E-LEARNING IN KUWAIT: STUDENTS' PERSPECTIVE

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ABSTRACT

The Coronavirus (COVID-19) pandemic has wreaked havoc on societies around the world and continues to do so and produced cataclysmic socio-economic challenges. This virus compelled countries to enact restrictive policies in order to combat, defend, and prevent against the spread of infection. In most nations, including Kuwait, a complete lockdown was imposed, with necessary measures taken to limit social gatherings, wear protective masks, and encourage social distancing. Businesses, organizations, and institutions have been forced to discover new avenues to survive and thrive by converting to remote operation using digital technology. Similarly, the epidemic has forced educational institutions to abandon conventional face-to-face instruction in favor of online digital learning. The goal of this study is to assess the online learning process in Kuwait from the perspective of students. In this regard, a survey questionnaire was designed and distributed to students throughout Kuwait; 830 students responded, with just 500 students with complete answers. In light of the dangerous and widespread of the harmful virus, analysis found that students consent to online learning. However, most prefer face-to-face instruction in a classroom setting.

KEYWORDS

Online learning, Kuwait, COVID-19 pandemic, barriers, sustainability

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Highlights

- *This study evaluates Kuwait's online education system from students' viewpoints.*
- *The majority of students prefer in-person instruction in a classroom setting over e-learning.*
- *While Kuwaiti teachers are less accustomed to e-learning, students possess knowledge of computer applications and online processes.*
- *All stakeholders and elements of Kuwait's educational systems must commit, dedicate, and work together to ensure the long-term viability and sustainability of digital learning systems in Kuwait.*

INTRODUCTION

Following the initial signs of its emergence in late 2019, COVID-19 spread rapidly throughout the world, killing millions of people and forcing countries into lockdown. Economic activity has ceased as a result of its ripple effect. Rapid spread of the virus forced organizations and companies to transition to an online mode of operation. The devastating effects of the COVID-19 pandemic have also disrupted many aspects of our lives, most notably education.

The crisis paralyzed the education sector and hence compelled officials to choose between closing schools to save lives or keeping them open. The virus has pressured students and faculties to stay at home. Face-to-face interaction between instructors and students is especially harmful due to the high contagiousness of Coronavirus. As a result, students' educational programs were disrupted, requiring a considerable change away from traditional learning in schools and universities and toward online or distance learning. Therefore, implementing remote education in various delivery modes assure educational continuity. E-learning is a method of transmitting knowledge to learners via the Internet, satellite, interactive television, intranet, or extranet (Chen et al., 2020). The concept of E-learning entails using modern technology and available E-tools for effective two-way communication in order to transfer knowledge to all key stakeholders in the education sector. Students, instructors, parents, institutions, and institutional administrators, as well as a competent information technology platform, are critical stakeholders in the online learning process, and their participation, cooperation, and joint efforts are important to maximize the process efficacy.

The most important purpose of digital learning is to close the learning gap produced by the lockdown. If one or more of the above-mentioned components does not operate or function effectively and satisfactorily, online learning is interrupted and hence blocked. Power outages, connectivity issues, internet availability, infrastructure, course design and organization online classes; course delivery and assessment; research and communication patterns; selecting the proper online teaching

platform and monitoring the effect and quality of online learning are just a few of the challenges that online learners face.

Instructors with mediocre perceptions of their knowledge of information technology are another barrier to online learning (Barrot et al., 2021; Adedoyin and Soykan, 2020). On the other hand, students had some of the same problems as teachers in this regard and were generally unprepared for online learning. However, students were hesitant to embrace online instruction because of their home obligations and lacked interaction between themselves and the lecturers. Some students did not have physical study spaces, environments, and online learning platforms. Many underdeveloped countries and with low incomes households do not provide students with a dedicated study area (Tang et al., 2023; Day et al., 2021).

Other problems that might develop as a result of a sudden change in one's lifestyle include stress, anxiety, and sadness (Saddik et al., 2020; Copeland et al., 2021). Low-income families lack basic necessities like food, shelter, running water, electricity, medical care, and safety for their children. These students are more likely to be targeted online because they are taking so many classes online and spending so much time on digital platforms. Students are now spending more unstructured and dangerous amounts of time online studying, which increases their risk of cyberbullying and exposure to violent information. Some schools and institutions lack the tools to support online teaching and learning, such as student access licenses for online library materials and functional online communication tools. Digital learning cost possess a burden for parents of students from low-income homes.

On the plus side, there are many clear accessibility benefits, flexibility, convenience, and a significantly more affordable study style in terms of travel and lodging. Many people are interested in whether online learning is superior to traditional in-class learning even though most academics and students prefer the traditional approach. Face-to-face learning is favorable due to the challenges that come with it; the participation of instructors is essential to the success of online learning.

Before the COVID-19 epidemic, digital education, or e-education, had been employed sporadically in some nations and only marginally or not at all in the majority. Nonetheless, it exists in a few different ways previously. For online expansion, modern equipment and means of transferring information are critical; thus, high-development computers and digital platforms exist. Distance education is very important and its widespread availability and feasibility as well as the expansion of computers and broadband Internet, have prompted their usage in educational activities (Makosa, 2014).

Computers and first-and second-generation communication technology were both used in early remote education courses. The mainstays of first-generation distance learning, which ran from the 1850s to the 1960s, were print, radio, and television. On the other hand, a variety of technologies were used in the second wave of distance learning courses without the use of computers. The establishment of the British Open University in 1969 marked a turning point in the usage of mixed-media technologies to deliver distance education. Text, audio, and visual learning materials were sent to students via mail and were supplemented by broadcast (Matthews, 1999).

This study aims to evaluate the appeal and usefulness of distance education among Kuwaiti students during a coronavirus lockdown. Additionally, clarify the areas of weakness and strength as expressed and characterized by students, and highlight difficulties and barriers encountered by students nationwide in the 2020–2021 academic year.

LITERATURE REVIEW

The growth of online learning over the years, particularly during the COVID-19 pandemic, is not a recent development in the education sector education. The Internet, social media, and other digital communication tools are used in online learning. The literature includes a long list of articles on online education. However, during COVID-19, the volume significantly increased.

As far as students' experience and readiness in using digital technology, according to Klein et al. (2018), WhatsApp has various qualities that are useful for higher education distance learning and is frequently used by students. It encourages engagement, knowledge sharing, and collaboration. Dhawan (2020) confirmed that the usage of social media for distance learning has undeniable benefits in improving communication between students and between teachers and students.

In their study, Noskova et al. (2021) developed a survey questionnaire to see whether students understood different ways to connect with digital learning resources and the most digital tools they preferred ones. Their findings revealed problems and gaps in students' information cultures and suggested means to improve their potential interactions with digital resources. Similarly, Singh (2020) looked into how management students felt about online education during COVID-19. The student had no idea that in-person instruction in the classroom would be replaced successfully by digital learning. Major obstacles sited by students included lack of teacher interaction and noisy home environment.

Dawadi et al. (2020) stated that online learning is expected to exacerbate previously existing disparities among students in low-income and developing countries, owing to existing socio-economic gaps in terms of wealth and education levels among the population. In the same line, Kapasia et al. (2020) emphasized the significance of a conducive learning environment, which is sadly lacking in many developing nations. Furthermore, according to Azorín (2020), students in some countries lack basic needs such as food, power, and clean water. Another barrier to e-learning is the lack of high-speed broadband or digital devices. For students, parents, and instructors, the proliferation of Covid-19 has produced social and emotional upheaval, uproar, and discomfort (Dorn et al., 2020).

