliefs.

As a part of the preparedness plan, OECD (2020) suggested that governments establish different forms of communication to maintain contact with disengaged students and to adopt a flexible curriculum limited to key competences in order to regain students' confidence. In addition, countries need to make themselves ready in the future by preparing strategies. These strategies might include a) monitoring student engagement closely by following up and checking learning progress, b) addressing the possible barriers to student engagement - such as lack of devices and safe places to learn - and subsequently offering them adequate resources, and c) providing individualized support to students (Gouëdard et al., 2020).

Initiatives for Remote Learning in Lebanon

The purpose of implementing online teaching for the first time in March 2020 was to keep students in the learning atmosphere as much as possible during school lockdowns (Atallah & Bou Melhem, 2020). The Lebanese Ministry of Education and Higher Education (MEHE) left the freedom for the teachers to use the delivery mode (synchronous or asynchronous) and the communication channels (Zoom, Microsoft Teams or WhatsApp groups) they had access to (Al Rouadi and Anouti, 2020).

According to a survey on national education responses launched by UNESCO, UNICEF and the World Bank (2020) as responses to COVID-19 school closures, there were three delivery channels for remote-learning in Lebanon: a government-supported digital website with content, the TV programs, and paper-based responses with take-home packages. For these initiatives

taken by the government, there are no collected data at the national level showing the accessibility and the effectiveness of the delivered resources during that period.

Materials and Methods

Research Design

Since the aim of the study is to examine the perceptions of Lebanese Grade 9 and Grade 12students towards the online experience during the outbreak of the pandemic in 2020 and to link their perceptions to the best practices of online teaching and learning, the researchers used empirical data to find answers. Therefore, the researchers followed the quantitative approach to track frequencies regarding students' prior experiences in online learning, their preferred delivery mode, the devices and platforms they used, and the quality of online lessons they received.

Data Collecting Tool

The tool used to collect data was an online survey (See Appendix A) prepared on Google Forms. It consisted of 3 Sections, where Section 1 sought to collect general information about the respondents including the type of schools they learn at, their grade level, and the governorate to which they belong. Information about gender and the language of instruction was not collected since they fall out of the scope of the present study. In Section 2, the learners were asked about their online learning experience, their access to technology including the type of devices they had and the communication channels they used for distance learning. Section 3 explored the benefits and drawbacks of taking online lessons from the learners' viewpoints as they were asked to rank the quality of online lessons delivered by their teachers. It is worth mentioning that all questions were obligatory.

Sampling

The study sample included 928 Grade 9 and Grade 12 learners of formal academic learning in the Lebanese educational system. They are learning according to the curricula issued in 1997. Grade 9 represents the end of Cycle III of Basic Education whereas the Grade 12 represents the end of the Secondary Stage and subsequently of school education. Grade 12 students are distributed on four sections: Life Sciences (LS), General Sciences (GS), Sociology and Economics (SE) and Literature and Humanities (LH). The learners of these grade levels were selected since they both sit for the National Official Exams at the end of their academic year.

Based on students' responses to Section 1, it was revealed that around half of them (51%) were enrolled in Grade 9 while the second half (49%) were in the Grade 12. More specifically, around 19% of learners were enrolled in LS, 18% were enrolled in SE with roughly half of this percentage (9%) enrolled in GS and around 3% enrolled in LH. Moreover, the majority of respondents from public schools (58%) were Grade 12 learners whereas the majority of respondents from private schools (62%) were Grade 9 learners. The respondents were from the eight Lebanese governorates with the highest percentage from Mount Lebanon (28%), followed by the South (20%) and Beirut (19%). The remaining respondents (33%) were from the other six governorates and they were distributed as follows: 11% from the North, 10% from Nabatieh, 6% from Bekaa, 4% from Baalebeck–Hermel and 2% from Akkar.

Data Analysis

After cleaning data and sorting responses by question, the researchers conducted a range of statistical analyses using SPSS (version 19). Tables of frequencies and percentages, as well as cross-tabulations were used to present categorical variables. Chi-square tests of independence were used to examine the relation between pairs of categorical variables and their strength by Chi- Square measures of association.

Since data collected were quantitative, percentages were calculated based on numerical analyses. Based on the findings, data were interpreted, the research questions were answered, conclusions were drawn, and recommendations were made.

Validity and Reliability

To check the survey's face, content and construct validity, it was sent to three evaluators: two university professors to test it pedagogically and to a statistician to test it statistically. The three evaluators made sure that the survey indicators are sensible and that they measure the target concepts, that each indicator covers the full range of intended meanings, and that the survey measures exactly what it intends to measure. The evaluators also made sure that the instructions are clear and that the language is suitable to the level of the target sample. To estimate the reliability coefficient, five students – who were not a part of the study- were asked to fill the form at two different periods so that the researchers could find the correlation between their scores.

