Music Students' Perception Towards Music Distance Learning Education During COVID-19 Pandemic: Cross-Sectional Study in Jordan

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Abstract—During COVID-19 pandemic countries faced various levels of COVID-19 infection rates. This affected the educational process where universities were forced to switch to online learning. This situations crated various challenges for university schools in general and music schools in specific, in dealing with this situation that necessitates emergency measures to continue the academic course amid the lock-downs and social distancing measures. Therefore, it is important to evaluate the effectiveness of online methods of learning and to decide their feasibility and appropriateness for music students. Thus, this research aimed at investigating Music Students' Perception towered Music E-learning Education during COVID-19 Pandemic. Also it aims at investigating music Distance learning knowledge, attitudes and practices and challenges faced to provide suggestions for solving the challenges. An online survey distributed to a sample of (83) students from the music department at the University of Jordan. The survey sought population and socio-economic information and information relating to electronic and online musical training; musical education during the COVID-19 pandemic; mental music assessments; and the skills, attitudes and practices of E-learning. Most respondents (76.2%) agreed that distance learning is applicable in music department. (54.2%) of the respondents agreed distance learning is a possible substitute for standard education. However, E-learning has actually been created as a modern way of improving the process of learning and improving learning performance.

Keywords—COVID-19, pandemic, distance learning, music education, E-learning

1 Introduction

The COVID-19 pandemic in the year 2020 substantially changed the way of living of most of the populations around the world [1]. Everyone became responsible of oneself safeguarding and others. Authorities and organizations took actions to closely monitor the situation, includes keeping track of the daily infections and deaths caused by COVID-19. They further take precautions to minimize infection rates by wearing masks, maintaining social distancing and sterilization [2], the Coronavirus can be responsible for diverse human diseases which range from the common cold to extreme

acute respiratory syndrome. Being a new virus, the World Music Organization has partnered with countries and other partners to collect information about the pandemic and how it impacted public music [3].

Worldwide, millions of deaths have been recorded and thousands of multiple infections are daily reported as a result of this viral infection [4]. Switching to online education in universities in most countries is considered one of the most significant complex events that resulted from wide spread of the pandemic. This was necessary to continue the educational process despite its disadvantages [5]. After the end of the first wave of the Covid-19, it impacted the lives of many, especially the elderly and those with chronic diseases [6]. The virus with its new forms is expected to spread in all the countries of the world posing imminent danger of high rates of infections taking place again. This will have a direct impact on gatherings in closed or confined spaces, especially universities. [7] [8].

Coinciding with the spread of the Coronavirus, countries have decided to switch to online education using distance learning platforms with modern and advanced digital and technical infrastructures. Use these platforms came as an option to force social distancing and hence reducing the number of students interaction on a daily basis on university campus [9]. Distance education have now become a much safer way to teach students while at the same time protecting the students from exposure to the virus and pursue education, even though this method does represent some advantages and disadvantages when compared to traditional education in conventional classrooms [10].

However, teaching music is different from other educational material. Music is defined as a spiritual call and comfort to the nerves and the human soul, and sometimes to animals as well [11]. Music education by means of the electronic method depends on providing educational content by providing skills and concepts to the learner using ICTs and their multiple media format in a manner that enables the student to actively interact with the content, teacher and colleagues simultaneously and synchronization ally based on time place and speed that suits the circumstances of the learner and his ability. This also enables the learner to manage all educational and scientific activities and its requirements electronically through the electronic systems designated for this [12]. During the quarantine period individuals searches for something to occupy one's time to get rid of the excessive psychological pressure; music education could have a positive impact on students to rid them of tension, worries and anxiety, refining the behavior, self-calm, mitigate the negative effects of isolation. Furthermore, music enhances the learner`s a memory when learning music and thus speeding the learning process with better concentration, it also improves the learner`s self-confidence and the achievement of skills that require focus [13]. The musician learns patience and self-control [8]. During the Coronavirus period a person becomes irritable. Music helps to guide person's nervousness and spirit. It also helps to focus and regulate movement between two organs of the body, such as eye and the hand coordination [14] [15].

COVID-19 has led to the online transformation of the music education techniques [16]. This transformation poses significant challenges in the field of music education, as teachers are expected to conduct their lessons in a safe manner and preserve the integrity and the consistency of the music education process [17]. Furthermore, students of music can become infected by the virus through the learning process and spread it to the rest of the group, which is why they are required to stay in their homes and obey social distancing guidelines. It is therefore important that we establish a music education

curriculum that offers students on-line continuous learning opportunities during the pandemic [18] [19].

Some of the solutions which are suggested include an immersive online course and the use of various programs for musical students or self-study electronic lectures [20]. Some of the difficulties are that that the students do not have the musical instruments in their homes and are faced with financial constraints to buy the instruments. Thus, educators must continue providing music education during the pandemic. This study aims to provide an overview of the circumstances of music students during the pandemic and to assess their knowledge, attitudes and practices with regards to the use of technology in music education.

1.1   Teaching music online

Many schools worldwide have expanded the number of online classes in subjects such as musicology, music theory, the basics of music, music appreciation, music education, and music technology [21]. However, video and audio samples, website links, and slide presentations (e.g., PowerPoint, Keynote, and Prezi presentations) and handouts or written documents were the most prevalent forms of content utilized in online classes [21]. The increased use of websites, social media, video clips on the internet, and mobile applications, and the orientation towards more active rather than passive learning techniques, may have paved the way to change the usage pattern and rate of e-resources to facilitate e-learning [21].