Similarly, according to E-learning Africa groups (eLearning Africa and EdTech Hub, 2020), the constraints and limitations of online processes in Africa are not the same for everyone; they vary depending on region and degree. The issues that urban colleges face are distinct from those that rural primary schools face. Although Covid-19 has impacted all educational sectors, certain levels of education have been affected differently than others; however, higher education has been the least affected.

Teachers and parents play critical roles in the success of the educational system. Several studies have looked into

research from this perspective. For example, Flores and Gago (2020) conducted a study to examine the ability of Portuguese teachers to address difficulties and possibilities in digital instruction. De Boer (2020) found that due to the new teaching revolution in Dutch higher education, teachers are experiencing traumatic, demanding, and upsetting experiences along with psychological and professional issues.

Alqabbani and Almuwais (2021) developed a cross-sectional survey questionnaire in Saudi Arabia to gauge university professors' readiness attitudes and satisfaction with the shift to distance learning. The vast majority of responses were encouraging and positive. Using a survey with educators and learners on distance learning, Gupta et al. (2020) discovered a distinctly positive response among students and less favorable among teachers. Majority of respondents stated that online learning is inappropriate for teaching mathematics, which necessitates constant face-to-face engagement with the instructor besides being dissatisfied with the inadequate infrastructure. Farooq et al. (2020) looked into the issues that the medical faculty in Pakistan faced during COVID-19. Lack of sufficient training and minimal assistance from the university were among the main setbacks. In addition, difficulties such as internet connectivity and availability were mentioned.

Parents play an essential role in providing for children's needs, such as a safe and healthy home environment. In addition, they provide direction and stimulate their children in the e-learning process. In the Sultanate of Oman, a study on parents' perceptions of online education during the coronavirus pandemic was conducted to measure parent's view of e-learning. According to the parents, e-key learning benefits include exposing their kids to modern educational technology and teaching them how to function independently. One of the challenges was time management and network limitations (Al-Hadharami and Al-Saddi, 2021). E-learning in Jordan faces several logistical, administrative, and technical challenges, according to Abuhammad (2020). Parents spent time and energy trying to give their kids a nurturing and supportive environment, but they ran into personal, practical, and financial difficulties.

In terms of students' perspectives, the literature encompasses research articles for all academic levels, and several authors have investigated the viewpoints of non-college students. For this particular group of students, for example, Şahin et al. (2020) employed a variety of nonparametric tests, including the Kruskal-Wallis and Wilcoxon tests to measure the impact of delivering a learning psychology course in various methods on students' academic achievement and attitudes. Similarly, Mukluk et al. (2021) examined secondary school students' views on distance learning in mathematics education during the COVID-19 epidemic in Zambia.

In Alabama and Georgia, Lindner et al. (2020) used transactional distance to deliver a structured interview questionnaire to middle and secondary school agriscience teachers. Instructors emphasized that students should be provided with the necessary tools and materials, as well as receive proper training. In light of the sudden shift to online teaching, Hasan (2020) conducted a qualitative study among Indian students during the COVID-19 pandemic. In this study, convenience as well as flexibility were identified as advantages, the disadvantages were as weak network and connectivity. Rahayu and Wirza (2020) used survey questionnaires and interviews to investigate the attitudes of Indonesian junior high school English teachers about online instruction. Although the students favored online learning, they questioned the method's effectiveness.

In Zimbabwe, Maphosa (2021) conducted a survey of university undergraduate students. The main shortcomings stated by students included lack of technology, facilities, internet, and power outages. The major challenges were energizing and stimulating students to participate actively in the process. During COVID-19, Giray (2021) conducted a poll to find out how Turkish undergraduate computer science students perceive online learning. Students preferred in-class lectures. Moreover, the main deterrents of online learning were the lack of instructor support and scarcity of classmate interaction.

In California, Asgari et al. (2021) surveyed university engineering students on e-learning, findings revealed that privacy and security, as well as learning and teaching to be the significant technical problems. In a similar vein, during COVID-19 lockdown, Alsoud and Harass (2021) analyzed the perceptions of university undergraduate Jordanian students on e-learning process in the country. The sample included undergraduates under the age of 21, with few graduate students. Almaiah et al. (2020) conducted interviews with students and specialists in six universities in both Saudi Arabia and the Jorden during COVID-19 to determine the key hurdles facing the e-learning process. The participants indicated that the key elements for a successful on-line are having visionary policymakers, as well as qualified developers and employees. According to Doucet et al. (2020), no one unique online learning system exists that is customized to all subjects, ages, cultures, and regions. Yet, a study conducted in Lebanon by Fawaz and Samaha (2020), researchers discovered a positive correlation between university satisfaction levels and the prevalence of depression and stress.

The findings of Wahid et al. (2020) suggested that online learning is inappropriate for science disciplines, particularly those that require students to perform experiments in lab settings, like biology, chemistry, and physics. On the other hand, Kalman et al. (2020) aimed to evaluate how chemistry students reflected on online learning. Students expressed their excitement and satisfaction with the technique, provided they fully master the skills and developed a passion for the work

In order to identify the factors influencing students' intention to use e-learning, Al-Okailya et al. (2020) conducted a survey questionnaire among Jordanian university students. The responses were examined using partial least squares. The majority of students used smartphones in their online classes, according to data analysis. The majority of respondents cite poor communication with their peers, lack of technical support resources, and motivation as the main drawbacks of distance learning, the main concerns of instructors were a lack of technical support, particularly for those who were not accustomed to giving lectures or producing materials for online platforms.

Several studies in medical and other related fields have been conducted; for example, Diab and Elgahsh (2020) used

a descriptive correlational research process to assess Egyptian nursing university students' perceptions of online education. The majority of students, particularly first-year students, expressed their discontentment with e-learning process. The dissatisfaction was primarily caused by inadequate infrastructure and technology, a lack of management support, and improper instructor behavior and incompetence. The main issues raised by students included poor internet connectivity, particularly for students in rural and distant places, and a lack of a place and distinct room for studying. In a similar vein, other students admitted to feeling anxious or depressed in some way.

Hundekari et al. (2020) assessed Indian medical students' perceptions of online teaching during the COVID pandemic. Despite their preference of face-to-face instruction, students agree to use online instruction as a backup in dangerous or time-sensitive scenarios. skills. In Poland, Bączek et al. (2021) designed an on-online survey for medical students to assess the e-learning process. Analysis revealed that online learning is highly favored among students since it allows for more stays-at-home, ample access to online services, and studying at one's own pace. The absence of ample interactions with patients and technical problems were highlighted as the main drawbacks.

Basith et al. (2020) in Poland designed an online survey for medical students to evaluate the e-learning process. Data analysis shows that online learning is quite favored among students. It provides for more time spent at home, more access to internet resources, and the ability to study at one's own speed. The lack of adequate interactions with patients, as well as technical issues, were cited as the key negatives.

Furthermore, the instructor proposed conducting additional research on the ramification of e-learning on students. During the COVID-19 pandemic, a survey of university medical staff in Egypt revealed that proper tools and teacher experience were the most important success factors in online learning. Students' main concerns were a lack of facilities and a lack of internal connectivity within the country (Zalat et al., 2021). Alsmadi et al. (2020) investigated the efficiency of remote learning among Saudi Arabian medical students with 63% indicating that it was beneficial, but they lacked adequate contact with the teachers.

Quality assurance is imperative for the success of distance learning. Quality of teaching, learning, material, and facilities are essential ingredients for producing efficacious learning outcomes for students. Achieving quality teaching and learning is an aspiration of educational decision-makers but is an intricate endeavor since it involves multitudinous dimensions, such as curriculum design and course content and material, as well as assessment of the learning environments and outcomes. Furthermore, it necessitates sincere and fervent coordination, cooperation, and engagement among a wide range of stakeholders.