Research Procedures

After the necessary modifications were made based on the comments of the three evaluators, the General Directorate of education gave the approval to disseminate the survey online through different social media such as WhatsApp groups, Telegram, and Facebook Messenger.As a result, the survey was shared randomly with school teachers who in turn, shared it with their students in the assigned classes. Also, these teachers were asked to share the survey with their colleagues to encourage a broader group of respondents. As for private school teachers, they took the permission of the directors of their institutions before they distributed it to their students. These instructions for teachers were written clearly in the survey's introduction. The survey was open from the 26th of May till the 10th of June, 2020; noting that this period fell in the last weeks of remote learning which started at the beginning of March, i.e. a few days after the school lockdown.

Limitations

As this paper examines Lebanese students' perspectives towards the quality of online education during the pandemic; it provides some but not sufficient information about key elements which may enhance innovative adaptations to the teaching- learning process while teaching and learning online. Moreover, the results might not be reproducible if a larger sample of students was taken or if the students' choices were different.

Findings

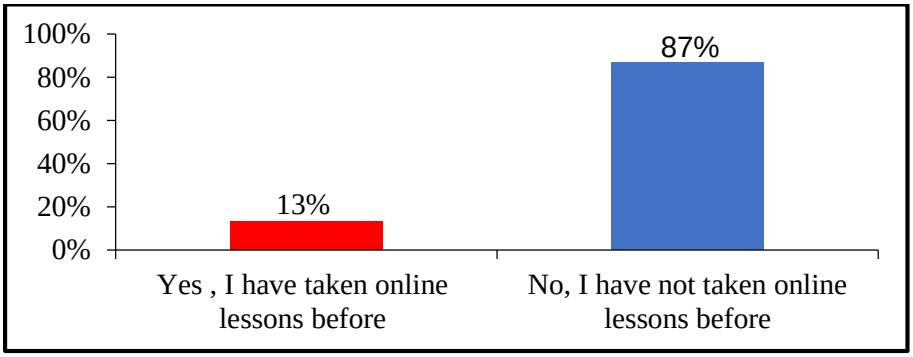
Studying the impact of the COVID-19 pandemic on the teaching-learning process from the perspectives of teachers is important but it is equally crucial to hear learners' voices regarding the implementation of online education. Knowing that enhancing teaching necessitates harnessing the power of students' voices, reliable feedback from students has to be taken into consideration by stakeholders to guide responsive teaching. Therefore, this paper reflects students' perceptions toward remote learning, the challenges they faced as well as the opportunities they experienced.

The responses to Q1 in Section 2 of the survey on Google Form which examined if students had been exposed to online learning before COVID-19 showed that 804 participants (87%) had never taken online lessons while only 124 participants (13%) had been exposed to this experience as it is presented in Figure 1. This indicates that remote learning was a method newly experienced by the majority of learners. Thus, many challenges were expected to arise while

implementing this method for the first time. In this respect, attempts to apply remote learning suddenly and without readiness brought several obstacles for all partners engaged in the teaching- learning process- including parents.

Figure 1

Distribution of Participants according to Their Prior Online Learning Experience



In response to Q2, in which participants were asked to select the delivery mode they prefer, 56% stated that they prefer to learn in an entirely traditional way, i.e. in a physical classroom setting, while 41% declared that they prefer to learn in a hybrid way where remote learning is mixed with the physical classroom attendance. Figure 2 further illustrates that among the 13% of respondents who have already been exposed to remote learning before COVID-19, 6% confirmed that they prefer to learn in a traditional way, 6% conveyed that they prefer the hybrid delivery mode while only approximately 1% mentioned that they prefer entirely online learning.

Figure 2

Distribution of Participants according to Their Prior Online Experience and Their Preferable Delivery Mode

