



Research Article

Exploring the challenges of e-learning for music in Iraq

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Abstract

The article explores the challenges faced by music instructors in Iraq while using e-learning for music education, particularly during the COVID-19 epidemic. The research aims to identify and assess the main obstacles encountered by music educators in applied disciplines, particularly in solo performances on instruments such as the piano and violin. The research used a descriptive-analytical technique, especially content analysis, to examine and evaluate the difficulties encountered by music educators in Iraq during the transition to e-learning. The study sample consists of four faculty members who were chosen from the Department of Musical Arts at the Faculty of Fine Arts, University of Baghdad. These faculty members used e-learning to teach solo instruments. The process of data collection involves the distribution of a questionnaire consisting of 30 questions, particularly tailored to gather instructors' viewpoints and understandings about the challenges faced while using e-learning for practical music courses. and analyzed using statistical measures in SPSS. The results highlight the difficulties encountered by music educators in Iraq while using e-learning, including the lack of direct human interaction and limitations in practical learning. Practical disciplines, including solo performance on instruments, provide unique challenges since they require specific equipment, exact instructions, and exceptional skills. However, e-learning in music education offers advantages such as convenience, accessibility, and cost-effectiveness. The research emphasizes the need to integrate technology and develop innovative methods to effectively provide both theoretical and practical teaching in music education. The declaration acknowledges the efficacy of combining online and conventional approaches to enhance learning results, optimize communication, and save expenses. During the pandemic, e-learning has become essential. Nevertheless, it is crucial to emphasize the delivery of accurate information, appropriate assignments, and ongoing student involvement. This research aims to improve understanding of the challenges and benefits associated with e-learning in music education, particularly in the context of Iraq. This resource provides significant insights for educators, policymakers, and organizations seeking to enhance music teaching via the implementation of state-of-the-art technology approaches.

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Introduction

The emergence of e-learning is a direct result of the scientific and technological progress made in the last century. The surge in demand for education, along with a limited number of educational institutions, the surplus of readily available information, and the need to integrate technological advancements into the education sector, is the impetus behind this response. E-learning refers to the use of electronic media, namely computers and the Internet, for the purpose of

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providing instructional knowledge. It is now a widely used educational strategy (Abdel-Aziz, 2009). The roots of e-learning are subject to ongoing discussion, with some ascribing it to computer-assisted learning and others to the utilization of computer networks, such as the Internet, in the field of education. The concept has progressed with contemporary technologies and continues to endure modifications and advancement (Dawoodi, 2018). E-learning is defined as using the Internet and computer-based tools to study educational content and facilitate interaction between teachers, learners, and the subject itself (Abdel-Aziz, 2009; Al-Ghareeb, 2009). The name "e-learning" is favored over "virtual education" to emphasize its resemblance to conventional education through the utilization of electronic media. Emphasizing the results and efficiency of e-learning is of utmost importance, rather than making comparisons with conventional approaches (Dobbs & Philip, 1997). The prevalence of e-learning is seen in the increasing abundance of online institutions, schools, and courses accessible on the Internet. Many educators and students worldwide already used e-learning before the COVID-19 pandemic (Koumi, 2006). Its benefits include overcoming geographical barriers, offering flexible learning schedules, and leveraging technology to enhance educational experiences (Roddy, 1996; Yulia, 2020). E-learning can be classified into different types. Synchronous education involves real-time connectivity between teachers and students, allowing immediate feedback and interaction (Amer, 2014). Asynchronous e-learning, on the other hand, does not require real-time interaction and allows learners to access pre-developed materials at their own pace (Amer, 2014). Blended education combines online and traditional face-to-face education, utilizing various tools and systems to create a comprehensive learning experience (Al-Ajrash, 2017).

The evolution of educational forms and disciplines has led to the development of various music education methods. Music education is considered as important as other academic subjects and contributes to cognitive development and various aspects of personal and social skills (Wangphanich, 2013; McPherson & Zimmerman, 2011). The content of music education encompasses diverse musical knowledge and skills, which can be acquired through interaction with teachers and instruments (Hoffer, 1977). Evaluating music education's outcomes involves cognitive and emotional aspects, including intellectual growth and changes in attitudes and values (Leonhard & House, 1972). In traditional music education, the teacher is vital in guiding and instructing students in instrument-specific techniques and theories. The curriculum and teaching methods vary depending on the instrument and the professor's approach (Maysam & Kuna, 2008). Overall, e-learning and music education are dynamic fields that continue to evolve and adapt to the changing educational landscape. Integrating technology and the diverse approaches in these areas aim to enhance the learning experience and provide valuable educational opportunities.