As an example of quality assurance, Marciniak (2018), identified several indicators for assessing the quality of online higher education programs. Kazaine and Arhipova (2018), on the other hand, proposed procedures for assessing and controlling the quality of e-learning materials. Chuah and Lim (2018) found that using quality tools is essential for improving Malaysian student' retention and supporting learnign processes.

MATERIALS AND METHOD

During the coronavirus pandemic, Kuwait, like most other nations, was put on full lockdown and had to alter all safety standards, and the country had to adjust and acclimatize to new living conditions. The majority of the country's economic operations and organizations were halted or slowed down, the education system was no exception. As a result, classes and face-to-face lectures were replaced by online instructions and lectures. Kuwait, as an oil-producing country, has no severe infrastructure concerns or shortages of electronic facilities, equipment, or other tools required for distance learning. Students were unfamiliar with this way of learning, and instructors were inexperienced and unequipped to teach in this manner, this was apparent particularly among high and middle school teachers.

This study is specifically aimed at answering the following research questions to investigate the factors that influence students' learning and experiences during online education:

- How satisfied are the students with the organization's support, the role of the instructors, and the home study environment for facilitating online education?
- What are the positive and negative factors that influence students' online learning experiences?
- How much do students prefer taking online classes in the future?
- Is there a discernible difference in opinion based on gender or academic level and discipline?
- What line of actions should decision-makers in the country make to successfully sustain the online education process?

This research study was initiated with the goal of adequately and professionally designing online classes and providing and administering methodical and efficient instruction in the future. As a result, a survey questionnaire was designed to assess and measure the effectiveness and identify the key success indicators of the online learning process in Kuwait from the perspective of students. The questionnaire consisted of 25 questions and was distributed to students via online distribution, covering all governorates, education levels, gender, and other parameters, as shown in Table 1.

More than 1000 students in Kuwait received the questionnaire via the Internet. A total of 783 students answered, with the final number reduced to roughly 500 following comprehensive scrutiny for missing answers and duplications. The student's responses were evaluated and visualized using SPSS software. The sample represented a close exemplification of the student population in Kuwait with different characteristics, as portrayed in the aforementioned table. Kuwait is divided into six governorates; schools are predominantly publicly supported by the state, with few privately owned and operated schools. There is one public university (Kuwait University) and a number of privately financed universities, and only one Technical school that offers a diploma. The nationals represent the bulk of students, along with many non-Kuwaiti students. Many of the expatriates are either single or have left their children in their own country. The female students are slightly more than the male.

Education Sector	Number of participants	Percentage (%)
Public (Governmental)	309	62
Private	191	38
Academic Level		
Middle School (Intermediate)	141	28
High School (Secondary)	189	38
Applied education and training (diploma)	80	16
University	90	18
Age Range (years)		
9-14	139	28
15-18	152	30
19 and above	209	42
Gender		
Female	276	55
Male	224	45
Nationality		
Kuwaiti (national)	363	73
Non-Kuwaiti (Expatriate)	137	27
Governorate of Residence		
Ahmadi	65	13
Al-Asema (Capital)	115	23
Al-Jahra	72	14
Farwaniya	54	11
Hawally	128	26
Mubarak Al-kabeer	66	13

Table 1: Demographic Characteristics of the participants in the survey

The sample was a good representation of Kuwait's student population, with various characteristics, as shown in the aforementioned table. Kuwait is divided into six governorates, with the majority of schools being publicly funded by the government and only a few privately run institutions. Female students outnumber male students by a small margin. Figure 1 displays the percentage of student participants from different genders according to education level in both public and private sector schools, based on the above-mentioned table.

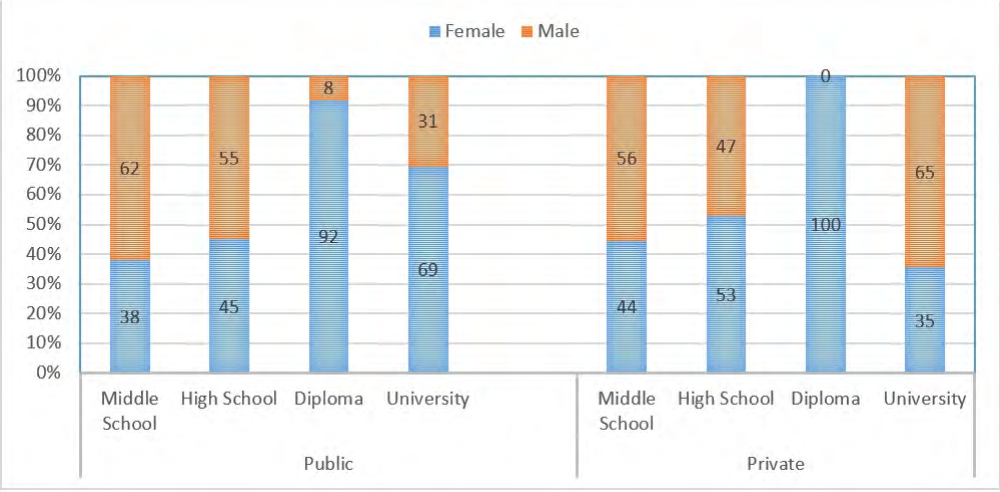

Figure 1: Percentage of student's participants in the survey according to the academic level from different genders and sectors

According to Figure 1, the female diploma student participants outnumbered their male counterparts in both the public and private sectors, but the percentages are frequently reversed in middle and high school.

RESULTS

The feedback from the survey questionnaire shows that, unlike many developed countries, Students in Kuwait overwhelming (97%) have computer knowledge and are familiar with and accustomed to using the internet and highly engaging in social media, and most own required devices for online learning. According to the survey, around 74% (369) claimed to have prior experience with using Microsoft Teams and Zoom applications.

Furthermore, just 45% stated having received the necessary materials for remote learning classes, although more than

half (58%) claimed of being comfortable using this form of learning; and 42% expressed their dissatisfaction.

Approximately 66% of students reported spending three to seven hours per day on online classes, while 10% claimed to spend more than seven hours, and 24% claimed to spend less than three hours per day. As shown in Figure 2 below, university students reported their grades had declined, while diploma students' grades did not change. High and middle school students' responses were nearly identical across all categories.

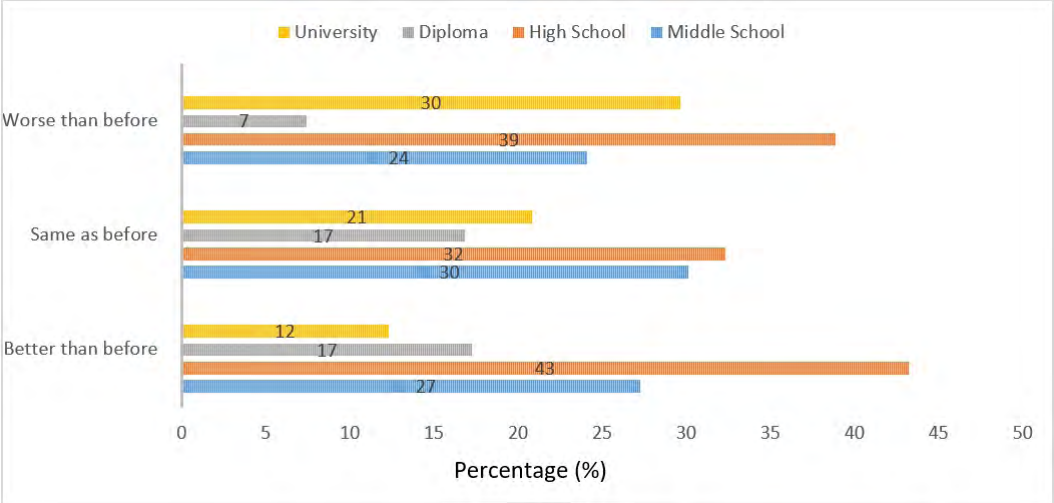

Figure 2: The status of students' grades in online learning versus in-class education in percentage according to academic level

As far as help and support from teachers, the bulk of students (85%) believe that they are available, with the bulk (56%) claimed that instructors are only available on occasion. Over 70% reported receiving some type of assistance from family and friends, with more information shown in Figure 3.