Biasutti et al. (2019) conducted a research including 24 participants in professional development activities about online refresher classes for professionally engaged music instructors using asynchronous sessions and face-to-face seminars. The asynchronous model was well-liked because it allowed participants to select when to conducted tasks, allowing them to fit into their work schedules. Participants praised the platform's interactivity and user-friendliness, which aided in the development of social features such as the formation of a community of practice where instructors could talk and exchange experiences. However, they pointed out instructional, organizational, and technological concerns regarding using technology. The majority of the challenges in schools were caused by an overflow of activities, whereas technical concerns included gaining access to the platform itself or understanding the page structure of wiki tools [22].

1.2   Online musical instrument education & learning

Several research has proven that musical performance skills may be developed in virtual environments, both casual and formal. [23] [24] [25] [26] [27]. In informal education settings, synchronous technology studies investigated how a person may learn to play a musical instrument through individual assignments. [26]. In an asynchronous, online, e-learning environment, for instance, the learning processes of instruction, copying, practicing, performing, and assessing were monitored while participants learn to play an improvised blues on a musical keyboard [28] [29].

Other research was conducted in formal educational settings to investigate how technology aids may help with music instruction, such as piano lessons, piano sight-reading skills, and trumpet classes [30] [31]. Kruse et al. (2013) examined features of piano lessons such as the viability of online learning at academic level and merits and limits

of piano lessons delivered over Skype as experienced by one student and one teacher. the findings indicated that the merits of online classes were the ability to develop imagination and motivation, a natural feel to lessons, and mastery of equipment and music. The limits were mostly related to technological concerns [30].

A further research, conducted by Pike and Shoemaker (2013), looked at the impact of online classes on the development of piano sight-reading abilities in 19 novice piano students. The students were divided into two groups: 1) one experimental group learned sight-reading using live internet video, and 2) the control group learned sight-reading through traditional face-to-face techniques [31]. There were no significant differences between the two groups, indicating that teaching sight-reading online might be a good alternative to face-to-face instruction or a useful addition to regular courses. Dammers (2009) performed a case study of nine lessons employing an entry level video conferencing strategy using personal PCs, cameras, and Skype videoconferencing software. The results showed that the format was workable on a basic level. However, the restrictions of video delay, impersonal dynamics, restricted visual controls, confined mobility, and sound management provided pointed out that virtual formats is more likely to be a mere replacement to face-to-face instruction when situations impose the transformation [31] [32] [33]. Traditional one-on-one instrumental lessons are predicated on a one-to-one interaction, which appears to be easily replicated in virtual environments. Nonetheless, multiple studies have shown variety of concerns with synchronous online activities, such as latency and audio quality. [32] [33] [34].

Furthermore, instrumental lessons require the actual visual monitoring of the different performance criteria such as the positioning of fingers as well as the posture of the performer and the attitude they portray which might be further concern with regards to instrumental classes [31]. For instance, with the electric guitar there are some constraints such as bow motions for strings as well as embouchures with regards to woodwind instruments and brass. In this case, it is important that webcams are strategically positioned to enable teachers to scrutinize the pupils posture in the required detail. [25]

Several studies focused on various mechanisms and support that could support e-learning. For example, multimedia tools can be used to complement the instruction of music where teachers can made video snippets other data basis or YouTube. [24] [35].

It has become common knowledge that online education is rapidly increasing worldwide; it is therefore increasingly being implemented to replace class room education. In general, more students would attend schools to partake in the known conventional practice of teaching and being educated. However, as a result of the Covid-19 epidemic there was no other alternative but to enforce E-learning as a legal requirement by governments. Many schools throughout the world rely primarily on distant learning to meet their fundamental educational demands. Based on the knowledge from prior crisis circumstances, the adaption of web-based learning and the support of the continuance of educational activities through online classrooms has shown to be useful and beneficial [36] [37]. E-learning research have shown a variety of advantages, including more flexibility and versatility, as well as facilitating contact between the teacher and the student. E-learning sessions may be scheduled at any time, place, or day, and can reach a huge number of people regardless of their location [37] [38]. However, there are several prerequisites and potential constraints of using E-learning effectively [39]. According to Brown et al., every student interested in enrolling in an E-learning program must have a personal computer, a webcam, and a steady Internet connection [40].

Because education is entirely delivered over the Internet, software and hardware failures can fundamentally jeopardize sessions and disrupt the learning process [41] [42] [43]. Furthermore, for efficient teaching and learning, teachers and students must have a high level of experience and knowledge of the technology being used in E-learning. Otherwise, the benefits of E-learning will be restricted to those who are technologically competent [44] [45].

The education in the music department and other linked departments is broad, with a large portion of it involving practical and technical skills learned in the wards. In the midst of the COVID-19 epidemic, it is vital to analyze how E-learning is employed as a sole method of teaching and instruction in music departments vs place-based, practical learning [46] [47]. Furthermore, the impact of the E-learning movement on student perception, confidence and happiness is critical for the development of future music professionals [48]. However, and despite the fact that there is minimal proof that E-learning courses compared to classroom education is preferable, students report high levels of satisfaction [49]. There are no studies on the impression and pleasure of E-learning among music students during the COVID-19 epidemic. During the pandemic, it is expected that music students would be satisfied with E-learning and training [50] [51]. As a result, the purpose of this study was to analyze students 'experiences, perceptions, and satisfaction with-learning in the music department.

2 Problem statement

Most The COVID-19 epidemic has also created an educational crisis, disrupting regular educational process. However, The University of Jordan were aware of MOODLE-based e-learning and its applications for a long time, however, it was not given much attention until the COVID-19 pandemic. As the pandemic takes over the primary service sector, "education," affecting millions of pupils, the relevance of e-learning has grown. With no prior exposure or experience, students are increasingly making attempts to enroll in e-learning in order to study and obtain information, or even to proceed with their regular educational process without interruption. This is a relatively new scenario for Jordan, especially in terms of embracing widespread e-learning in all colleges and schools. However, music education has a practical component in which students learn by playing musical instruments, and as a result, students have encountered certain challenges studying music online. However, online systems that provide e-learning, such as MOODLE, have not met the needs of music education and students. Furthermore, E-learning will provide more opportunities to study with greater flexibility, attracting more students to learn and profit from it. There is a necessity to sustain in a crisis, and so e-learning is the enabling agent in assisting students to pursue their education.