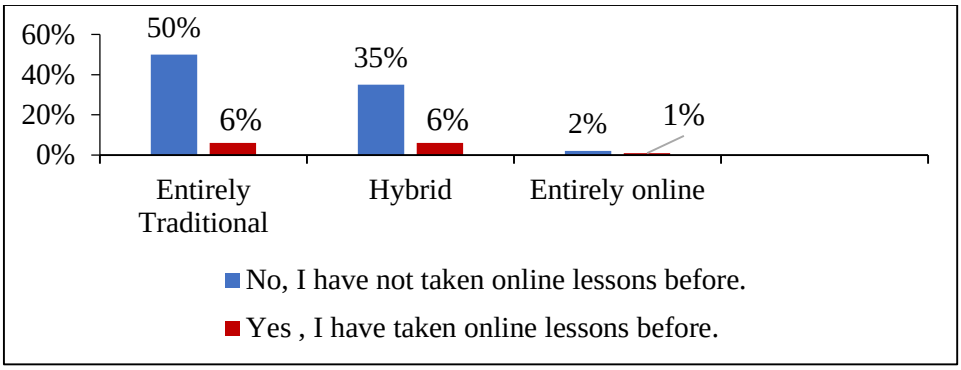
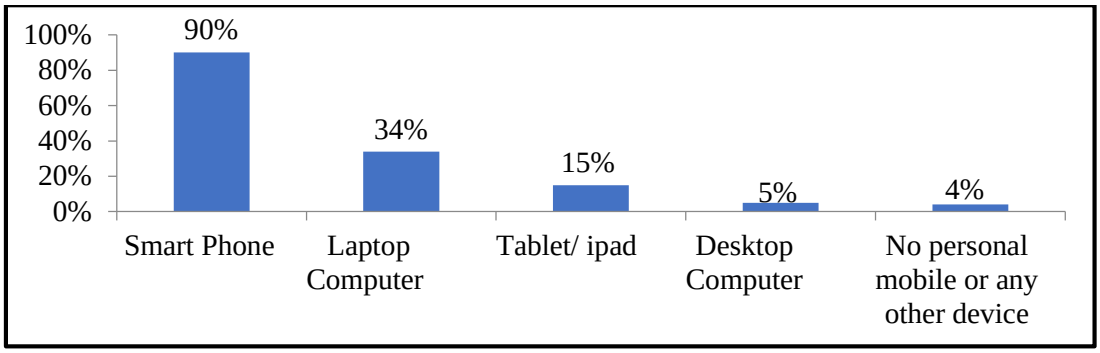


Figure 3 displays the technology tools selected by participants in Q3 as they were asked to list all the devices they own. So, 90% of respondents proved to have smart phones, 34% declared to have laptop computers; while 15% stated that they have Tablets/ iPads. A fewer number (5%) chose desktop computers; and only 2% selected Webcam 'built in' or USB attached. Besides, 43 respondents (4%) added that they have no personal mobile or any other device.

Figure 3

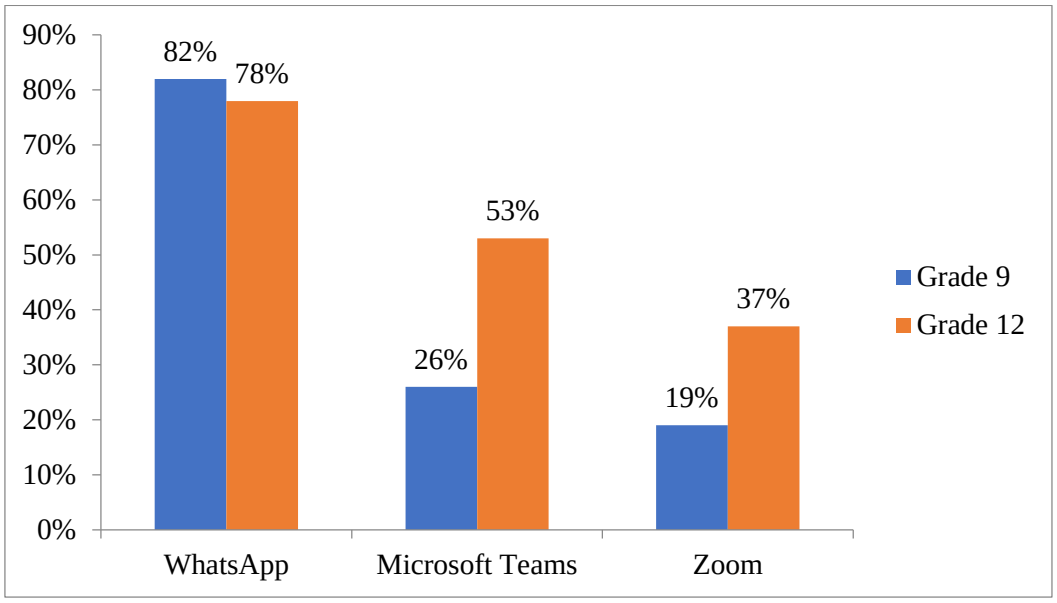
Devices Owned by Participants



In Q4**,** students were asked to list all channels they used in remote learning. As such, WhatsApp was used by 744 participants (80%), followed by Microsoft Teams which was used by 359 participants (39%). These percentages align with the percentages of students who used smart phones (90%) and those who used laptop computers (34%). Another free communication application, Zoom, normally used for synchronous learning, was selected by 258 participants (28%).