Figure 4 depicts the student respondents in terms of pleasure and content with the online learning experience. According to Figure 4, most students prefer conventional teaching methods. For example, 15% of university students, 37% of high school, 29% of middle school, and 17% of diploma students favor online teaching.

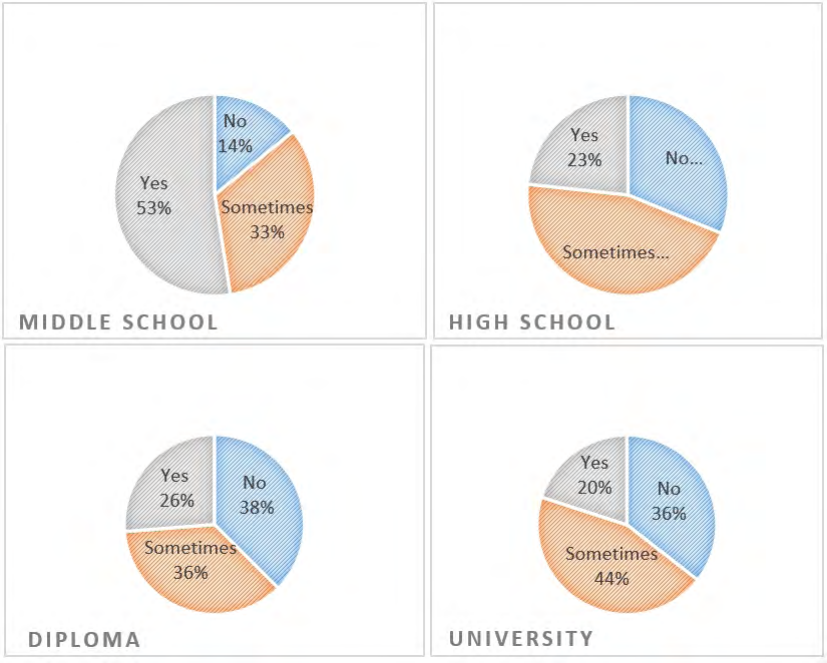

Figure 3: Percentage of students from different academic levels receiving assistance from family members and friends

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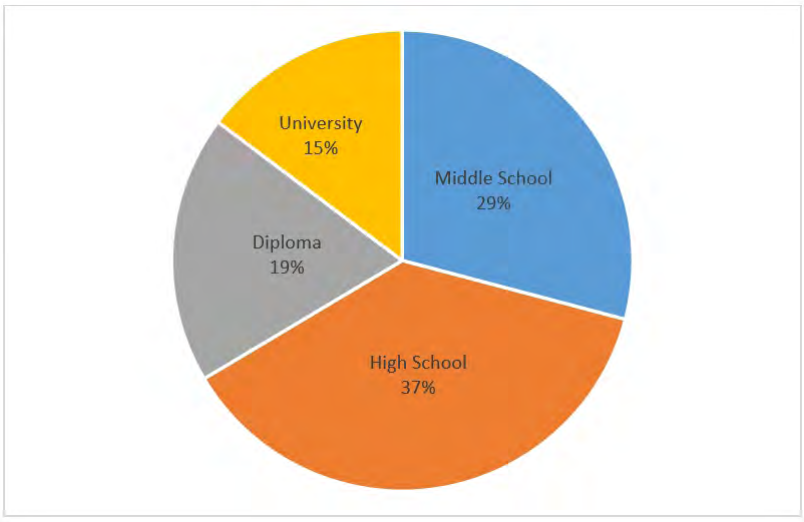

Figure 4: Satisfaction with online learning based on the academic level

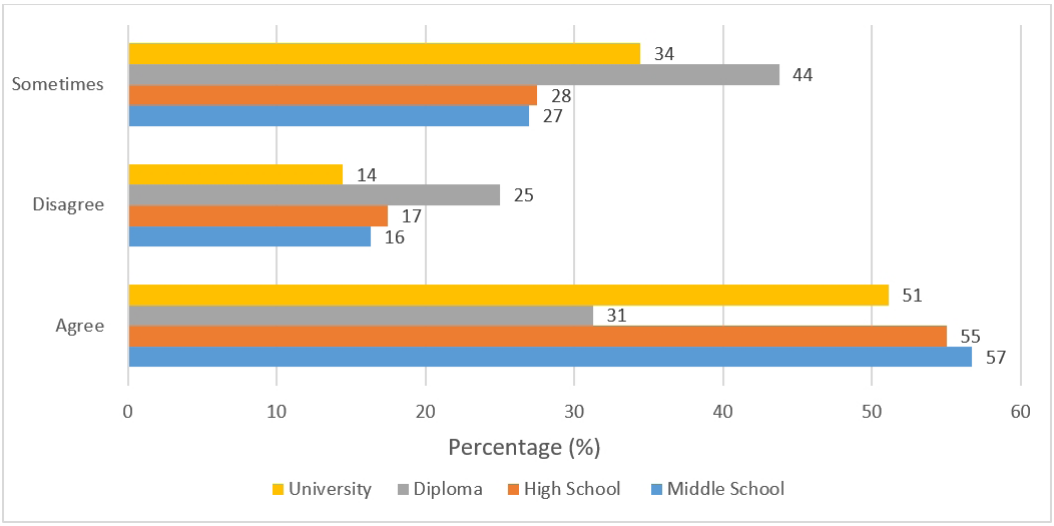

Figure 5: The need for face-to-face communication with instructors at various academic levels

Many students prefer to interact personally and face-to-face with teachers when communicating with them, even if it is only occasionally. College students are at the top of the list in this regard, followed by high school students (Figure 5).

Around 50% disputed that distance learning is more stimulating and inspiring, instead finding it to be rather uninspiring and uninteresting, prosaic and mundane. When it came to the mode of instruction, nearly 80% noted a significant difference between the traditional face-to-face teaching method and online instruction.

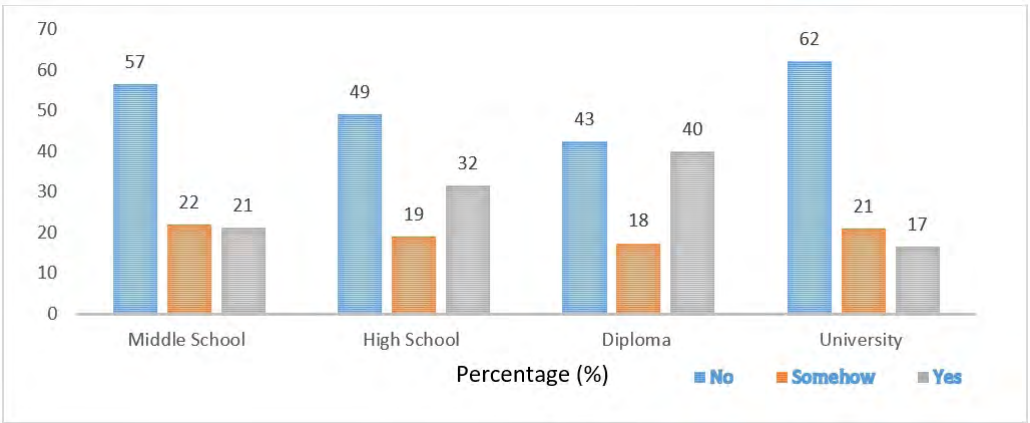

Figure 6: Students' acceptance of the stimulating degree of distant learning above traditional learning methods

The categorization agreement at various educational levels is shown in Figure 6. One of the most important measures of a student's comprehension of the material is his performance on the test. Nearly 95% of students who were asked whether their grades in online instruction compared to traditional face-to-face instruction improved or stayed the same said they did not, 44% said they did, and nearly 46% said they did not. Less expatriate students believed their grades improved, compared to more Kuwaiti students who thought they did. The survey respondents' responses are shown in Figure 7 by nationality and academic level.