Even though e-learning allows for online instruction of music courses, a student will not show a sudden desire to study and progress if the course has a practical component. It is entirely dependent on one's interest, passion, influence, and spending power. However, it is now very difficult to trace the consequence of e-learning in terms of whether it is favored or rejected by the student population. As a result, there is a great need to know students' perceptions of their experiences with e-learning, on the basis of which the ministry of education may make future decisions to create policies for online education. Jordan is a low-middle-income country where education remains a pipe dream for

millions of vulnerable people. While there are numerous benefits to e-learning, there are also certain drawbacks that must be considered in order to comprehend reality.

The teaching and learning process in the school of arts and design, including music, visual art, theater, and other allied departments, is diverse, with a large part of it involving learning practical parts and music instruments, as well as technical skills in the wards, practical, and instruments. Amid the COVID-19 epidemic, it is vital to analyze how E-learning is employed as a sole method of teaching and instruction in music and art institutions, as opposed to place-based, practical training on music instruments. Furthermore, how the trend of E-learning effects students' perspective, confidence, and pleasure is critical for the development of future musicians and artists. Although minimal data suggests that E-learning courses are favorable favorably to classroom teaching, with high levels of student satisfaction [43, 44], research on the perception and satisfaction of E-learning among music sciences students during the COVID-19 epidemic is lacking. During the epidemic, it is expected that music students would be satisfied with E-learning and training. As a result, the current study sought to analyze students' experiences, perceptions, and satisfaction with E-learning in music institutions.

3   Methodology

A cross-sectional survey was conducted in December 2021. The questionnaire based survey was distributed in The University of Jordan to 83 music students. This research used the Arabic version of the Alsoufi et al, 2020 Scale [6]. In order to ensure acceptable participation rate, an online survey, using Google Form, was distributed to specific individual courses of music student's, using Moodle Distance learning platform. authors collected completed questionnaires to ensure confidentiality and avoid any interference with the answers. The research goals or results to minimize the likelihood of any potential discrimination were not known to the participants. The study only included music students who are studying at Jordan's university music department. Without the involvement of authors or any other individual, the questionnaire was self-managed and no identity details of participants were included to ensure confidentiality.

4   Aims and research questions

This research is aimed at studying the student's perceptions with regards to learning music by means of Distance learning, their knowledge, attitudes and practices and provides an analysis of the situation of musicians during the COVID-19 pandemic.

To the aim is to refine their perspectives on the potential strengths and limitations of using technology to teach music online, when taking into consideration both general and applied music lessons. Aspects such as practical instruments teaching, lesson implementation, assessment, organizing examinations, and time management skills were covered. The driving research questions were:

(1)   What are the music student's perceptions towered music Distance learning in terms of knowledge, attitudes and practices?
(2)   What is the music students' engagement to Distance learning?

5 Study instrument

The questionnaire addressed participants' basic demographic data, including their gender, age and marital status, and also general questions on financial status, faculty, music education level, psychological disorder, and where appropriate, education disabilities. The survey included questions with regards to skills of electronic appliances, the nature and standard of the Internet used, the state of the Music School's education, status of electronic device ownership, the availability of advanced technology or the system of education of the universities (Alsoufi et al, 2020).

The survey also requested information on the pandemic status of music education participants, such as their job status, the types of education activities performed, how COVID 19 has influenced the pandemic, ten items relating to their personal attitudes towards the pandemic, three points relating to their own personal opinions on response to the pandemic from the authorities and three points relating to t. The research included a number of Distance learning queries, a teaching approach using electronic resources aimed at remote learning. The pandemic has shown itself to be critical and the music should continue. The following section divided this section of the questionnaire into: six items dealing with Distance learning information among respondents, 20 items dealing with Distance learning with respondents and 12 items dealing with respondents' views regarding Distance learning practice and applicability for music education.

We provided the Arabic and English questionnaire to suit the respondents' needs. As Cronbach's alpha values of 0.869 and 0.825 respectively showed for the Arabic and English edition, the Information, Behaviors, and Practices questionnaire was highly internal.

6 Statistical analysis

We followed same statistical steps provided by Alsoufi et al, 2020. The characteristics and responses of the respondents were analyzed using frequencies and percentages. As frequencies and percentages, we defining categorical variables and as standard deviation or median range values continuous variables if appropriate. The Kolmogorov-Smirnov test indicated that the variables did not obey a normal distribution. We have used the chi-square test to assess variables depending on gender or practice years. We have done the Mann-Whitney U-test in order to differentiate between two classes of continuous variables. In order to evaluate the relationship between information, attitudes and realistic values and variables examined, the coefficient of ranking correlation between Spearman was used. All statistical analyzes were carried out using (IBM) SPSS version 23.

7 Results

7.1 Basic demographic characteristics

We collected 83 complete questionnaires completed by musical students from the Jordan university in Jordan. Participants were predominately female; the sample

included 62 females (74.7%) and 21(25.3%) males. The mean age was 20.1 years, with a significant mean difference between male and female participants (p = 0.030). Greater number of the respondents included third-year musical students (23; 27.7%), followed by first-year students (22; 26.5%). However, a significant difference was found in the educational level and several other characteristics of male and female respondents. Approximately 55 respondents (66.3%) reported that they had experienced financial difficulties during the pandemic, with reference to history of illness, 11 respondents (13.3%) reported experiencing music-related issues, 7 (8.4%) reported having a psychological illness, and 4 (4.8%) reported having physical or learning disabilities. Table 1 summarizes the basic characteristics of participants, and the differences between male and female participants.

