'Face-to-Face vs. Distance Learning': analysis of the training of musicians during Covid-19

Liliya Borodovskaya[1], Tatiana Leontieva[1], Ziliya Yavgildina[1], Cholpon Turumbaeva[2], Gani Baiulov[3]

[1]High School of Arts, Kazan State Institute of Culture, Russia, [2]Department of Orchestral Conducting, Kyrgyz State University of Culture and Arts named after B. Beishenalieva, Kyrgyzstan, [3]Institute of Traditional Arts, Kyzylorda State University named after Korkyt Ata, Kazakhstan.

Abstract

The Covid-19 pandemic has significantly accelerated the introduction and expansion of forms of distance learning around the world. However, there are still some areas of learning that require direct interaction between the teacher and the student – like «face to face». Teaching of music (solo and choral singing, playing musical instruments) requires constant personal control of the teacher during the lesson. The main purpose of this article is to analyze the quality of distance and mixed learning for students of musical specialties at three humanitarian universities of Russia, Kazakhstan and Kyrgyzstan. Students answered to 32 questions of an online questionnaire on the using of various digital technologies in the process of distance learning during the pandemic. The authors come to the conclusion that the most promising is the mixed model of music education, in which digital technologies serve as an additional means for the development of professional skills.

Keywords: blended learning; music education; digital technologies.

1. Introduction

Over the past two years (2020-2021), education around the world has seen rapid changes, from the search for the quick solutions amid the constraints of the Covid-19 pandemic to the creation of the new pedagogical models of learning through digital technologies. The most relevant research topics in the field of education are still distance and mixed learning (Victorino et al., 2021) in various subject areas. The problems of music lessons related to the need for individual communication between a teacher and a student "face to face" in a pandemic also remain in the spotlight (Wendt et al., 2021). The lessons in vocals, piano, guitar, etc., when the teacher has to see and hear his student's every sound and every movement, are especially difficult in a remote format. In such conditions, the choice of digital educational tools and technologies is a difficult task, as musicians need high-quality sound and video transmission. Researchers provide many examples of the use of mobile applications for the vocal training (Shi, 2021), which help to change the pedagogical model in accordance with the demands of the quality of the lesson. However, the development of digital technologies in the field of academic vocal pedagogy is still lagging behind (Fan, 2021). As the most acceptable form of distance learning for students of creative specialties, many teachers offer a mixed or hybrid format (Li et al., 2021).

Learning through online resources has become popular – these are social media, which have a large number of educational video courses (Sun, 2021). A new class of young musicians has emerged who give lessons through YouTube channels and who consider themselves experts in musical knowledge (Vizcaíno-Verdú et al., 2021). Teachers and students have significantly advanced their skills in recording digital content for classes, mastered new programs and applications (Gutman et al., 2021).

The development of artificial intelligence technology has gained popularity for training musicians during the Covid-19 pandemic (Yang G. & Yang L., 2020). Massive Open Online Courses (MOOCs) for musicians have also emerged and online messaging services have been used for educational purposes: "They've broken the traditional learning model" (Yang G. & Yang L., 2020). However, the technical problems of audio distortion and Internet data rates are the "cons" of using these digital applications for online learning (Yang G.& Yang L., 2020).

A large study of the work of music schools and conservatories in Spain during the pandemic is presented in the paper of several authors (Calderón-Garrido et al., 2021), who concluded that music theory classes were less affected in the distance learning. And we agree with the authors that the greatest difficulties during online learning are experienced by the musical ensembles (Calderón-Garrido et al., 2021).

In the studies and papers, you can get acquainted with new online resources for learning – SmartMusic, eMusicTheory and Dolmetsch Music Theory and find out the results of testing

them by the students in the choral singing class (Lv & Luo, 2021). An experimental program for online learning to play keyboards and vocals was presented by a group of authors (Zhang et al., 2021) showed good results in activating the memory and creative skills of students.

Today, it is time to take stock of the use of the digital technologies in the training of musicians over the past two years. It is necessary to carry out an analysis – which digital applications and programs were most in demand, convenient, promising for further use. The training of musicians is inevitably moving to a new stage – the combination of the traditional forms of face-to-face lessons in combination with new digital tools for independent work of students in a mixed format.