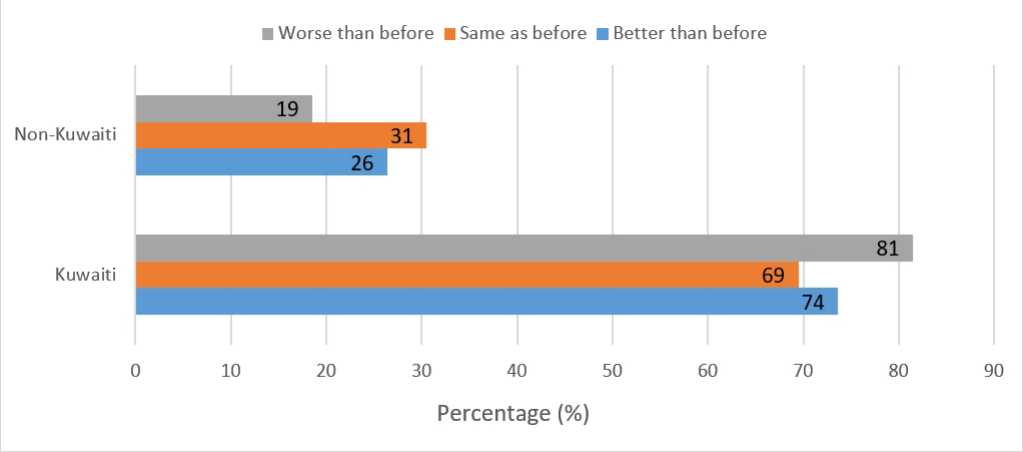

Figure 7: Comparison of native and expatriate students' levels of academic improvement in online learning vs. traditional teaching methods

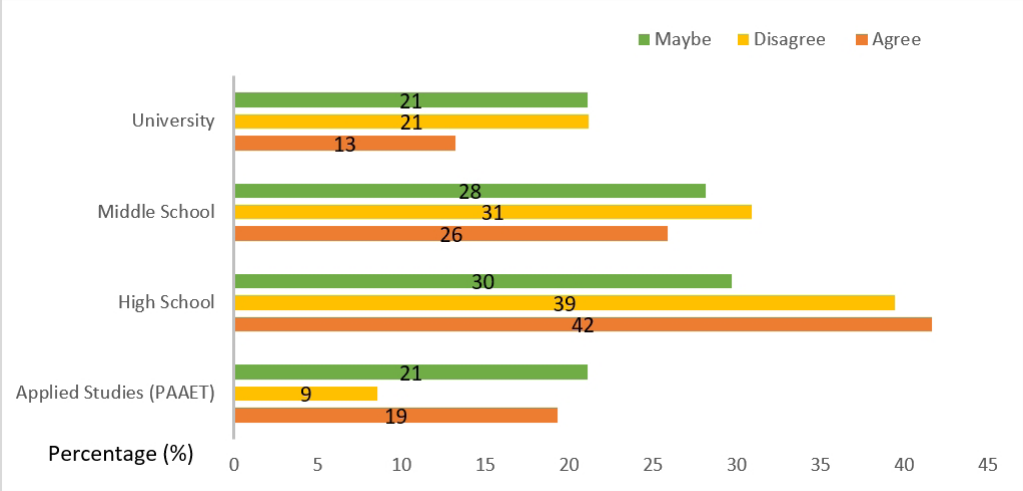

Figure 8: Approval of a total move to online learning in percentage by various academic level students

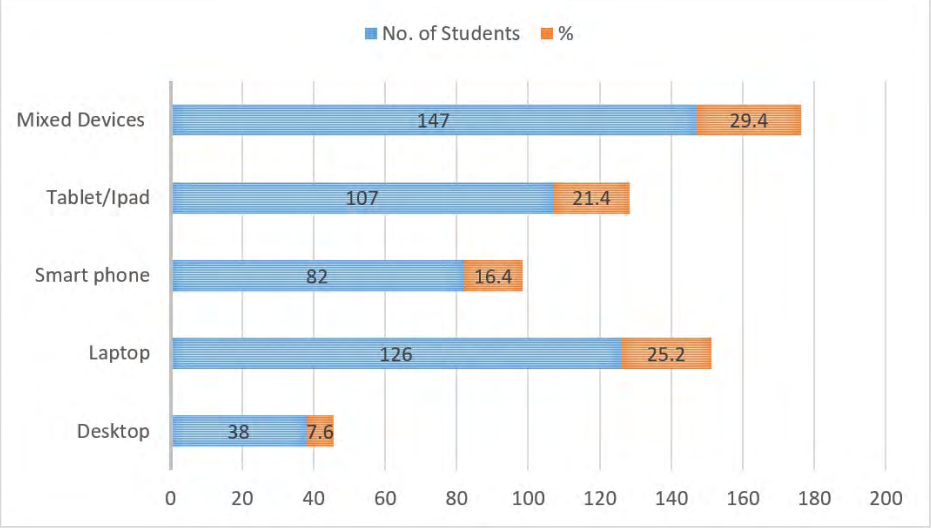

Figure 9: Number of students using the different devices in online courses

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Only 40% of the participants agree that learning should be entirely done online, while 35% disagree, and the remainder are undecided. According to the findings, more students disagree or are undecided. Carefully examining the numbers in Figure 8, one can deduce that diploma students have the highest degree of agreement (47%), followed by high school students (43%), middle school students (36%), and college students have the lowest level of agreement (28%).

Some students use only one device, as seen in Figure 9, with approximately 126 (25%) students using laptops in their online studies, 107 (21.4%) using tablets and iPads, 82 (16.4%) using smartphones, and 38 (7.6%) students using desktop computers. 147 students (29.4%) use several gadgets in their online courses.

SPSS software was employed to examine the various responses to the various questions, as well as to back up the previous findings shown in the various figures above. Since the majority of the items in the questionnaire list are qualitative, the answers are either yes, somehow, or no. Numerous nonparametric tests were applied in this regard. Either frequency or median is the most appropriate statistical analysis for comparison.

However, because of the nature of the questions, advanced statistical analysis, such as the Mann–Whitney U test, is recommended. The qualitative variables are labeled as follows: 0 for no (no = 0), 0.50 for somewhat (somewhat = 0.5), and 1.0 for yes (yes = 1). As a result, it will be easy to compare the results when examining the data. It will be displayed as a percentage, with zero as the lowest value and 100 as the maximum.

Table 2 summarizes the (Mann–Whitney U test) used to compare the average percentages of each group. Education type (public vs. private), gender (male vs. female), and nationality are just a few examples (Kuwaiti vs. Non-Kuwaiti). For example, students in public schools had an average proportion of "q8. experience utilizing Microsoft Teams and Zoom Applications" of 68.9%, which was substantially lower (U = 25749, p-value < 0.05) than students in private schools (81.7%).