Table 1. Basic characteristics of the study population (n = 83)

Variables	Total (%)	Female (%)	Male (%)
	n = 83	n = 62	n = 21
Age, Mean (SD)	19.5 (3.7)	19.6 (3.9)	19.3 (3.2)
Marital status			
Married	8 (9.6)	8 (9.6)	0 (0.0)
Not married (Single, divorced, widowed, …)	75 (90.4)	54 (65.1)	21(25.3)
Academic year			
First year	22 (26.5)	18 (21.7)	4 (4.8)
Second year	20 (24.1)	17(20.5)	3 (3.6)
Third year	23 (27.7)	17 (20.5)	6 (7.2)
Fourth year	18 (21.7)	10 (12.0)	8 (9.6)
Having financial issues	55 (66.3)	49 (89.1)	6 (10.9)
Music related issue	11 (13.3)	8 (9.6)	3 (3.6)
Psychological illness	7 (8.4)	5 (6.0)	2 (2.4)
Physical or learning disability	4 (4.8)	3 (3.6)	1 (1.2)
Source of COVID-19 knowledge			
WHO, CDC, Up-to-date and official sources	49 (59.0)	38 (45.8)	11 (13.3)
Local official statements	36 (43.4)	26 (31.3)	10 (12.0)
Social media	72 (86.74)	52(62.7)	20 (24.1)
Friends, neighbors and relatives	45 (45.2)	28 (33.7)	17 (20.5)
Local and international media sources	56 (67.5)	37 (44.6)	19 (22.9)

8 Studying the availability and usability of technology

The findings indicate that large number of participants (36.1%) said they were highly good or good in using electronic devices with percentage of the participants (33.7%). Most (73.2%) reported having access to an Internet connection in the fourth generation. However, only (18.1%) mentioned a very strong internet connection for participants.

Most people (50.6%) reported using the mobile to learn music, while (39.8%) reported having a computer or a laptop. The majority (85.5%) of the participants relied on university lectures and 34.9 on a wide variety of educational sources. Moreover, (83.1%) reported using the internet for music education and 88.0 for social media and. Table 2 and the results of the musical students in the pandemic's technical status.

Table 2. Status of educational technology tools during the COVID-19 pandemic

Variables	Total (n)	%
Level of proficiency in using various electronic devices		
In adequate	2	2.4
Acceptable	8	9.6
Good	15	18.1
Very good	30	36.1
Proficient	28	33.7
Type of internet service available (can choose multiple answers)		
Asymmetric digital subscriber line (ADSL)	13	15.7
3rd Generation (3G)	5	8.5
4th Generation (4G)	65	73.2
Quality of internet service		
Bad	14	16.9
Acceptable	31	37.3
Good	23	27.7
Very good	15	18.1
Which of the following items do you personally own and utilize in your musical education? (can choose multiple answers)		
Personal Computer or laptop	33	39.8
Tablet	9	10.8
Smart Phone	42	50.6
Does your device support any of the following technologies? (can choose multiple answers)		
Augmented Reality	09	14.9
High Definition Phone camera	41	49.4
Fourth Generation internet service (4G)	31	37.3
Your education depends upon (can choose multiple answers)		
Lectures provided by the University	71	85.5
Online courses and resources	13	15.7
Self-study utilizing various educational sources	29	34.9
Main use of internet during COVID-19 pandemic (can choose multiple answers)		
Musical Education and Distance learning	69	83.1
Social Media and E-mail	73	88.0

Table 3. Effect of COVID-19 on the Music education process

Variables	Total (n)	%
Did you suspend your educational program (of your own volition) recently due to any of the following reasons?		
Have not suspended educational program	81	98
Suspended educational program due to financial problems	2	2.0
Suspended educational program due to my social status and personal responsibilities	0	0
Suspended educational program due to other reasons	0	0
Did the faculty suspend or postpone the educational program in response to COVID-19 Pandemic?		
Yes	0	0
No	83	100
Did your faculty changed your training program to be online due to the COVID-19 Pandemic?		
Yes	0	0
No	83	100
How are you spending your time during this period of COVID-19 pandemic? (multiple choices)		
Feel unwell and have implemented self-isolation	23	27.7
Looking after ill patient / family member	19	22.9
Volunteering activities	27	32.5
Musical education through online platform	59	69.0
Spending more time with family	31	37.3
Exercise and improving physical fitness	16	19.3
Play video games	36	43.4
Self-learning through a program not provided by faculty	17	20.5
Play Music	76	75.4
Read books	26	31.3
Rest and relax	35	42.2
Did the COVID-19 pandemic affected your education plan and future interest?		
It has affected the education plan of future interest	51	61.4
Became interested in public music / infectious diseases	30	36.1
Has not affected education plan or future interest	2	2.4

9   COVID-19 effects on music education

The music department used online learning because of the COVID-19 pandemic. In addition, the findings show that most students did not disrupt their schooling and were formally enrolled with 98% at the start of the pandemic when they were asked if their training was interrupted or stopped for any other reasons. However the school of art

and esign changed students training program to be online due to the COVID-19 with 100% responsnt answer.

Further the responsnt answered about how they spending there time during this period of COVID-19 pandemic that 27.7% Feel unwell and have implemented self-isolation, 22.9 % Looking after ill patient / family member, whereas 32.5 have done volunteering activities and 69.0% spent time on Musical education through online platform and 37.3 answered that they are Spending more time with family and 19.3% Exercise and improving physical fitness. Further 43.4% of rersondant spend there time on Playing video games and 20.5 use Self-learning through a program not provided by faculty and most of them with percent of 75.4 play music.