Due to technological improvements, e-learning has gained significant prominence in education globally in recent years. Nevertheless, the use of this method in arts education, especially in hands-on disciplines, is restricted, and instructors encounter several obstacles. Baker (2011) asserts that online learning is not widely used in arts education since it is not practical and does not include physical interaction. Nevertheless, Graham (2006) supports the idea of combining online and conventional techniques in music education to enhance learning results, facilitate communication, and save expenses. The COVID-19 epidemic has necessitated the transition of several institutions, including music education, from conventional classroom teaching to online learning. Nevertheless, the use of e-learning in music education requires a distinctive methodology that encompasses both theoretical and practical instruction. Music education is unique compared to other fields of study since it specifically concentrates on instructing students in the art of sound or playing musical instruments in order to develop their talents. Furthermore, music education requires students who possess exceptional talents, unique skills, specialized equipment, and clear explanations. Notwithstanding the difficulties, e-learning in music education offers notable advantages, especially in regard to accessibility and cost-effectiveness. While e-learning has become essential during the pandemic, it is important to ensure that students are provided with accurate information and appropriate activities to effectively acquire skills. The absence of connection and engagement might provide a substantial obstacle to sustaining student motivation and interest in the topic. Nevertheless, a study conducted in Turkey by Güzel, Çakır, and Çelen (2020) revealed the efficacy of e-learning in the pedagogy of instruments such as the violin. The study demonstrated that video-assisted violin lessons on YouTube yielded positive results when integrated with conventional in-person instruction and supplementary assignments.

However, these lessons were insufficient. This research demonstrates their use of asynchronous e-learning. Kristin Shoemaker and Gertjan van Stam conducted an experiment in the field of e-learning piano education. They used Internet MIDI, a software tool that enables two piano keyboards to electronically regulate, synchronize, and communicate data using MIDI technology (Shoemaker & van Stam, 2010). The objective of this project was to use the Internet as a medium for piano instruction in order to tackle the scarcity of conventional piano teachers. These endeavors signify continuous efforts to ascertain the most efficient e-learning techniques for instructing music. Within Iraq and the Arab world, there are many approved technology instruments for the purpose of electronic music instruction, such as the Zoom program, Google Classroom, and Google Meet. Researchers and educators have looked into the use of these applications for video conferencing in the context of music instruction. "Consequently, educational institutions have embraced these programs as a pedagogical instrument" (Dammers, 2009). Amidst the coronavirus epidemic, these apps have gained more popularity since most educational institutions depend on them for e-learning. The Department of Musical Arts at the University of Baghdad has implemented a program that offers theoretical and practical courses via the distribution of texts in PDF format, audio clips, or synchronous e-learning.

The technological revolution has given rise to e-learning as a means of enhancing educational systems by creating efficient and effective learning environments. Developed nations have made significant advancements in e-learning, which offers flexible learning opportunities that are not time- or location-bound. E-learning is now considered integral to education and is widely used in many universities as an auxiliary system.

However, some countries, like Iraq, have faced numerous crises hindering their educational progress, resulting in reliance on traditional methods with limited innovation. The COVID-19 pandemic further impacted education globally, leading to the adoption of e-learning as an ideal solution.

In response to the pandemic, Iraqi educational institutions suspended in-person activities, prompting the use of electronic means for continuity. The shift to e-learning posed challenges for music teachers, students, and faculty members, including increased effort, unusual obstacles, and difficulties in practical study subjects, particularly.

Problem of Study

The purpose of this study was to identify and assess the difficulties encountered by music educators in Iraq while providing E-learning music instruction during the COVID-19 outbreak. The study aimed to address the following inquiries:

- What are the main obstacles encountered by music educators in Iraq when using e-learning for music instruction?
- How do these obstacles become evident in practical disciplines such as solo performance on instruments like the piano and violin?

Method

Research Model

In this study, a descriptive-analytical technique, especially content analysis, was used to examine and analyze the obstacles experienced by music educators in Iraq when applying e-learning music education during the COVID-19 epidemic. This approach was chosen because of its capacity to give both quantitative measures and qualitative interpretations of data, thereby providing a holistic view of the research investigation (Latif & Marot, 2020). This aligns with the academic intent to generate a comprehensive understanding of the phenomena under study.