Figure 4

Communication Channels Used by Participants in Remote Learning



A Chi-Square test of independence was performed to examine the difference in the use of Microsoft Teams between Grade 9 and Grade 12 learners. The result was statistically significant, χ^2 (1, N = 928) = 72.112, p < .001, ϕ_C = .279. The association is a moderate positive relation. As illustrated in Figure, 4. 53% of Grade 12 learners used Microsoft Teams compared to 26% of Grade 9 learners. Another Chi-Square test of independence was also performed to examine the difference in the use of Zoom between Grade 9 and Grade 12 learners. The result was statistically significant χ^2 (1, N = 928) =34.478, p < .001, ϕ_C =.193. The association is a weak positive relation. As Figure 4 represents, 37% of Grade 12 learners used Zoom compared to only 19% of Grade 9 learners.

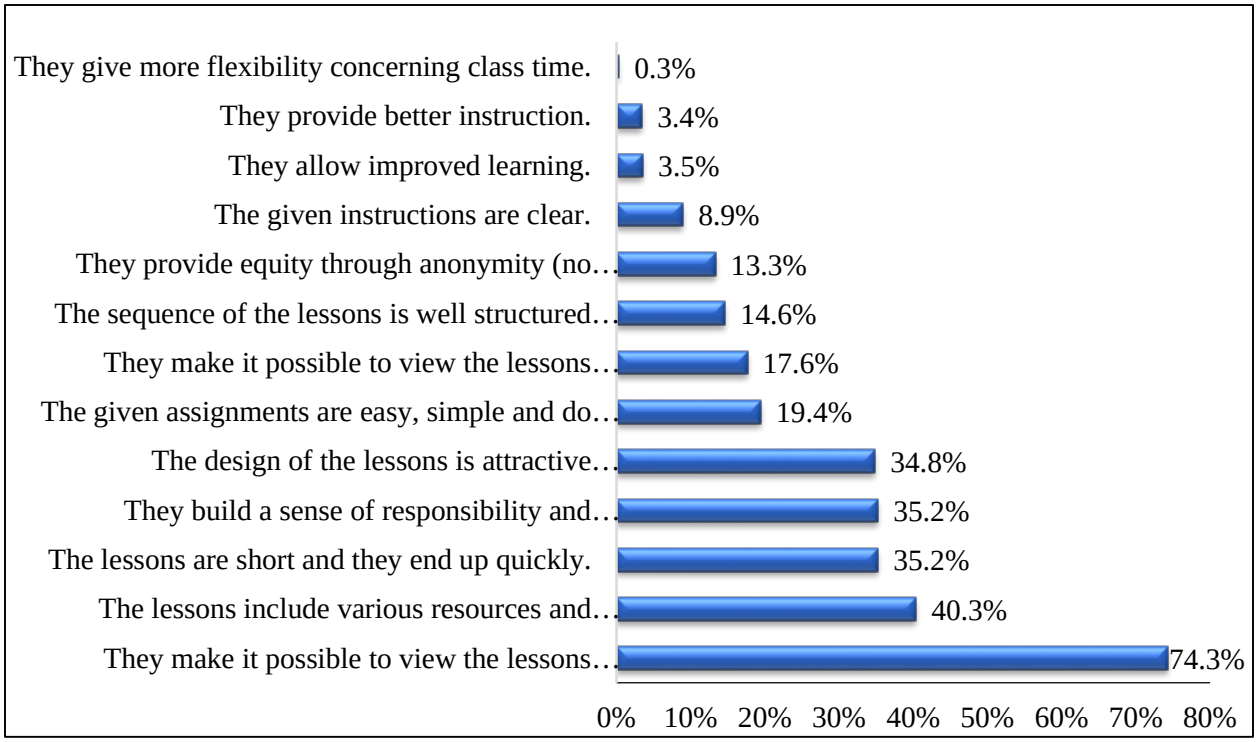
Other paid channels were added by private school learners. They include eSchool application which was used by 9% of respondents and a proper school Moodle/Website (1%). Further free communication channels such as Google Classroom/Google Meet were added by participants (4%) to the list**.**

In Q5, the participants were asked to select only five benefits of taking online lessons out of the several items suggested. They were also given the chance to add other advantages. Accordingly, the responses of participants who selected more than five items were excluded from the analysis. Thus, for students, the top benefit of taking online lessons was the possibility to see them as many times as they want at their own convenience. This item was selected by 652

respondents (74%) as compared to 353 respondents (40%) who considered that online lessons are rich in various resources and multimedia (video, audio, etc.). The property of ending up quickly as they have a short duration was selected by 309 respondents (35%). Likewise, 308 students (35%) considered that online lessons build a sense of responsibility and autonomy and 305 (35%) respondents believed that the design of online lessons is attractive as they include pictures, colors, animations, etc. These responses, along with other options selected by fewer students, are summarized in Figure 5.