However the student answered about if the COVID-19 pandemic affected there education plan and future interest that 61.4 see that it has affected the education plan of future interest and 36.1 Became interested in public music / infectious disease and only 2.4% has not affected education plan or future interest. During their music preparation, 36.1% concerned about exposure to COVID-19. During the pandemic, most of the students (61.4%) agreed to Distance learning. Most of them thought that their study capacity was wasted because of the pandemic.

10   Musical students' attitudes toward distance learning

Attitudes towards Distance learning in the faculty of music is measured through the implementation and use of Distance learning in the faculty of music and through questions that centered on the applicability and usability of Distance learning in the music faculty. Each response was scored using a Likert-type scale (strongly disagree, disagree, neutral, agree, and strongly agree). Attitudes toward Distance learning were assessed using 15 questions, as shown in Table 4.

The respondents had reasonably positive attitudes towards Distance learning. Most participants (60.2%) accepted that the Music Department should apply Distance learning. Only 36.2% accepted that Distance learning should replace regular learning. But only 22.2% said that it would be much easier to stream video lectures than live lectures 49.4 of those respondents accepted that the quality of Distance learning should be appropriate to fulfill educational needs. Yet 59.1% acknowledged that Distance learning makes for open discussions. 57.8 % of Students' see that commitment to Distance learning services should be close to direct learning. A 54.2% of music students are able to use material online. cording to respondent's answer However, only 37.4% accepted that Distance learning should be used in practical terms compared to 39.7% who disagreed and 22.9% who were neutral. Though 37.4% accepted that the practice can be covered by Distance learning. Only about 36.1% agreed that Distance learning would replace conventional methods of teaching and 67.5% thought that musical education content can be accessed online. thIn addition, 62.6% accepted that during Distance learning education it is possible to communicate with students and lecturers. 42.1% of students considered Distance learning difficult due to financial costs. Lastly, most of the students agreed with the importance of recognizing an electronic certificate.

Table 4. Attitudes of music students toward distance learning

Attitude	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Distance learning is applicable in music department	3 (4.8)	6 (7.2)	8 (11.7)	34 (38.5)	33 (37.7)
Distance learning is a possible substitute for standard education	6 (7.2)	19 (22.9)	13 (15.7)	28 (33.7)	17 (20.5)
Distance learning can be easily applied in music faculty	5 (6.2)	12 (14.5)	17 (20.5)	27 (32.5)	22 (26.5)
The Distance learning content should be sufficient to satisfy educational requirements	13 (15.7)	9 (10.8)	20 (24.1)	17 (20.5)	24 (28.9)
Downloadable Distance learning content is better than Live content in music training	21 (25.3)	26 (31.3)	18 (21.7)	13 (15.7)	5 (6.5)
Adherence of students to Distance learning schedules should be similar to direct learning	5 (6.5)	12 (14.5)	18 (21.7)	26 (31.3)	22 (26.5)
An interactive electronic content with discussions can be achieved through Distance learning	4 (4.8)	9 (10.8)	21 (25.3)	32 (38.6)	17 (20.5)
Most musical students can use live online learning content	7 (8.4)	6 (7.2)	23 (27.7)	20 (24.1)	25 (30.1)
Distance learning can cover the practical aspect of musical education	7 (8.4)	26 (31.3)	19 (22.9)	18 (21.7)	13 (15.7)
E-testing can replace the current traditional testing methods in musical faculties	10 (12.0)	23 (27.7)	20 (24.1)	25 (30.1)	5 (6.0)
Distance learning is more convenient and flexible than conventional learning	7 (8.4)	21 (25.3)	25 (30.1)	24 (28.9)	6 (7.2)
It is possible to obtain musical educational material through the internet	4 (4.8)	13 (15.7)	10 (12.0)	36 (43.4)	20 (24.1)
Interaction between students and lecturers is possible through Distance learning	9 (10.8)	14 (16.9)	8 (9.6)	30 (36.1)	22 (26.5)
Musical students have financial difficulty in gaining access to Distance learning	4 (4.8)	13 (15.7)	31 (37.3)	27 (32.5)	8 (9.6)
The veracity of certificates attained through Distance learning must be acknowledged	0 (0)	0 (0)	2 (2.5)	36 (43.4)	64 (54.1)

11 Evaluating musical students' engagement to distance learning

The response to Distance learning practices from the participants is discussed in Table 5. however, the results in this table shows that The university offered online music education to all participants with 100%. moreover, all of the participants use online applications and platforms for musical education purposes. However, during the COVID-19 pandemic, good percent of 76.2% of the participants took part in online education besides educational system. However, 85.5% recorded using the Internet for reasons of musical education. Particularly, 67.5% had regularly downloaded media relevant content and 53% shared music education with other students, and 50.6% said that they had used the Platform for study groups and discussions. In addition, all students used personal computers or tablets for academic reasons, whereas 55.4% stated purchasing an electronic device to access Distance learning teaching content. moreover, 63.9% did not purchase paper, but downloaded the electronic contents because it save money. Each "true" or "false" answer was given as 1 or 0 for further analyses respectively. The ranges were between 12 (maximum) and 0. (minimum). A cutoff score of ≥8 was regarded as showing an acceptable level of practice, while <8 was regarded as suggesting an insufficient level. All students were practicing at an acceptable level in most of the questions among 83 participants.