Sampling

The study involved a research community of ten professors from the Department of Musical Arts at the University of Baghdad's Faculty of Fine Arts. From this community, a sample of four faculty members was intentionally selected. These faculty members were permanent members of the Department of Musical Arts and taught solo playing (piano-violin) during the transition period for e-education, which occurred from March 18, 2020, until the end of the academic year in 2021 due to the COVID-19 pandemic.

Data Collection Tools

To achieve the research objectives, the researcher developed a questionnaire consisting of 30 items. The questionnaire was designed to gather teachers' opinions and viewpoints regarding difficulties when using e-learning for practical music courses focusing on solo playing. The questionnaire design was based on thoroughly reviewing the theoretical framework literature and relevant references. The validity of the questionnaire was ensured through two methods. Firstly, the questionnaire was evaluated by three experienced and specialized arbitrators in the field of scientific research and teaching at the University of Baghdad's College of Fine Arts. Their feedback was utilized to modify several items, enhancing the clarity and comprehensiveness of the questionnaire. The amendments resulted in a 100% agreement percentage. Secondly, the reliability of the questionnaire was calculated, yielding a validity score of 82.1% based solely on the closed questions in the questionnaire. The constancy of the questionnaire refers to its ability to produce consistent results when administered multiple times under the same conditions. In other words, constancy ensures that the questionnaire's results remain stable and unchanged, even if administered multiple times within specific periods. To verify the constancy of the questionnaire used in the study, the researcher employed the Cronbach Alpha coefficient method, which was calculated 0.674. the coefficient value is 0.674, indicating that the questionnaire items demonstrate a stability rate of 67.4%. This is a positive indication of the questionnaire's constancy.

It is observed that the Cronbach Alpha coefficient falls within a range that warrants scrutiny. With regards to the questionnaire's validity, it denotes the extent to which the scale assesses its intended construct, and can be ascertained through the stability coefficient. The validity of this questionnaire is determined to be 0.801, signifying an 82.1% level of validity.

Table 1. Shows the value of the Cronbach Alpha coefficient in case the question is omitted

Items	C.A.
1 Has the educational institution identified any particular e-learning applications	0.675
2 Have you received any training in e-learning	0.675
3 Had you engaged in e-learning prior to the outbreak of the coronavirus pandemic	0.630
4 Do you utilize a single type of e-learning with all of your students	0.619
6 Does e-learning provide productive feedback for practical training	0.698
8 Is the internet speed sufficient for delivering online lectures	0.573
9 Are there any challenges in monitoring the number of students during e-learning of practical music subjects	0.816
10 Do students participate interactively in e-learning for practical subjects	0.675
11 Does the e-learning system align with the teaching of music for practical subjects	0.651
12 Is the delivery of educational materials to students through e-learning platforms both seamless and convenient	0.573
13 Which specific electronic devices are utilized for music instruction in the context of e-learning	0.675
14 Are you getting ready for the virtual class session	0.619
17 Do you utilize any safety measures during virtual music classes	0.675
18 Does the employed software offer satisfactory visual and auditory quality	0.573
19 Are there options within the application's settings to eliminate both continuous and intermittent background noise and echo	0.675
20 Which specific form of e-learning is utilized in practical music instruction	0.675
21 What specific elements of practical music instruction (individual) do you favor	0.675
22 Do you engage in playing the musical instrument alongside the student during the virtual lesson to provide clarification	0.573
23 Is the audio and video lesson inclusive of both genders	0.661
24 Do you employ particular tools and software to aid in individual practical music instruction	0.573
25 Do you request that your students capture a video recording of their exercises and submit it via an electronic platform	0.675
26 Do you encounter challenges in assessing students' proficiency in practical subjects in the context of e-learning	0.735
27 In your view, does e-learning impede the progress of students in practical subjects	0.735
28 Does the implementation of e-learning in practical subjects alleviate the workload of teachers	0.651
29 Are you able to discern the movement of the hands and fingers of the student during their musical exercise with clarity	0.675
30 Do the applications you utilize capture all the sound frequencies produced by musical instruments	0.651

C.A.: Cronbach Alpha

By referring to Table 1, it is evident that the Cronbach Alpha coefficients vary when a specific question is excluded from the questionnaire. Specifically, if item 9, which pertains to the challenge of monitoring the number of students during e-learning of practical music subjects, is removed from the questionnaire, the Cronbach Alpha coefficient will change from a range of 0.674 to 0.816. This change indicates that the questionnaire's reliability has improved from questionable to good, Cronbach Alpha coefficient was calculated 0.816. Regarding the open-ended questions, the researcher relied on the experts' viewpoints to ensure their validity.