The Mann–Whitney U test, on the other hand, revealed that there was no statistically significant difference in "q9, get equipped for distance learning" between public and private school students. By carefully reviewing the data in Table 2, it is possible to deduce the existence of a significant difference (p-value < 0.01) between replies of students in public education systems and those in private education schools to questions using the Mann–Whitney U test (8, 11, 12, 18, 20, and 24).

Furthermore, the answers to questions 11,12, and 20 differed significantly between the two genders. The Mann–Whitney U test revealed a significant difference (p-value < 0.05) in answers between nationalities in all questions except 8.

The Kruskal-Wallis H test revealed a statistically significant difference in answers to "q7. Knowledge on the internet" between at least one academic level ($\chi^2_{(3)} = 7.9$, $p < 0.05$) in the above-mentioned table. The Kruskal-Wallis H test, on the other hand, revealed no significant differences in q8-experience utilizing Microsoft Teams and Zoom Applications" between the three age groups, with a value of ($\chi^2_{(2)} = 5.3$, p-value > 0.1). With the exception of questions 8 and 21, the Kruskal-Wallis H test revealed that there is a statistically significant difference in replies between the different Academic Levels with (p-value < 0.05) across the board. In the same test, it was discovered that in questions 9, 11, 12, 15, 16, 20, 21, and 23, there was a statistically significant difference in answers between age groups. Furthermore, in questions 7, 8, 9, 12, 13, 15, 17, 18, 19, 20, and 23 the test revealed a statistically significant difference in replies between governorates as displayed in Table 3.

In addition, using SPSS, the analysis of variance (ANOVA) test was used to compare the average number of hours spent on lessons in question 14 (How many hours per day does it take you to complete your online learning lessons) between different social characteristics such as (Education Type, Gender, etc.). In this regard, the findings revealed a substantial variation across education type, academic level, age, and gender (Table 4).

Additionally, the analysis of variance (ANOVA) test was deployed using SPSS to compare the average number of hours spent to complete lessons in question 14 (How many hours per day it takes you to complete your lessons in online learning) between the different social characteristics such as (education type, gender, etc.). Findings indicated a significant difference between education type, academic level, age, and gender (Table 4).

Question	Education Type			Gender			Nationality		
	Governmental	Private	U test	Female	Male	U test	Kuwaiti	Non-Kuwaiti	U test
7 - Do you have any prior knowledge of computers and Internet?	79.3	80.1	**28969**	79.2	80.1	**29833**	80.7	76.6	**23107**
8 - Do you have experience using Microsoft Teams and Zoom Applications?	68.9	81.7	**25749*****	76.4	70.5	**29084**	69.7	84.7	**21142*****
9 - Have you ever been trained and provided with all the required materials for your distance learning lessons by your school?	60.5	58.6	**28591**	60.1	59.4	**30688**	59.8	59.9	**24791**
11 - Is opening the camera optional?	50.2	41.4	**26912***	42.4	52.2	**27870****	47.7	44.5	**24086**
12 - Is it requested to open the camera on tests?	40.8	73.3	**19913*****	56.9	48.7	**28370***	53.2	53.3	**24836**
13 - Are you comfortable with this method of learning?	58.6	58.1	**29373**	59.8	56.7	**29958**	56.2	64.2	**22867**
15 - when you need help, Is your teacher always available?	62.1	63.6	**28856**	62.7	62.7	**30573**	61.8	65.0	**23482**
16 - Do you receive any assistance during the study from family or friends?	51.5	51.8	**29389**	50.5	52.9	**29874**	51.9	50.7	**24400**
17 - Do you think there is a difference between traditional and distance learning?	86.6	90.1	**28113**	86.8	89.3	**29502**	87.6	88.7	**24303**
18 - Distance Learning is more stimulating and encouraging than traditional learning.	40.1	33.0	**26973***	38.9	35.5	**29635**	37.3	37.6	**24610**
19 - Is it easy to work in groups to complete the assignments online?	59.4	57.9	**28865**	59.1	58.5	**30636**	58.1	60.6	**24103**
20 - Is it necessary to communicate with the teacher face to face?	64.2	70.4	**26760***	63.0	71.0	**27863****	65.6	69.3	**23436**
21 - Did you hire a private tutor during distance learning?	29.4	30.9	**29084**	27.2	33.5	**28962**	31.4	26.3	**23590**
22 - Are your grades in the online academic achievements?	67.6	64.9	**28110**	67.8	65.2	**29559**	66.3	67.5	**24702**
23 - Do you think the grading system is excellent in online learning?	53.7	50.7	**19849**	52.8	52.3	**22155**	51.9	54.5	**16658**
24 - Do you recommend completing your studies using distance learning?	54.9	47.9	**26922***	54.0	50.0	**29405**	53.2	49.6	**23779**
25 - Do you think there are any advantages of distance learning?	75.5	79.8	**11419**	79.8	73.5	**13507**	76.4	78.1	**8684**

**** p-value < 0.01, ** p-value < 0.05, * p-value < 0.1*

Table 2: Comparing knowledge by characteristics with their Mann–Whitney U test

Question	Academic Level					Age				Governorate						
	Middle School	High School	(PAAET)	University	$\chi^2_{(3)}$	9-14	15-18	19 and above	$\chi^2_{(2)}$	Ahmadi	Alasema	Allahra	Farwaniya	Hawally	Mubarak Alkabeer	$\chi^2_{(5)}$
7 - Do you have any prior knowledge of computers and internet?	78.4	80.2	74.4	85.0	**7.9****	78.1	82.6	78.5	**2.3**	74.6	86.5	73.1	82.8	79.5	86.5	**16.9*****
8 - Do you have experience using Microsoft Teams and Zoom Applications?	66.7	77.2	76.3	75.6	**5.3**	68.3	73.7	77.5	**3.6**	70.8	70.4	87.0	79.7	66.7	70.4	**11.1****
9 - Have you ever been trained and provided with all the required materials for your distance learning lessons by your school?	70.9	57.9	55.6	50.0	**17.5*****	71.6	58.6	52.9	**17.9*****	49.2	69.1	51.9	62.1	52.3	69.1	**15****
11 - Is opening the camera optional?	39.0	43.4	47.5	65.6	**17*****	35.3	45.4	55.5	**13.9*****	52.3	50.4	46.3	46.9	37.9	50.4	**3.7**
12 - Is it requested to open the camera on tests?	33.3	42.9	85.0	77.8	**84.6*****	40.3	44.7	67.9	**31.9*****	35.4	62.6	59.3	63.3	50.0	62.6	**28.5*****
13 - Are you comfortable with this method of learning?	60.3	57.7	68.8	47.8	**7.9****	60.4	56.6	58.4	**0.4**	58.5	53.0	44.4	66.4	57.6	53.0	**10***
15 - when you need help, Is your teacher always available?	68.4	60.3	58.1	62.8	**7.3***	69.8	58.2	61.2	**10.1*****	56.9	66.5	60.2	69.1	53.8	66.5	**13.3****
16 - Do you receive any assistance during the study from family or friends?	69.1	46.0	44.4	42.2	**41.5*****	68.0	45.4	45.2	**34.9*****	50.0	48.7	47.2	52.7	50.8	48.7	**4.9**
17 - Do you think there is a difference between traditional and distance learning?	87.9	91.5	75.0	91.7	**26.8*****	88.5	89.1	86.6	**0.8**	94.6	89.1	87.0	90.2	84.8	89.1	**11.5****
18 - Distance Learning is more stimulating and encouraging than traditional learning.	32.3	41.3	48.8	27.2	**13.1*****	32.4	36.8	41.1	**3.3**	44.6	27.8	32.4	36.7	38.6	27.8	**14.7****
19 - Is it easy to work in groups to complete the assignments online?	63.5	59.0	63.8	46.7	**9.4****	63.3	55.9	57.9	**2.1**	66.9	52.6	49.1	56.3	62.1	52.6	**12.8****
20 - Is it necessary to communicate with the teacher face to face?	70.2	68.8	53.1	68.3	**13.7*****	71.2	71.4	60.0	**11.4*****	54.6	72.6	64.8	71.5	72.7	72.6	**20.5*****
21 - Did you hire a private tutor during distance learning?	26.2	36.0	23.8	28.9	**5.7**	26.6	38.8	25.8	**8.1****	27.7	29.6	29.6	30.5	34.8	29.6	**1.1**
22 - Are your grades in the online academic achievements?	66.7	69.6	71.3	56.1	**12*****	64.7	70.7	64.8	**4.5**	70.8	60.4	62.0	67.6	68.9	60.4	**8.3**
23 - Do you think the grading system is excellent in online learning?	47.9	56.6	60.5	43.0	**10.5****	47.4	47.7	59.4	**8.8****	70.7	44.0	64.6	41.8	51.5	46.0	**26.3*****
24 - Do you recommend completing your studies using distance learning?	48.9	53.4	64.4	43.9	**10.6****	48.2	50.0	56.5	**3.6**	58.5	47.0	46.3	51.2	56.1	47.0	**5.8**
25 - Do you think there are any advantages of distance learning?	82.8	78.3	77.0	66.2	**6.5***	82.4	78.9	72.1	**3.8**	73.0	76.0	80.3	68.4	75.9	84.0	**3.7**