Table 5. Music students' practice evaluation of distance learning

Variables	Yes No. (%)	No No. (%)
Did you participate in any online musical education course offered by the university this period?	83 (100)	0 (0)
Did you participate in any online musical education program other than your university education during this period?	27 (32.5)	56 (67.5)
Did you use the internet to attend courses obtain musical information or understand musical concepts?	71 (85.5)	12 (14.5)
Do you download content related to your musical education in a periodic manner?	70 (84.3)	13 (15.7)
Did you use online applications and platforms for musical education purposes?	83 (100)	0 (0)
Do you share educational material with your fellow musical students at your faculty?	44 (53.0)	39 (47.0)
Did you use the internet to study with a friend or a group of friends through online meetings?	42 (50.6)	41 (49.4)
Did you use the internet to attend a course in Problem-based learning format?	34 (41.0)	49 (59.0)
Do you utilize your personal computer or mobile or tablet in online studying?	83 (100)	0 (0)
Do you use the internet regularly in your studies?	47 (56.6)	36 (43.4)
Have you downloaded electronic content instead of purchasing the paper form of study materials in order to save money?	53 (63.9)	30 (36.1)
Did you purchase an electronic device in order to have access to Distance learning educational resources?	46 (55.4)	37 (44.6)

12   Results, discussion and recommendations

The aim of this study was to evaluate the situation of music students in the COVID-19 pandemic and evaluate their Distance learning skills, attitudes and awareness as a music education outbreak. The research population consists of both alumni and music students from all years who study music at Jordan University. The findings show an acceptable degree of understanding, attitude and conduct for Distance learning that demonstrates the usability of Distance learning during the COVID-19 outbreak. The results show that music students can be accessed and the music transformed. However, several respondents identified financial and technical problems when using Distance learning platforms. They also expressed concern about Distance learning, which is heavily dependent on teachers. With all the positive and negative changes caused by the Corona virus, it had a significant, noticeable impact on the technical side of teaxhing students, especially in Jordan and the whole world, however, In students view, distance education is the biggest obstacle to the poor living conditions of a large part of the population, the lack of Internet coverage to all regions of the country, the inability of distance education to create interaction similar to what is happening in traditional classes, the difficulty of applying lessons and the practical aspect of classroom music. In addition to its effect on the psychological side of the student and reduce their chances of showing their best and artistic creativity. Thus discussions regarding the reality of music production, education, documentation and translation remain locked up.

In addition, Music and its teaching is an art, and it is also a means of entertainment, motivation, and an impact on determination and conscience. Among the benefits of teaching music during the Corona period, it has positives First—its effect on the soul, through its influence on the soul and its emotions and its expression, especially with sadness, joy and enthusiasm. Secondly—it adds joy and happiness, especially with weddings, graduation ceremonies, victories, etc., but during the period of the Corona, one of its disadvantages does not add this full joy, especially the imprint of parents and relatives, weddings, graduations and other things. The listener may be sad or ill, so do not add anything or feel joy. Third—it adds calm and relaxation, When banning, and also from the negative aspects of it add nervousness, some types of music have the effect of violence, nervousness, anger and depression. Fourth—its effect on behavior, adding dance and activity Fifthly, it has an important role in education, especially during this period, because education has become remote, adding non-boredom and using platforms increases understanding, focus and speed of memorization, especially for children. As for its disadvantages, it adds to some people distraction and lack of focus, and that happens with the wrong use of the content of music. Sixth, it has a role in music and uplifting morale.

From the psychological state and became a part of their lives, and it was taking them out to another world in many parties, but in the time of Corona Many concerts were canceled and it became difficult to record a new song, but at the same time it allowed some to discover the talent of singing they have by sitting a lot at home or creating singing challenges, and everyone is searching about a special innovative way to record his own song and in general, even if there were negative conditions for the music at a time if coronavirus, but it did not significantly affect it because all of us and we still need to

hear the music, even if there is nothing new, there is an old one. In addition music has proven to be the cure for anyone at any time and time, and even remote education, many are willing to record in it, the music will remain.

The methods of teaching and learning on the Internet have evolved with the development of the available means. Written files and pictures were just the beginning. Now, with the increase in the speed and capacity of the Internet channels, the student can actually be inside the lecture room through a screen, he sees asking and interacting in the case of live broadcasting of lectures or that he is following a series Videos attached with files, supporting designs on the screen and animations, in other cases, the student chooses the lecture times that fit his life schedule and times and learning music is instructions, and this is easier through a screen with auxiliary designs and cameras, each focusing on an important part of the playing process. Something that does not happen in any normal music lesson except with the question and the answer and the interaction that does not exist between every student and a music teacher as for mastery of playing, this is something that has nothing to do with the teacher, so the teacher gives the necessary training to be able to master a certain technique and skill, and he goes. As for the serious student who wants to play and who really loves to play, he is the one who practices these exercises regularly so that he can do it. The advantage in teaching music via the Internet, if the screens and designs are available, is that the state of lack of understanding of the information is non-existent, so repetition, whether to understand the information or to practice it after completing the lesson or video, is what makes an able musician.

Nevertheless, participants illustrate that the world of music in light of the Corona is not always easy, as there is a difficulty in putting some small details through the camera and that the music lesson is not like any lesson but rather a lesson in which the player does his best in order to pass it on to his students and to the largest number of people possible, and that students find more time For training, but sometimes they find it difficult to understand certain words or get confused. The students see that Distance learning Reduce time and effort for the student, especially if his home is far from his teaching facility. Also it Ease of returning to lectures and making use of them and repetition of explanations because of their preservation on the teaching sites. Parents monitoring students during the educational and teaching process and following them up and following up on exams and assignments in ways that have become easier thanks to electronic education. Further, Discovering the energies, capabilities and competencies of teachers and those in charge of the educational process. Despite the posive attetude for most of the students some students illustrate that as for the disadvantages there are difficulty practicing music activity due to social distancing, also Prevent the practical side even though it is an important thing, Not performing concerts and important projects for the student to strengthen his artistic personality on stage. further, The lack of infrastructure capable of accommodating the number of students in addition to the lack of basic Distance learning for all students, which constitutes a difficulty in the distance learning process. In addition, Difficulty applying practical musical lessons and remote activities. The lack of a systematic plan for distance education. The connection of examinations and tests to the Internet, which is always maintained, interrupted, disconnected or sometimes suspended.