Data Analysis

The data was gathered through the employment of a questionnaire as the research tool and, subsequently, inputted into an Excel file, arranged, and imported into the statistical software (SPSS) for data analysis after the answers were coded. Descriptive statistics were used to compute the study's data, and precisely, arithmetic means and standard deviations. During the statistical analysis, the researcher depended on the acquired data and information, in which four questionnaires were distributed and subsequently retrieved. The researcher utilized the relevant statistical indicators to align with their research hypotheses and inquiries, which are arithmetic mean; this measure determines the extent of concurrence among the study sample's responses to each item in the questionnaire. Standard Deviation; this metric is employed to determine the extent of variation among the responses of the study sample from the level of agreement.

Observation

The significance value (sig.) was employed in testing the research hypotheses instead of tabulated values due to the precise outcomes obtained through its application. These measures were computed using the Statistical Package for Social Sciences (SPSSV20) software.

Statistical indicators

The sections of the questionnaire were coded to analyze the data obtained from the questionnaire, and the corresponding statistical measures are presented in Table 2.

Table 2. Displays the coding of the resolution sections

Answer Coding	Paragraph
2-1	Yes - No
1-2-3	Yes - Sometimes - No
1-2-3	Yes. - Too much. - No.
1-2-3	Yes. - A little bit. - No.
1-2-3	Yes. - Not at the required level. - No.
1-2-3-4	Computer - Tablets - Mobile - Other

The statistical measures were computed for the questionnaire items, as illustrated in Table 3.

Table 3. Presents the statistical measure values of the questionnaire items

	Items	Min	Max	\bar{X}	S.D.	Degree
1	Has the educational institution identified any particular e-learning applications	2.00	2.00	2.0000	0.00000	high
2	Have you received any training in e-learning	2.00	2.00	2.0000	0.00000	high
3	Had you engaged in e-learning prior to the outbreak of the coronavirus pandemic	1.00	2.00	1.2500	0.50000	high
4	Do you utilize a single type of e-learning with all of your students	1.00	2.00	1.7500	0.50000	high
6	Does e-learning provide productive feedback for practical training	1.00	2.00	1.5000	0.57735	high
8	Is the internet speed sufficient for delivering online lectures	1.00	2.00	1.5000	0.57735	high
10	Do students participate interactively in e-learning for practical subjects	2.00	2.00	2.00	0.000	high
11	Does the e-learning system align with the teaching of music for practical subjects	1.00	2.00	1.2500	0.50000	high
12	Is the delivery of educational materials to students through e-learning platforms both seamless and convenient	1.00	2.00	1.5000	0.57735	high
13	Which specific electronic devices are utilized for music instruction in the context of e-learning	4.00	4.00	4.00	0.000	high
15	Are you getting ready for the virtual class session	1.00	2.00	1.7500	0.50000	high
17	Do you utilize any safety measures during virtual music classes	1.00	1.00	1.0000	0.00000	high
18	Does the employed software offer satisfactory visual and auditory quality	1.00	2.00	1.5000	0.57735	high
19	Are there options within the application's settings to eliminate both continuous and intermittent background noise and echo	1.00	1.00	1.0000	0.00000	high
20	Which specific form of e-learning is utilized in practical music instruction	3.00	3.00	3.0000	0.00000	high
21	What specific elements of practical music instruction (individual) do you favor	1.00	1.00	1.0000	0.00000	high
22	Do you engage in playing the musical instrument alongside the student during the virtual lesson to provide clarification	1.00	2.00	1.5000	0.57735	high
23	Is the audio and video lesson inclusive of both genders	1.00	2.00	1.7500	0.50000	high
24	Do you employ particular tools and software to aid in individual practical music instruction	1.00	2.00	1.5000	0.57735	high
25	Do you request that your students capture a video recording of their exercises and submit it via an electronic platform	2.00	2.00	2.0000	0.00000	high
26	Do you encounter challenges in assessing students' proficiency in practical subjects in the context of e-learning	1.00	2.00	1.7500	0.50000	high
27	In your view, does e-learning impede the progress of students in practical subjects	1.00	2.00	1.7500	0.50000	high
28	Does the implementation of e-learning in practical subjects alleviate the workload of teachers	1.00	2.00	1.2500	0.50000	high
29	Are you able to discern the movement of the hands and fingers of the student during their musical exercise with clarity	2.00	2.00	2.0000	0.00000	high
30	Do the applications you utilize capture all the sound frequencies produced by musical instruments	1.00	2.00	1.2500	0.50000	high