**** p-value < 0.01, ** p-value < 0.05, * p-value < 0.1*

Table 3: Comparing knowledge by characteristics with their Kruskal-Wallis H

Characteristics		14 - How many hours per day it takes you to complete your lessons in online learning?	
		Average	*F*
Education Type	Governmental	2.1	**14.97*** **
	Private	2.4	
Academic Level	Middle School	1.8	**15.69*** **
	High School	2.3	
	PAAET	2.6	
	University	2.3	
Age	9-14	1.9	**12.62*** **
	15-18	2.3	
	19 and above	2.4	
Gender	Female	2.4	**13.87*** **
	Male	2.0	
Nationality	Kuwaiti	2.2	**1.21**
	Non-Kuwaiti	2.3	
Governorate	Ahmadi	2.2	**0.47**
	Alasema	2.2	
	AlJahra	2.1	
	Farwaniya	2.3	
	Hawally	2.3	
	Mubarak AlKabeer	2.3	

**** p-value < 0.01, ** p-value < 0.05, * p-value < 0.1*

Table 4: Comparing knowledge by characteristics with their ANOVA test

DISCUSSION

The COVID-19 pandemic impacted the education industry worldwide and thus forcing many schools and colleges to suspend their activities. The epidemic has sparked a sudden and unprecedented digital change in education and thus bringing challenges and opportunities. This reckless decision has significantly harmed students, teachers, and educational administrators. As of July 2020, 1.725 billion children and youth, or 98.6% of all students, were affected by the pandemic in 200 countries, ranging from pre-primary to higher education (United Nations, 2020).

Since students are one of the main stakeholders in the E-Learning system and its main beneficiaries, they are given preference over other stakeholders in our study. In this study, a cross-sectional survey questionnaire was constructed and distributed to students. Data were collected from a sample of 500 students and analyzed in order to evaluate students' engagement, social presence, and satisfaction with emergency remote teaching and barriers encountered compared to the traditional technique. It is essential to understand these attitudes in order to assist the government and decision-makers in developing solutions to remove the obstacles that affect students.

E-Learning can be effective and unquestionably increased by having computer skills, technology-assisted learning platforms available, and an efficient and affordable interactive setting. In addition to being familiar with and accustomed to using the internet and being highly active on social media, the current research findings have shown that a vast majority (97%) of students in Kuwait possess computer knowledge and good digital skills. According to the survey, more than 70% claimed to have prior experience using Microsoft Teams and Zoom applications, University and private students reported having the highest levels of experience.

Digital skills can help students advance in their future careers, bridging digital gaps and positively affecting their social life. This finding is in concert with the result obtained by Egielewa et al. (2022) in Nigeria. Additionally, a study discovered that students who used social media displayed excellent learning performance (Mendoza et al., 2021). Our findings also revealed that young students, especially those between the ages of 15 and 18 (80%), demonstrated superior computer technology knowledge, which is in concert with the findings of Hong and Kim's (2018) research.

Gender did not significantly moderate the association between the various barriers and students' resistance to online classes, according to an analysis of the study's data. The findings revealed that generally speaking, there are no appreciable differences in average involvement, grade, motivation, and satisfaction between male and female students. On the other hand, Gaur et al. (2020) in India found a significant gender difference in the respondents' responses to students' challenges with online learning. The results of this study were inconsistent, much like Baticulon et al. (2021) discovered divergent perspectives on gender factors when participants reported personal barriers.

University students' grades are declined, whereas diploma students said there had been no changes. High and middle school students' responses were identical in all categories. Nearly 95% of respondents who chose online learning over traditional face-to-face instruction said their grades did not worsen, 44% expressed their grades had improved, and around 46% did not report any changes. A few expatriate students believed their grades improved, compared to more Kuwaiti students who thought they did. Additional research has examined this topic; for instance, Wang et al. (2019) found a positive correlation between ratification and GDP; Perets et al. (2020) found that students with higher GDP had better marks than others.

Students' satisfaction with online instruction is significantly influenced by the availability of good, effective, and relevant e-learning systems, knowledge of educational technology tools, support and guidance from the educational institutions. According

to this survey, 53% of students expressed their satisfaction with online education in this way, with approval rates for diploma and middle-class students being the highest (68% and 60%, respectively), and university students being the lowest. Everyone, except for one governorate, was in or near their mid-fifties.

Comparing to other researchers' findings; these results are also consistent with a study conducted among medical students by Abbasi et al. (2020), where the vast majority of students indicated disapproval of taking online courses in the future (77%). These results, however, are at odds with those of Dobbs et al. (2017), who claimed that students who had taken online courses tended to perceive them favorably and expressed an interest in doing so in the future. Similarly, Paudel (2021) discovered that every study subject expressed a desire and willingness to enrol in online courses in the future.

According to the results of our investigation, both private and public schools gave an approval rate of online learning in the upper fifties percentage. Nevertheless, Ansar et al. (2020) findings revealed that students from private sector institutions were more unsatisfied with their online experiences, which are in contrast. The approval rates were in the mid-fifties (55%).

One of the essential elements in the success of online learning is the instructor. He is necessary for effective distance learning because students think of their instructor as a person, not just a computer. This feeling encourages online learners to participate in the course. Most students (85%) believe that instructors are available, while only 60% believe that instructors are only occasionally available, according to the responses from the current study.

The majority of respondents (about 65%) agreed that having a teacher present is necessary, with private school students (80%), men (71%), and non-citizens (69%) having the highest rates of agreement. Unlike what we discovered, Walker and Koralesky (2021) discovered that students also claimed to feel disengaged from their professors. The absence of the instructor impacted negatively students' online learning, according to Tamim (2018)'s research.

Peer interaction and support have been shown to elevate student achievement, particularly for students from underrepresented groups. Williams and others, 2017. During the COVID-19 pandemic, a lack of peer support has negatively impacted students' motivation Support of Family and friends is essential for enhancing online learning and better preparing students. The percentage of students who acknowledged receiving some assistance from family and friends in this study—more than 70%—was the highest among intermediate schools. When asked about working in groups and communicating, students, 58% preferred to do so; only 47% of college students agreed. Thus, the correlation between family support and learning engagement has been the subject of earlier research (Gao et al., 2021; Frawley et al., 2019). Our findings support this. Wissing et al. (2022) identified peer interactions as a resource that can mitigate or even eliminate the adverse effects of required online education.