Students of music in Jordan have many difficulties; that because of the local conflict which affected several cities they experienced financial difficulties and were internally displaced from their homes. Some respondents also reported physical problems, while other psychological diseases were reported. These problems are of great concern and action may be necessary to alleviate them, while ensuring that music students obtain immediate help during this difficult period. In addition, students of Music reported high levels of computer and IT skills; most respondents reported decent, very good or qualified ability levels. Most stated having access to Internet services of the fourth generation with an appropriate or strong Internet connection. These findings can contribute to the feasibility of carrying out music student Distance learning programs. Approximately half of the students reported using smartphones for music instruction, while 33% use their own computers. These findings support the need for mobile apps that offer access to online education and music lessons. The findings also underline the need to deliver immersive sessions with optimized mobile tools, since most people use their phones more than they do on their computers.

Indeed, many students reported the availability of several advanced technological device supports, such as augmented reality and fourth-generation internet support. Besides that, we observed that some of the participants in the study find it hard to engage in Distance learning music because of the financial cost of the computers, the music instruments or the Internet, which has made it hard for music students to obtain a stable online connection, with potential difficulties in using advanced technology essential to Distance learning. For music students in Jordan these resources and facilities can be costly. Thus, funding for music students by offering a secure and efficient internet link via internet companies and reducing the costs of students of music is necessary to resolve these problems. Schools of music and faculties should provide students with lectures that are downloadable and accessible. Further, Most of participants mentioned being reliant on university lecture courses. In particular, the conventional teaching approach requiring students to listen to one-tone lectures, which do not provide visual stimuli and provide students with minimal opportunities for discussion. This way of teaching leads students to feel less moved to take potential lessons and boredom at lectures. Other factors include the travel difficulties of students who live in other cities and could also be an easier way of leaning access to multiple tutors in private schools.

The respondants see that One of the most prominent advantages is that it provides the student with the knowledge supply that is downloadable at any place and time in the world, as soon as he logs into his official page via his password. Also, these platforms contribute to reducing the percentage of errors or omissions that most students suffer, including lack of focus during follow-up lectures and practical works, because most of these lessons remain recorded in the form of videos. Here lies the essence of the advantages through easy access to all scientific materials with detailed and preferred explanations, and they remain recorded in electronic paper form or videos for the student to constantly follow and benefit from them well. Also, it is easy for the student to submit a direct question to the professor during his follow-up to the lecture, and this cannot be done in the traditional auditorium due to the space or the difficulty of hearing the question in a space that needs an amplifier. Technology today has become a blessing to protect some from the dangers of epidemics and facilitate the work of others, but on

the other hand there are those who consider it a curse and a departure from our normal daily lifestyle due to its dependence on communications via the Internet.

Despite the difficulties experienced by students during the COVID-19 pandemic, none of them had suspended their enrollment in the respective Music school. A program to enhance the teaching-learning process in the COVID 19 pandemic therefore is urgently required. Music educators should respond by minimizing the pandemic effect so music students can cope and use their time and continue the education process. Strategies for continuous online learning may be applied. However, these programs need interactive and institutional help, as some students may face communication difficulties. However, Distance learning and video lectures allow music students to enhance their education and graduation during that pandemic period. This is because most students of music, especially those with downloadable services, were able to access more lectures. Many students were concerned that COVID-19 is exposed to in campus lectures, while other students were concerned about viral transmission in the group. Most music schools therefore suspended music at campus lectures for students in music with a view to reducing the risk of infectious transmission amongCOVID-19 students in music patients. Teachers should engage in the creation of strategies to achieve online educational goals of the courses.

It is worth noting that there is no difference between learning to play instruments through online videos and learning face-to-face except with the features in which the videos excel over learning in institutes A, by a specific music teacher. In online music lessons, the student sits face to face with the music teacher except that the teacher is inside the screen. However, because the online instrument learning courses are recorded videos, the professor says the most accurate and clear information to explain a specific point, unlike the face-to-face lessons that may be affected by the professor's mood, fatigue and exhaustion, which may be caused by moving from one music class to another, repeating the same information to more than one student in addition to fatigue General exhaustion of musicians from partying and teaching. In addition, The musical instrument learner in online music lessons does not have to repeat the question that he poses to the teacher. The information is recorded. The learner can repeat the information hundreds of times until he himself understands it. The thing that the learning theories have proven is the best in receiving the information. This is because self-access to knowledge confirms that the information has been entrenched, further, learning musical instruments online is less expensive in terms of fees for music courses over the Internet, in addition to the absence of transportation costs and time savings.

Courses, lessons and music lessons and learning musical instruments on the Internet are available to everyone anytime and anywhere, especially since the Internet has become available to large numbers of people in the Arab world. Music is a soul, feeling and mood, if everyone can choose the time according to comfort and mood, then teaching how to play a specific instrument is more enjoyable and there is no (unintended) compulsion based on the mood of either the student or the teacher or the difficulty of appointments. A large number of the instrumentalists, even the most famous of them, are people who learned to play on their own. Music lovers need only someone to explain the basics to them and then practice and follow-up exercises lead to professionalism, and these basics principles and exercises playing instruments are all explained in the best revolution in a video recorded in online music lessons. These suggested methods

of learning should therefore adopt a systemic curriculum established by experts that involves priorities, education strategies, implementation methods and assessment protocols in order to ensure that the desired learning aims are achieved. Furthermore, given the various needs and goals of students at different levels of learning, such programs must address the needs and goals of students together with the university goals. Further, the the positive side of Distance learning that a new world has been found in music education. Reaching students or teachers has become very easy. The closures that occurred increased people's free time, increased exercise time for many, and increased free time from exploring talents. The challenges of distant music learning that some minor details can't be been clarified online as well as the financial crisis that has diminished parents and students' desire to teach music. Examinations are another challenge for the method of music education. Some colleges, in order to prevent further storming and postponement of grades of student, have created an online assessment platform for students in music during the COVID-19 pandemic. In order to meet the requirement for education in Jordan this type of on-line exam and evaluation has been suggested. However, it does present a range of technological concerns, including the availability of technical specifications, including cameras, microphones and speakers with special features to avoid distractions and distortions. It also raises legal problems, and its implementation faces many difficulties.