Figure 5

The Benefits of Taking Online Lessons as Selected by Students in Q5 of Section 2

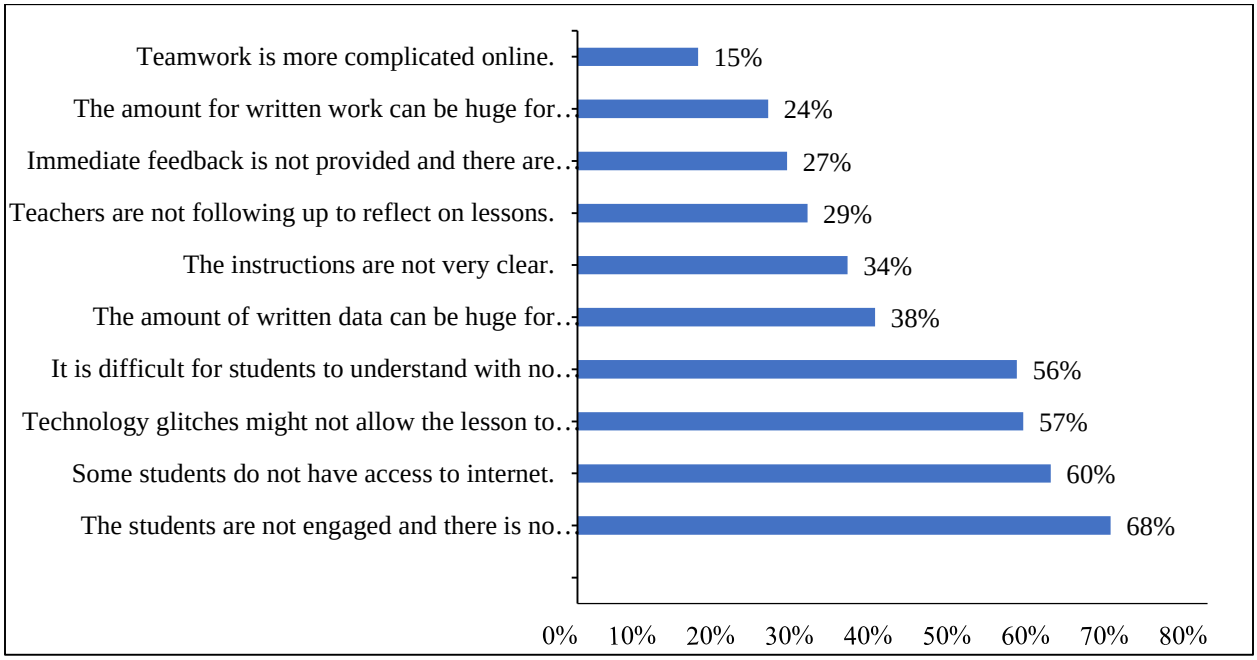


Q6 is also a multi-response question that required students to select only five drawbacks of the online lessons among the several items. So, identically to Q5, the responses which included more than five answers were excluded from the analysis. Figure 6, which summarizes these responses, shows that the lack of engagement and the absence of interaction was the most selected drawback. Technological problems and internet access problems came at the second and third ranks. The misunderstanding of lessons due to the absence of direct interaction as well as

the absence of feedback and follow-up by teachers were selected by participants as being among the five drawbacks of taking online lessons.

Figure 6

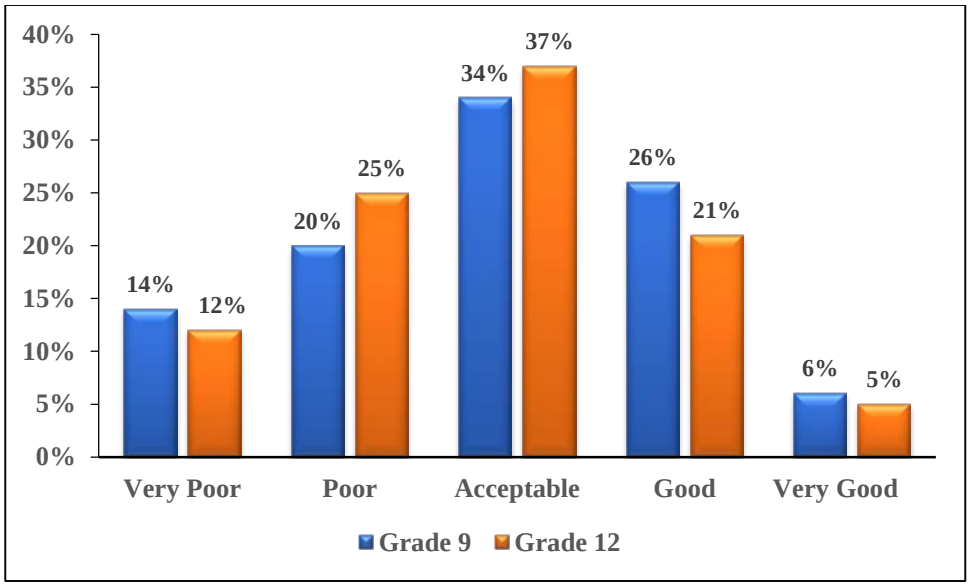
Drawbacks of Taking Online Lessons as Selected by Students in Q6 of Section 2