After examining Table 3, it becomes apparent that questionnaire paragraphs (1, 2, 10, 13, 17, 19, 20, 21, 25, 29) obtained a standard deviation value of (0.000), signifying unanimous agreement among the respondents regarding these paragraphs. The remaining questionnaire paragraphs were observed to have received nearly unanimous agreement. As for the open-ended questions, the collected responses were as follows:

Table 4. The following presents the responses to the open-ended questions

	Identification paragraphs	Summary of answers
5	Is instruction delivered exclusively through a single medium, or are there approaches to accommodate diverse learning preferences	Employing multiple programs
7	In the context of e-learning, what is the methodology utilized for the assessment of students in practical subjects	Analogous to evaluating attendance
14	What visual programs or applications are utilized within the pedagogy of practical musical materials	Google Meet & Zoom
16	What methodologies do you employ within the domain of e-learning	Electronically distribute the lecture to the student

Based on the aforementioned responses, it is evident that educators employ various instructional approaches and assessment methods in e-learning, resembling traditional classroom methodologies. The primary platforms used by teachers for conducting lectures are Google Meet and Zoom, while the distribution of recorded lectures electronically is the prevailing practice.

Results

Results of the first question: Has the educational institution identified any particular e-learning applications?

According to the outcomes of this inquiry, the educational organization has recognized specific e-learning tools, which exhibit a considerably high degree of prevalence, as evidenced by an arithmetic mean of (2.0000) and a standard deviation of (0.00000).

Results of the second question: Have you received any e-learning training?

As per the findings obtained from this query, it was revealed that the faculty had undergone training programs in e-learning, as depicted by an arithmetic mean of (2.0000) and a standard deviation of (0.00000), with a high degree.

Results of the third question: Had you engaged in e-learning before the outbreak of the coronavirus pandemic?

The outcomes of this inquiry indicated that most of the teaching staff had not engaged in e-learning prior to the pandemic, as demonstrated by an arithmetic mean of (1.2500) and a standard deviation of (0.50000), with a high degree.

Results of the fourth question: Do you utilize a single type of e-learning with all your students?

As per the findings obtained from this query, it was revealed that most respondents employed the same e-learning modalities for all their students, as demonstrated by an arithmetic mean of (1.7500) and a standard deviation of (0.50000), with a high degree.

Results of the fifth question: Is instruction delivered exclusively through a single medium, or are there approaches to accommodate diverse learning preferences?

According to the outcomes of this inquiry, it was found that diverse techniques were utilized in delivering educational content to the students.

Results of the sixth question: Does e-learning provide productive feedback for practical training?

The findings obtained from this query demonstrated a dichotomy in the effectiveness of e-learning for practical training, with some observations being fruitful while others were not. The results were reflected in an arithmetic mean of (1.5000) and a standard deviation of (0.57735), with a high degree.

Results of the seventh question: In the e-learning context, what methodology is utilized to assess students in practical subjects?

According to the outcomes of this inquiry, it was found that the evaluation methods utilized in e-learning were analogous to those employed in traditional face-to-face instruction.

Results of the eighth question: Is the internet speed sufficient for delivering online lectures?

The findings derived from this query revealed a split opinion regarding the adequacy of internet speed for delivering lectures. Some respondents considered it suitable, while others did not, as evidenced by an arithmetic mean of (1.5000) and a standard deviation of (0.57735), with a high degree.

Results of the tenth question: Do students participate interactively in e-learning for practical subjects?

As per the outcomes of this inquiry, it was identified that the level of interaction exhibited by students in e-learning sessions for practical subjects was not up to the desired standards. This was reflected in an arithmetic mean of (2.00) and a standard deviation of (0.000), with a high degree.

Results of the eleventh question: Does the e-learning system align with teaching music for practical subjects?

The findings obtained from this query revealed that most respondents believed that the e-learning system was not aligned with the practical components of music education. This was reflected in an arithmetic mean of (1.2500) and a standard deviation of (0.50000), with a high degree.

Results of the twelfth question: Is delivering educational materials to students through e-learning platforms seamless and convenient?