Our research gave an overview of the pandemic situation among music students. Students demonstrated flexibility and showed appropriate levels of Distance learning abilities, behaviors and activities. COVID-19 required us to work into all aspects of our system of musical education. This provides future teachers with an opportunity to update the curriculum and in especially to match their qualifications and skills during their careers. Although several studies have concentrated on the implications for music students of the COVID-19 pandemic, our research was conducted with the goal of analyzing several findings that would help them determine their current situation and investigating the effects of the pandemic. The COVID-19 virus outbreak continues to disturb education and training in music. COVID-19 overburdened the education system, undermining educational institutions' abilities give sufficient services. We must take a variety of steps to mitigate the effect on music education and preparation as we confront a Second wave of this epidemic. To minimize this disturbance, valid solutions are required, and such interventions can take the form of on-line learning and virtual experience in an environment that is handy, although the latter can take time in view of COVID-19 continued dissemination.

In the Music Departments of the Faculty of Fine Arts where individual courses are held intensely, individual instrument courses are of great importance. It was concluded in line with the opinions of the students that some applied courses such as individual instrument courses given by distance education are not as effective as face-to-face education in the music departments. As a matter of fact, Can and Yungul (2017) in their studies with graduate students, determined that students support traditional education with regards to the effectiveness of the instrument course program. In conjunction with performing the target performances which is the goal to be obtained by the students in instrument education, it would also be required to respond to the student`s physically or establish visual or auditory communication making it possible to clarify the stance, attitude or some technical issues of the instrument from at different intervals. Again,

according to the student's opinion about whether they want the continuation of the distance education process, which is one of the results of the research, only 21 students stated that the process should continue with distance education. In addition, in case of the continuation of distance education, it was concluded that the students mainly had the opinion that the theoretical courses (12) should continue with the distance education. This was followed by the opinions that no courses should be done with distance education (4), and all courses should be done with distance education (3). According to the study of Zirhlioglu (2006) there is a disparity in the information received in formal education as it is more constant and between formal education and distance education there is a difference with regards to learning. In the study of Altuntas (2020) the findings were equivalent to this research, the students were asked what their preference would be of the education system once the conditions were appropriate after the pandemic process was completed, 90.3% of the students chose to maintain their education with formal education and 9.7% with distance education. In addition, when the efficiency of practical and theoretical courses with distance education method was questioned in the pandemic process, 12.5% of the students responded that it was processed efficiently and 87.5% inefficiently for applied courses; 21.5% thought it was processed efficiently and 78.5% inefficiently for theoretical courses. In the study of Keskin and Ozer (2020) the results were alike, it was determined that 84.4% of students were under the impression that web-based distance education is not as effective as face-to-face education, 45.7% others were of the mind set that it is an alternative to face-to-face education, as well as the contribution of distance education in relation to theoretical courses and common culture is mild and observed to be somewhat higher than professional practice skills. Face-to-face sessions in the classroom continue to be valued by students (Richardson, Maeda, Lv, & Caskurlu, 2017). Based on these results, it can be recommended that students would require increased face-to-face education in applied units such as music departments of fine arts faculties. When creating the environment where students are afforded the opportunity to practice on a one-to-one basis after listening to the course content could contribute to the student's professional practice skills. The train of thought is that there is importance in developing distance education particularly for applied courses or to find alternate methods (Altuntas, 2020; Keskin & Ozer, 2020). The main impacts experienced by students is the down times and the lack of suitable internet connections. The improvement of the infrastructure and resolving the technical problems in this regard are required to enhance the learning of the students of the Music Department and should be given priority to be resoveled without further delays... In parralel with the distance education process being ongoing in the applied departments of the universities, is the importance of eliminating the glitches that occur during this process without impacting on the time and causing interruptions of the education by performing studies that would incorporate the opinions of students and instructors. If students are provided with continuous support in this process, participation in the distance education process could increase. In addition instructers should be given on the job training in distance education.. Enhancing the appropriate software/ programs to be used in the distance education process for music departments can be produced and further developed. It is therefore evident that the effeciency and activity of the distance education process can be increased by minimizing the problems students experience with the music courses in the process. In the event of a crisis situation such

as the pandemics which will result in distance education being compulsory, the state and universities should make available the required support to the students who are financially and technologically compromised and provide each student the opportunity of equal education. As a result of the urgent and rapid transition to distance education in the pandemic process, it is recommended to carry out studies in music departments and other applied departments in order to improve the quality of the service and education in the future by improving the existing system.

In future research, our findings can be used to analyze the status of music students and the use of electronic learning as an alternative to the traditional method of music education to help students to learn music. empower music students by offering them a full education in music and an appropriate work experiences. However, The results showed that the degree of Distance learning awareness, attitudes and practice was appropriate. This shows that, considering technological and socioeconomic difficulties, this teaching mechanism is useful in a country with limited resources. Music students, particularly during the pandemic, should receive adequate educational assistance. We recommend the use of highly advanced software and virtual reality to adapt immersive online lessons. This will allow students to adapt to new way of teaching music. In addition, E-learning has actually grown into a modern way to enhance the learning process and improve the learning performance. The research results would make it easier for educational institutions and policymakers to bring this online learning process to the next level. In addition, the interactive technology was well embraced for learning purposes in the absence of face-to-face contact. Therefore, steps to improve the quality of e-learning should be taken to help students learn better during the Covid-19 pandemic process.

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