In Q7, participants were asked to rank the quality of online lessons on a five point Likert scale. A Chi-Square test of independence was performed to examine the difference regarding the quality rank of online lessons between Grade 9 and Grade 12 learners. The result was not statistically significant, χ^2 (4, N = 928) = 8.883, p =.064 > .05. As it can be seen in Figure 7**,** 'Acceptable' had the highest frequency among both Grade 9 (N= 162) and Grade 12 learners (N=173).

Figure 7

The Ranking of the Quality of Online Lessons



Analysis

The study examines the perspectives of Grade 9 and Grade 12 Lebanese students toward remote learning since learners in these grades were expected to be more concerned about continuing their studies online because they were supposed to sit for the National Official Exams. Regarding the geographic distribution of Lebanese students, the results of Section 1 of the survey revealed that the majority of respondents (67%) came from Beirut, Mount Lebanon and the South.

The first three questions of Section 2 gave a clear idea about the readiness of students to learn remotely. Therefore, they revealed that only 13% of students had been exposed to online lessons before COVID-19. This indicates that the educational sector in Lebanon - just like in most countries - was not prepared for the shift to online learning.

The results also showed that 56% of students – including those who had taken online lessons before- preferred face-to-face instruction at schools while only 41% seemed interested in online learning but in the hybrid model. Hence, designing a completely distance teaching-learning system was not preferred by Lebanese students similarly to those in many parts of the world (Olasile & Soykan, 2020).

Regarding the accessibility of devices and communication channels needed for the success of online learning, the social status of Lebanese people gives more chances for approximately every house to own at least one smart phone with the WhatsApp application

installed in it. This low-paid Tech has been used for communication for many years, so it was not surprising to find that online learning depended heavily on it. Hence, 80% of students declared to have used WhatsApp without any statistical difference between Grade 9 and Grade 12 learners. Both Microsoft Teams and Zoom were new to the educational culture of Lebanon; however, their percentage of use differed across the grades. For Microsoft Teams, an account for every student and teacher in the educational sector was offered by the Ministry of Education and Higher Education (MEHE) which also conducted training sessions for teachers and school administrators. Even though this application could be installed on smart phones, only 39% of students had used it and this aligns with the percentage of computer devices owned by students [Laptop (34%) and Desktop (5%)]. The percentage of Grade 12 students who used Microsoft Teams was double that of Grade 9 (53% versus 26%). This result could be due to the fact that teachers in the Secondary Stage generally have more advanced technological skills than teachers of Basic Education because of many reasons including their level of education (CRDP, 2020).

The free communication channel, Zoom, is largely used worldwide for online meetings and also for synchronous learning. The results showed that Grade 12 learners were more exposed to this channel than Grade 9 learners (37% versus 19%). This is additional evidence that supports the difference in digital skills between teachers of different stages.

Moreover, the low percentage of private school learners who use paid applications such as eSchool (9%) and specific Moodle or website (1%) supports the idea that even this flourishing sector in Lebanon has not been prepared for online learning.

Data collected from Section 3 disclosed that as far as the benefits of online lessons from the perspectives of students are concerned, the top benefit which received the highest percentage of responses (74%) was their permanent accessibility to students who could view the sessions as much as they needed. This feature of online lessons promotes self-paced learning and helps students to be responsible for their learning. Building a sense of responsibility and autonomy was also selected by 35% of students as one of the five benefits of online lessons. This supports the idea that online learning encourages self-dependence.

Besides, the richness of lessons in various resources and multimedia such as images, videos, audios, etc. is an essential component of online learning which was selected by 40% of students. This variety in digital resources makes these lessons attractive and engaging. In fact,

the quality of digital resources used to design lessons is an essential part of online learning and has been the subject of many studies (Ally, 2008, p.16).

The relatively short duration of online lessons is another characteristic of online lessons that was selected by 35% of students. In fact, as the attention span of students differs according to age, the duration of online lessons needs to be adjusted. These results highlight an important indicator about the success of remote learning that took place during the school lockdown period from March 2020 till June 2020. On the other hand, the top drawback of taking online lessons from the perspectives of students was the absence of engagement and interaction as it was selected by 68% of students. The problems of internet and technology glitches were selected by 60% and 58% of students respectively. These barriers were considered the most common online learning challenges encountered by learners in many countries.