The main goal of this paper is to analyze data from a survey of students of musical specialties in three higher educational institutions in Russia, Kazakhstan and Kyrgyzstan. It is important to understand the degree of student satisfaction with the distance learning format, especially for individual music lessons. The results of this study are planned to be used in the preparation of international academic mobility programs for music students from the three countries listed above. The choice of optimal digital services will help create favorable conditions for joint learning of music students. The result of the analysis of the online survey should be the answer to the question – is it the mixed form of education that is the most suitable for musicians from different countries.

2. Research methods

A simultaneous survey was conducted in the form of an online questionnaire (GoogleForms) for 107 music students of higher educational institutions of culture and art from three countries. The responses were received from students: 43 from Russia (Kazan State Institute of Culture, KazSIC), 31 from Kyrgyzstan (Kyrgyz State University of Culture and Arts named after B. Beishenalieva), 33 from Kazakhstan (Kyzylorda University named after Korkyt Ata). The main purpose of the survey is to identify students' attitudes towards the total online learning, especially in musical disciplines that require face-to-face communication with the teacher. The second important task is to analyze changes in students' digital competencies, their attitude to digital technologies in education, in their creative and professional activities. The researchers needed to identify a common set of digital educational services; degree of mastery of digital programs and applications for musicians; as well as knowledge of professional terminology in English.

3. Results

The results of the survey showed that students from the three countries gave very similar answers to the main questions. However, some answers were different. Let's consider

successively the results of an online questionnaire of 32 questions. All the questions were in Russian and had different types: ready-made answers – "yes" / no, multiple choice and open-ended questions.

The 1st group of questions – "general information" (No. 1-4). Full-time students (No. 4) in their 3rd and 4th year of undergraduate level (No. 2) were surveyed, 32% of which were male and 68% were female (No. 1). The students were distributed in the following musical specialties: 43% solo singing, 36% instrumental performance, 21% choral singing (No. 3).

The 2nd group of questions – "online learning" (No. 5-12, 14, 27, 28). The analysis of responses to this group of questions showed mixed results across the countries. The results of answers to more important questions are given as a comparison in Table 1.

Q5: What do you think – is it possible to study well with the help of online technologies ("yes / no").

Q6: What do you think – are digital programs and applications necessary for learning ("yes/no").

Q9: Did you understand all the professional advice on playing, singing, conducting, articulation with a teacher in creative disciplines during distance classes, articulation ("yes/no").

Q28: What do you think – is mixed learning (face-to-face and online) the best option in modern conditions ("yes / no").

Table 1. The comparative analysis of important questions of the second group.

	Q5	Q6	Q9	Q28
Russia	no 60,5%	yes 76%	yes 44%	yes 65%
Kyrgyzstan	no 61%	yes 71%	yes 61%	yes 64%
Kazakhstan	yes 63%	yes 67%	yes 78%	yes 72%

The majority of students use Google as their digital cloud platform for distance learning (No. 14).Works pace for Education (84%) and MOODLE-based systems (30%). Most often, the teachers suggested that students use video conferencing services for music lessons (No.10) – ZOOM (94%), Google Meet (27%), Microsoft Teams (3%), Discord (3%), Skype (3%). Students chose ZOOM (70%), Google Meet (19%), Skype (3%), WhatsApp (3%) as the most convenient service for individual music lessons (No. 12). The vast majority of students chose WhatsApp (97%), Telegram (30%), VK (29%), Classroom (3%), Viber (2%), Instagram (2%) as a quick messaging service (No.11). Question No.27: "How affordable are free licenses for digital mobile apps? " – the majority of students answered – "yes, they are

available for free" (64%), "you need to buy a license" (20%), "I use a demo version" (27%). Half of the students answered that they have a sufficient level of English language proficiency to work in digital programs and applications (No.7-8).

The 3rd group of questions – "the digital and multimedia technologies and social media" (No. 13, 15, 26, 29, 30). A very important group of questions for understanding what digital applications students use during distance learning, when some do not have a piano nearby for classes; it is necessary to record the completed tasks well in audio and video format and send it to the teacher. Carrying out creative projects, promoting your own social media accounts also requires many digital and multimedia competencies.