The findings from this inquiry revealed a split opinion regarding the ease of delivering educational material to students through e-learning platforms. Some respondents found it effortless, while others did not, as evidenced by an arithmetic mean of (1.5000) and a standard deviation of (0.57735), with a high degree.

Results of the thirteenth question: Which specific electronic devices are utilized for music instruction in e-learning?

As per the outcomes of this inquiry, it was observed that the computer was widely employed for practical lessons in e-learning, as reflected by an arithmetic mean of (4.00) and a standard deviation of (0.000), with a high degree.

Results of the fourteenth question: What visual programs or applications are utilized within the pedagogy of practical musical materials?

According to the outcomes of this query, it was found that Google Meet and ZOOM were the preferred platforms for delivering lectures.

Results of the fifteenth question: Are you ready for the virtual class session?

Based on the findings of this survey, it was observed that most of the respondents are preparing for their online lessons. The results showed an arithmetic mean of (1.7500) and a standard deviation of (0.50000), with a high degree.

Results of the seventeenth question: Do you utilize any safety measures during virtual music classes?

The results of this question indicated a lack of usage of protection measures during practical lessons conducted via the internet, with an arithmetic mean of (1.0000) and a standard deviation of (0.00000), with a high degree.

Results of the eighteenth question: Does the employed software offer satisfactory visual and auditory quality?

The results of this question revealed a dichotomy in the quality of the picture and sound provided by the software used, with an arithmetic mean of (1.5000) and a standard deviation of (0.57735), with a high degree.

Results of the nineteenth question: Are there options within the application's settings to eliminate continuous and intermittent background noise and echo?

The results of this question indicated that the program settings do not offer the option to eliminate continuous and intermittent background noise and echo. The arithmetic mean was (1.0000) with a standard deviation of (0.00000), with a high degree.

Results of the twentieth question: Which specific form of e-learning is utilized in practical music instruction?

The outcomes of this question indicated that blended e-learning is the type utilized in practical music lessons, with an arithmetic mean of (3.0000) and a standard deviation of (0.00000), with a high degree.

Results of the twenty-first question: What specific elements of practical music instruction (individual) do you favor?

The results of this question revealed that blended e-learning is the preferred mode for practical lessons involving solo playing, as indicated by an arithmetic mean of (1.0000) and a standard deviation of (0.00000), with a high degree.

Results of the twenty-second question: Do you play the musical instrument alongside the student during the virtual lesson to provide clarification?

The findings of this inquiry have indicated a clear contrast in the level of teacher involvement with the student in utilizing the musical instrument for clarification purposes during the instructional session. Notably, a marked difference between active participation and non-participation was observed, resulting in an arithmetic mean of (1.5000) and a standard deviation of (0.57735), with a high degree.

Results of the twenty-third question: Is the audio and video lesson inclusive of both genders?

The outcomes of this inquiry have shown that most participants opted for delivering the lesson through audio and video formats, with the inclusion of both genders. This resulted in an arithmetic mean of (1.7500) and a standard deviation of (0.50000), with a high degree.

Results of the twenty-fourth question: Do you employ particular tools and software to aid in individual practical music instruction?

The outcomes of this inquiry have unveiled a clear bifurcation in the employment of specific tools and programs to bolster the solo playing lesson. Notably, a marked contrast between the use of such tools and their non-usage was observed, resulting in an arithmetic mean of (1.5000) and a standard deviation of (0.57735), with a high degree.

Results of the twenty-fifth question: Do you request that your students capture a video recording of their exercises and submit it via an electronic platform?

The findings of this inquiry have revealed that students are mandated to document their exercise in the form of a video and submit it via an electronic application. This resulted in an arithmetic mean of (2.0000) and a standard deviation of (0.00000), with a high degree.

Results of the twenty-sixth question: Do you encounter challenges in assessing students' proficiency in practical subjects in the context of e-learning?

The outcomes of this inquiry have shown that most respondents encounter challenges when evaluating students in practical subjects using e-learning. This resulted in an arithmetic mean of (1.7500) and a standard deviation of (0.50000), with a high degree. Indicating moderate variability in responses.

Results of the twenty-seventh question: Does e-learning impede students' progress in practical subjects?

The findings of this inquiry have demonstrated that a significant majority of respondents believe that e-learning impedes students' progress in practical subjects. This resulted in an arithmetic mean of (1.7500) and a standard deviation of (0.50000), with a high degree.