The absence of direct instruction by teachers was selected by 56% of students and this is a consequence of the absence of interaction in the teaching session. So, no direct feedback was given to students by teachers and this affected students' comprehension. Therefore, following-up on students either synchronously or asynchronously is considered as one of the factors that determines the effectiveness of online learning.

Moreover, this difficulty to understand the presented materials due to the absence of the teacher is supported by the selection of the items *'The instructions are not very clear; Teachers are not following up to reflect on lessons; Immediate feedback is not provided and there are no responses to students' questions; The amount of written work can be huge for teachers to evaluate and to give adequate feedback'* by 34%, 29%, 27%, and 24% of students respectively. These results are in accordance with those revealed from Q5 in which the items *'The given instruction are clear; They allow improved learning; They provide better instruction'* were selected by a very small percentage of students.

When students were asked to rank the quality of online lessons delivered by their teachers on a five point Likert scale, 34% of Grade 9 students ranked the online lessons delivered by their teachers as 'Very Poor' and 'Poor' while an equal percentage (34%) considered the lessons they received 'Acceptable'. The remaining percentage of students (32%) described the online lessons as 'Good' and 'Very Good'. Similarly, 37% of Grade 12 students ranked the online lessons as 'Very Poor' and 'Poor', 37% described them as 'Acceptable', and 26% considered them 'Good' and 'Very Good'.

Pedagogical Implications

There is no doubt that students' perspectives about online learning reflect the quality of online teaching or instruction. Thus, efforts are needed to overcome the barriers and the challenges in order to ensure the quality of online instruction. This is closely related to providing teachers with strategies to design and deliver effective online instruction especially since in online learning environments, new roles are attributed to all those involved in this process such as teachers, administrators, students and parents.

According to Phipps and Merisotis (2000), the categories which grouped the benchmarks for measuring the quality of Internet-based learning such as course development and structure, teaching/learning, student and staff support, and evaluation and assessment reveal that staff and students are the two key stakeholders in an educational setting (Yeung, 2001) . As such, the team approach was suggested as a method to ensure the quality of online education instruction. For example, Levy (2003) suggested a team of a content specialist to decide on the teaching material, an instructional designer to be responsible for the visual presentation of this material, and a technical specialist to actually create the online course for the instructor to interact online with the learners.

More importantly, teachers should be able to identify and recognize the strengths and weaknesses of technologies, and to select the most appropriate delivery mechanism for their lessons (O'Quinn & Corry, 2002). In more specific terms, a part of online education is conducted via asynchronous learning where teachers need to use a learning management system (LMS) which provides a variety of tools that help in reporting summaries of students' online activity, following up on their participation and completing assignments, and tracking their progress (Ragan, 2009,p.5). Hence, this learning process requires students' role adjustment for online learning to be viewed as more cognitive or internally oriented. Online learners must take more responsibility, adjust to a new climate and to a new context, synthesize ideas, apply concepts, and stimulate their own curiosity (Garrison et al., 2004). Besides, teachers must practice dynamic management strategies by designing a system that allows learners to be engaged and dependent, to learn from others, and to undergo an interactive learning experience. Thus, teachers can successfully address all learning styles of the virtual student by incorporating activities that could be one-alone, one-to-one, one-to-many, and many-to-many. When organizing an online course, the amount students learn, their ability to apply learned skills into practice, and their satisfaction

with the learning experience should be considered. Such LMS, which guarantees safety, security, and confidentiality, also requires teachers to use student feedback in order to address their needs. Furthermore, teachers need to set a timeframe that specifies how they will respond to student inquiries and give them feedback since students expect 24/7 access to their "virtual teachers". This helps them to avoid the frustration and dissatisfaction of students who expect to get an immediate response. Thus, while giving feedback, teachers have to use clear and concise language that helps students to understand and encourages them to communicate their needs.

Rose (2018) added five attributes of effective online teachers. The first attribute is avoiding a didactic approach as online teaching should not be "lecture-based". The second attribute is varying pedagogy and making the utmost benefit of the features of online platforms that allow teachers to do "magic" through collaborative and cooperative activities. So, the role of the virtual instructor is to select and filter information for student consideration, to provide thought-provoking questions, and to facilitate well-considered discussion (Kettner-Polley, 1999, cited in Y Kotze & C Dreyer, 2002, p.103). The third attribute is using productive failure. This requires engaging students in activities before giving any instructions. In this way, they expect students to come up with wrong ideas and subsequently to fail. This failure offers productive opportunities for students to learn deeper as they explore and generate ideas; with the teacher consolidating. The fourth attribute is facilitating the learning by including everyone to keep the communication going. This does not only require the cognitive presence of the teacher, but also demands the presence of students in addition to the social presence of both. The last attribute is providing a seamless and harmonious structure that is clear, systematic, and logical. In line with this learning process, technology plays a major role and it also needs to work seamlessly.