As a result of counting the answers for this group, we found that music mobile applications are in the lead (No. 13) like "Piano" (68%), GarageBand (22%), Absolute ear (15%), Musescore (10%), AudioScore (8%), Smule (6%), NotateMe (5%), PhotoScore (5%), Vocalremover (1%), Metronomebeats (1%), do not use any at all (4%). Among multimedia programs and applications for creating creative works, students chose the following (No. 5): Photoshop (35%), AdobeCreativeCloud (30%), Canva (21%), Movaviclips (12%), SuperSound (7%), InShot (5%), do not use any (4%). To the question No. 26 "How often do you use digital applications for processing video, sound, images to create content on the Internet? ": "often" (46%), "not often" (44%), "I don't use it at all" (10 %). The leadership among students' choice of social media to promote their own musical creativity (No.29-30) distributed as follows: Instagram (69%), FB/Meta (7%), VK (2%), YouTube (10%), TikTok (8%), I don't use any (1 person out of 107), all of the above have an account (1 person).

The 4th group of questions – "the knowledge of digital technologies in the field of culture and musical art" (No. 16-18, 23). The questions of this group are needed in order to understand how widely students know and want to study in more detail the digital technologies of artificial intelligence (AI), virtual (VR) and augmented reality (AR), the creation of digital applications, work in music editors and virtual studios. The results showed that many use applications for education and cultural leisure (No. 16) GoogleArts&Culture (51%), Artefact (25%), VRCardboard (16%), do not use any (13%). Among music editors (No. 17), the most popular were Sibelius (59%), Musescore (30%), Finale (27%). General question No.23 about the availability of the module AI in various digital tools showed that many people know about services with AI, AR, VR from Google (83%).

The 5th group of questions – "the digital competencies of future professional activity" (No. 19-22, 24, 25, 31, 32). As the students themselves will work as music teachers in the future, we needed to identify the level of motivation for independent use and further development of digital educational tools. 80% of the students answered that they have already had professional work experience and know where they will work after graduation (65%). More than half of the students want to use digital programs and applications for musicians in their

professional activities (No. 21). The majority of students answered that they would improve the overall level of digital literacy (86%) and want to learn new digital technologies in the future: AI (54%); AR/VR (35%), the programming (35%).

4. Discussion

Despite some conflicting answers from students from different countries, in general, the results of the online survey showed the following results. In the "online learning" block of questions, students from Kyrgyzstan and Russia answered that they did not want to study remotely only, and this is due to the problem of video conferencing services that do not provide high-quality sound transmission for the level of professional musicians. Additional factors of dissatisfaction with full distance learning are the problems of accessibility of licensed programs and applications, and language restrictions. Also among the survey participants were several students who were negatively opposed to online learning in general, against digital technologies, mobile applications and social media. Perhaps this is how psychological fatigue from the the pandemic restrictions manifests itself.

The block of questions "the digital and multimedia technologies and social media" shows a great interest of students in creative projects for personal promotion in social media. A group of questions on digital technologies in the field of culture and music showed the willingness of students to learn AI, VR, AR and create digital applications. Artificial intelligence in culture and art got students interested more than other technologies.

The majority of students prefer mixed learning as the most preferable for musicians (67% on average). It should be concluded that students from Kazakhstan were more satisfied with the quality of online learning in all groups of questions, since they use the Platonus distance learning system (in integration with the MOODLE platform). The "Platonus" system brings learning closer to the "digital twin" model of the university, and creates comfortable conditions not only for learning, but also for the entire range of services of the educational campus. "Platonus" can become the basis for the future international academic mobility programs music students from the three countries.

5. Conclusions

The pedagogical experience of the authors of the study shows that a total remote mode is possible for many subject areas that do not require constant monitoring "face to face" – these are humanitarian lecture courses. Special musical disciplines, in which individual lessons are conducted, traditionally require full-time classes. The Covid-19 restrictions made us look for convenient digital educational tools for conducting creative lessons online. We conclude that mixed learning in a pandemic may be the best option for teachers and students. Many tasks

can be performed using cloud platforms, mobile applications, but "the live control" of mastering musical skills cannot be replaced by any digital technologies at this stage in the development of technical progress. In the near future, mixed reality technologies and holographic data transmission will become widespread, and then, perhaps, the "teacher's digital twin" will be able to conduct online classes from anywhere in the world.

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