Results of the twenty-eighth question: Does the implementation of e-learning in practical subjects alleviate the workload of teachers?

The outcomes of this inquiry have revealed that most respondents believe that e-learning for practical subjects does not alleviate the teaching workload. This resulted in an arithmetic mean of (1.7500) and a standard deviation of (0.50000), with a high degree. They indicate moderate variability in responses.

Results of the twenty-ninth question: Can you clearly discern the movement of the hands and fingers of the student during their musical exercise?

The findings of this inquiry have shown that the movement of hands and fingers during the student's exercise can be distinctly discerned. This resulted in an arithmetic mean of (2.0000) and a standard deviation of (0.00000), with a high degree. They suggest a lack of variability in responses.

Results of question thirty: Do the applications you utilize capture all the sound frequencies produced by musical instruments?

The outcomes of this inquiry have demonstrated that most respondents believe that the applications used do not capture all the sound frequencies of musical instruments. This resulted in an arithmetic mean of (1.2500) and a standard deviation of (0.50000), with a high degree. indicating moderate variability in responses.

Conclusion and Discussion

The educational institution opted for several e-learning programs and applications without considering the uniqueness of e-learning for music-applied subjects. This omission can be traced back to the deficiency of deliberate planning and design, lacking a systematic model, which is of utmost importance given that music education requires specialized programs and applications that can fulfill the music lesson's requirements. Macrides and Angeli (2020) state that technology can only be effective if it is carefully planned and integrated into the design of the lesson that targets curriculum objectives and explaining specific features and procedures of music.

The findings indicate that most teachers have undergone training in e-learning (i.e., utilizing electronic applications and programs). This development can be attributed to the concerted effort to enhance the educators' competencies, potentially aiding them in the electronic music lesson.

The findings revealed that most teachers had no prior experience with musical e-learning before the pandemic, rendering its implementation a challenge requiring significant effort from educators and the academic institution. This observation indicates that e-learning was not previously integrated into the educational system before the pandemic outbreak.

The study found that teachers employed various methods of explanation to communicate information, particularly during the solo playing lesson.

The teachers employed the same evaluation methodology as that used in traditional education for students in e-learning, which can be attributed to the lack of e-learning curricula and specific evaluation criteria for this mode of education.

The teachers held differing opinions regarding the necessary internet speed for the electronic music class, indicating a variability in the quality of the internet service. Ensuring a precise and accurate presentation of hand and finger movements, tones, and other factors related to solo playing is particularly crucial in the context of electronic music lessons, as it requires a specific internet speed.

Most teachers expressed that e-learning is incompatible with the musical education of solo playing. The present result exhibits similarities with Bondarenko (2020) findings, who found that the most challenges were found in the educational areas related to acquiring practical musical skills such as singing and playing an instrument. Additionally, they observed that student engagement did not meet the expected standard compared to in-person instruction. This situation can be ascribed to the instructor's and students' insufficient familiarity with online learning.

The College of Fine Arts' Department of Music utilized Google Meet and Zoom programs to facilitate solo lessons for their students. The teachers had mixed opinions on the efficacy of these programs in producing high-quality sound and images. They also noted that the programs could not remove extraneous noise during the lecture due to their unsuitability for e-learning solo playing.

The research revealed that most teachers face challenges in delivering solo lessons electronically. This can be attributed to the fact that e-learning necessitates specialized efforts, prior experience, and an integrated infrastructure to implement this mode of education effectively. Furthermore, most teachers prefer a blended e-learning approach due to its wider range of options in the education process. These findings are consistent with the research conducted by Ruokonen and Ruismäki (2016), which posits that combining online study with traditional classroom interaction in music education provides supplementary learning prospects.

The findings showed that the teachers could clearly observe the hand and finger movements during the lesson, which could be attributed to the screen size of the device used.

The success of e-learning relies on a complex web of interrelated factors, and the form of education utilized by the educational institution can be regarded as an emergency measure that focuses solely on information transfer without exploring the broader educational landscape.

Recommendations

- The researcher suggests the implementation of blended e-learning in solo playing education to utilize technological advancements in the teaching process effectively.
- It is recommended to develop courses for teachers in the field of e-learning as part of their professional development and to enhance the skills of all those involved in the educational process.
- It is necessary to address the internet speed issue to utilize it in the field of e-learning fully.
- There is a need to identify more suitable programs and applications to facilitate e-learning practical aspects of music education.

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