Finally, evaluation is also an important component of online education because it is a vital means to gauge students' learning outcomes and the quality of course instruction (Zheng & Smaldino, 2003); bearing in mind that issues such as cheating, plagiarism, and integrity in taking tests are matters that affect the quality of E-teaching (Simonson et al, 2003, p.62).

Conclusion and Recommendations

This study helps policy makers to closely examine the effectiveness of online learning in the Lebanese context from the perspectives of students because they are the center of the

teaching-learning process. In this paper, data were collected from 928 Grade 9 and Grade 12 public and private students from all governorates of Lebanon. The questions about the devices and the communication channels they used and the type of learning they prefer gave an idea about the status of online learning during the COVID-19 pandemic in 2020. Moreover, according to students, the five major benefits and drawbacks of taking online lessons help determine the means of designing and implementing online learning. Additionally, when asked to rank the quality of online lessons delivered by their teachers, the findings were surprising since the highest percentage of Grade 9 and Grade 12 students chose the "Acceptable" category (34% and 37%).

Indeed, to ensure the quality of online instruction, online lessons should possess some key elements. In this sense, it is imperative for knowledge to be constructed rather than transmitted, for the learning activities to appropriately match the student learning styles, for the lessons to be rich in experiential active learning, for spiral learning" to be present "to allow revisiting and expanding prior lessons, and for the identification and correction of inaccurate prior learning to be provided. Subsequently, in properly implemented online lessons, students can take full responsibility for their learning, be intrinsically motivated, and direct their learning while the teacher's role is to monitor and guide the overall learning process. Therefore, it is recommended that future studies examine the perspectives of teachers towards online teaching; and the impact of their attitude on their performance as teachers, and consequently on the achievement of their students.

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Appendix A

Student Survey for Grade 9 and Grade 12 Students

Section 1

Tick the appropriate case

School Type

☐ Public ☐ Private

Grade Level

☐ Grade 9

☐ Literature and Humanities ☐ Sociology and Economics

☐ General sciences ☐ Life Sciences

Province

☐ Beirut ☐ Mount Lebanon

☐ North ☐ Akkar

☐ Beqaa ☐ Baalbeck- Hermel

☐ Nabatieh ☐ South

Section 2

Q1: Have you ever taken online lessons before COVID-19?

☐ Yes ☐ No

Q2: Which type of delivery mode do you prefer in learning?

☐ Entirely online

☐ Entirely traditional (classroom only)

☐ Hybrid (A mix of traditional and online classes)

Q3: Which of the following devices do you own? Select all that apply

- ☐ Desktop computer
- ☐ Laptop computer
- ☐ Smart Phone
- ☐ Small tablet
- ☐ Webcam ("built in" or USB attached)
- ☐ None of the above
- ☐ Other/s: Specify

Q4: What communication tools are you using? Select all that apply

- ☐ Microsoft teams
- ☐ Zoom
- ☐ Whatsapp
- ☐ None of them
- ☐ Other/s: Specify

Section 3

Q5: What do you consider to be the benefits of taking online lessons?

Select up to 5 options only.

- ☐ They give more flexibility concerning class time
- ☐ They provide better instruction
- ☐ They allow improved learning
- ☐ They make it possible to view the lessons through different channels
- ☐ They make it possible to view the lessons many times
- ☐ The design of the lessons is attractive (pictures, colors, animations, etc.)
- ☐ The sequence of the lessons is well structured and organized
- ☐ The lessons are short and they end up quickly
- ☐ The given instructions are clear

☐ The given assignments are easy, simple and do not take too much time

☐ The lessons include various resources and multimedia (video, audio, etc.)

☐ The build a sense of responsibility and autonomy (self-dependence)

☐ They provide equity through anonymity (no names are included)

☐ None of the above

☐ Other/s: Specify

Q6: What do you consider to be the <u>drawbacks</u> of taking online lessons? Select up to 5 options only.

☐ The Instruction is not very clear

☐ The students are not engaged and there is no interaction

☐ Immediate feedback is not provided and there are no responds to student questions

☐ Teachers are not following up to reflect on lessons

☐ The amount of written data can be huge for students to understand

☐ The amount for written work can be huge for teachers to evaluate and to give adequate feedback

☐ It is difficult for students to understand with no teacher giving direct instructions

☐ Technology glitches might not allow the lesson to take place

☐ Some students do not have access to internet

☐ Teamwork is more complicated online

☐ None of the above

☐ Other/s: Specify

Q7: In general, how good do you consider the quality of the lessons your teachers are giving you online?

☐ Very Good ☐ Good ☐ acceptable ☐ Poor ☐ Very Poor