Unfortunately, these group activities don't always meet the designers' higher expectations for learning or have a strong student appeal. Some students abuse the trust, and free riding happens when someone shares the rewards of the group while not contributing their fair share of work (Gabelica et al., 2022).

A key component of effective online learning is effective communication between students, teachers, and other students, which is one of the fundamental interaction skills in schools. According to survey results, a higher proportion of students (65%) prefer to speak with their teachers in person, even if it's only occasionally. University students are at the top of the list in this regard, followed by students in high school. This result is in line with studies on college students conducted by Taghizadeh and Hajhosseini (2021). As per Shalian (2021) and Toppo and Philomina (2021), distance learning may impair students' capacity for accurate assessment and lessen the intensity of teacher-student interaction.

Due to exhaustion, stress, and lack of sleep during COVID-19, students' ability to manage their time can be difficult when learning online. According to our study, 66% of respondents claimed to spend three to seven hours a day or less on online coursework, 10% said they spent more than seven hours, and 24% said they spent less than three. A study by Sari et al. (2020) among Indonesian students revealed a positive correlation between time management and learning outcomes concerning management during the COVID-19 pandemic. Students in a different study by Paudel (2021) reported having trouble managing their time during the pandemic due to fatigue.

Nearly 80% of students preferred face-to-face instruction over distance learning, and about 50% disagreed, finding distance learning uninspiring, uninteresting, prosaic, and mundane. However, only a small percentage of students thought distance learning was more stimulating and inspiring than face-to-face instruction. It appears that the majority of students favor traditional teaching strategies. For instance, 15% of college students, 37% of high school students, 29% of middle school students, and 17% of diploma students prefer online instruction. 63% of respondents disputed the claim that distance learning is more inspiring and stimulating. Only 40% of participants believe that learning should be exclusively online, 35% disagree, and the remaining are unsure.

According to the findings of the studies by Kemp et al. (2019) and Aguilera-Hermida (2020), attitudes toward the advantages of online learning, such as the freedom to communicate and manage schedules, are favorable. The results show that more students disagree or are unsure. After carefully examining the data, we can conclude that diploma students (47%), high school students (43%), and middle school students (36%), have the highest levels of agreement. Participants' attitudes toward the benefits of online learning, such as the freedom to communicate and manage schedules, were found to have a positive impact on their preference to conduct e-learning for a longer period of time, according to the findings of the studies by Aguilera-Hermida (2020) and Kemp et al. (2019).

Research by Adarkwah (2021) found that more than half of respondents thought traditional instruction was preferable to online learning, which is consistent with our findings. Few participants believe that online learning would be more effective to traditional teaching. Due to the challenges of online learning, students prefer traditional face to face learning methods (Adarkwah, 2021). Many participants believe using online learning in middle and high schools has not been beneficial (Rouadi and Anouti, 2020). According to Khalil et al. (2020) thematic content analysis, many preclinical students opt for online learning for the following educational sessions.

But according to Nambiar (2020), respondents (59%) are against taking online classes. He showed that several factors, including

timely and high-quality communication between students and teachers, technological support, narrowly focused online course modules, and adaptation of traditional classroom instruction for online delivery, influence how satisfied students are with online learning. Technical support is one of these factors have a significant impact on students' approval of online courses. Although flexibility and convenience are advantages of online learning, there is insufficient network access. However, generally speaking, Online learning appears to provide students with more preference than in-person instruction on factors such as learning gains, satisfaction, learning styles, and study habits (Paulsen and McCormick, 2020).

Limitation

At universities, specialization is essential. In this study, student participants were considered as a single group. In general, type of university courses and specialization has an impact on how students react to online learning. There are courses that call for hands-on learning and laboratory work, especially in the sciences and the medical fields, and as a result, their perspective is different from that of the art majors. We suggest future research to evaluate student's satisfaction and approval of distance learning on the basis of their field of study.

The chaos and stress brought on by the pandemic's nature, risk, and rapid spread do not exclude students. The study did not, however, look at students' mental health. Stress and anxiety and their state of mind should be taken into account during the pandemic because they may have long-term detrimental effects on students' minds and their performance in online courses. Therefore, when developing and adopting effective policies for online learning, stress, and anxiety impact should be taken into account.

The study compared students' perceptions of traditional face-to-face instruction with those of online learning. It was not investigated how students perceived hybrid or blended instruction. Future circumstances might call for the usage of blended learning, which might be feasible given the widespread use of cutting-edge computer technology. For a more realistic evaluation and to properly evaluate online learning process in the country, a holistic study should be conducted that encompasses viewpoints from all significant stakeholders, including students, teachers, school administrators, and education decision-makers.

CONCLUSION

Many scholars worldwide have studied the impact of coronavirus spread (COVID-19) on teaching and learning, identifying the benefits, drawbacks, problems, limitations, and other significant concerns. Kuwait as many developing countries has adopted the online distance learning mode to avoid depriving students of their education during the closure. This research aimed to examine the e-learning process in Kuwait through the eyes of students from various academic levels. A sample of middle school, high school, diploma, and university students in the public and private sectors participated in a survey questionnaire.

When the feedback was analyzed, it was found that the bulk of students have a good and strong foundation in computers and other online digital systems. Nevertheless, the majority favored the conventional face-to-face instruction due mainly to the ample communication with instructors and fellow students. Furthermore, most agreed that the country's internet infrastructure is both accessible and inexpensive. Several benefits of online learning were identified by the students, including protection from the serious threats posed by the Coronavirus, transit time and expense savings, avoidance of traffic congestion, and continuous accessibility throughout the day. Students also cited other benefits, such as improvement in communication skills and reinforcement of their peer relationships. Others, on the other hand, saw an improvement in their performance and their grades. The primary drawbacks identified are a lack of sufficient connection and communication with the instructors and the occasional failure of the Internet. Others believe that online learning puts a higher load on students because it demands organizing capabilities, self-motivation, and proper time management skills. As a result, some acknowledged to regularly request support and help from their parents, family, and friends.

The availability and accessibility of technical infrastructure, tools, and equipment at the students' home are not the only important factors in the success and sustainability of online digital education, but rather the right digital pedagogical skills and effective student-parent-teacher-and-school communication, dialogue, and cooperation. In Kuwait, the government and the educational sector should accept and embrace the digital education culture. To achieve this goal, first and foremost, everyone involved in the educational process must be educated and trained on the use of digital tools and technologies, and support must be provided to students, teachers, and school administrators in the form of materials, computers, and reliable information. The following actions should be undertaken by the government:

- Kuwait must make every effort to keep online learning alive. To make progress and develop resilience in Kuwait, the government, educational authority, school administrations, and all other educational institutions and entities should use the lessons learned from the COVID-19 pandemic and crisis as a catalyst and incitement to digital and remote learning and technology use. This shift toward remote learning necessitates Kuwait to expedite, accelerate, and boost digital transformation.
- The long-term viability and sustainability of digital learning systems in Kuwait necessitates the dedication, commitment, and devotion of all stakeholders and components of Kuwait's educational systems and procedures, as well as their combined efforts. The government must take a holistic approach to digital learning. It must develop and implement a digital education strategy with clear and actionable goals and a timeline that is both realistic and practical. The government must also establish key performance indicators (KPIs) to track the strategy's progress and success. The government, as well as educational providers and entities, must set aside the required finances to ensure the strategy's success.
- On behalf of the government, the Ministries of Education and Higher Education must establish curriculums that enable digital education and develop important digital skills among students, and they must be accorded the same priority and importance as other necessary talents.

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