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THE IMPACT OF THE COVID-19 PANDEMIC ON MUSIC EDUCATION IN UKRAINE

Andrii Bondarenko, Tetiana Humeniuk, Anastasiia Romanenko,
Lidiia Makarenko, and Liubov Lysenko

Introduction

The COVID-19 pandemic has become one of the most discussed topics, not only medically, but also by different social sciences. On 11 March 2020, the World Health Organization (WHO) declared an international pandemic state of emergency. Authorities of different countries provided unprecedented lockdown that caused cardinal changes both in lifestyle and functioning of different branches of economics, including culture and education¹. These changes have become an object of culturology and sociology investigations aimed to answer a general question—how does the COVID-19 pandemic influence activities of various social groups, institutions, cultural sectors, etc.

Obviously, the field of music art in general and music education in particular is not an exception. Before the pandemic, Ukraine had a well-developed network of public music schools and conservatoires where children and adults could learn music, including playing musical instruments, singing, music theory, and ensemble playing. In large cities (such as Dnipro, Kharkiv, Kyiv, and Odesa), private music schools have been gaining popularity since 2016. This is due to the intensification of the promotion of their work by teachers through social networks. Kyiv as the capital of the country and its environs have a much greater concentration of cultural institutions and music schools than other regions. This, in turn, has an impact on the volume and nature of music education, which differ from those characteristic of rural areas or cities of regional significance. These institutions usually offer a variety of programmes of study, from elementary to professional level. Music schools and conservatoires actively attract their students to

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1. Maria Nicola, Zaid Alsafib, Catrin Sohrabic, Ahmed Kerwand, et al., 'The Socio-Economic Implications of the Coronavirus Pandemic (COVID-19): A Review'. *International Journal of Surgery* 78 (June 2020): 185–193; online at <https://doi.org/10.1016/j.ijssu.2020.04.018>, accessed 31 August 2023.

participate in music competitions, festivals, and concerts. This gave students the opportunity to demonstrate their skills and gain valuable speaking experience.

Lockdown measures provided by many countries around the world included cancelling concert venues and closing music schools, which certainly affected the educational and creative processes in general. As far as music education is generally thought to involve much physical activity², the impact of restrictions on music education is considered having an extreme influence. In fact, the prohibition of the face-to-face learning led to the rapid development of online learning activities relating to music performance. However, being the substitute for face-to-face interaction, online learning has substantial limitations in relation to music education³.

Consequently, music teachers faced difficulties with evaluating their digital competence in the use and management of new technologies⁴. To overcome this issue, different measures were conducted. In most, these measures were reportedly invented by educational society alone. Particularly in Spain, the lack of specific instructions from government bodies were revealed, as well as the difference between public, private, and semi-private schools⁵. In Sweden, new conditions induce teachers to reevaluate their teaching strategies, their content, and their own praxis theory, using Facebook groups for experience exchange⁶.

The need to invent a new replacement for face-to-face activities causes a high level of stress and anxiety in terms of behavioral problems, mostly among children, adolescents, and young people. Scholars report that teachers faced sensations of being overwhelmed, physical and mental exhaustion, reactions linked to stress, and confusion and uncertainty, as well as feeling an invasion of space and time, both personal and familial, all this generated by an emotional overload, significantly higher levels of depression than published norms⁷. In some countries, for instance, in Chile, the burden described

2. Mohammed Jais Ismail, Azu Farhana Anuar, and Fung Chiat Loo, 'From Physical to Virtual: A New Learning Norm in Music Education for Gifted Students', *The International Review of Research in Open and Distributed Learning* 23, no. 2 (2022): 44–62; online at <https://doi.org/10.19173/irrodl.v23i2.5615>, accessed 31 August 2023.

3. Barry Hill, 'Creative Collaboration in the Cloud: Using Splice Studio and Audiomovers to Enhance Online Music Education Outcomes', *Perfect Beat* 22, no. 2 (2021): 173–181, online at <https://doi.org/10.1558/prbt.19304>, accessed 31 August 2023.

4. Sara Domínguez-Lloria and Marguerite Pino-Juste, 'La competencia digital en el profesorado de música durante la pandemia derivada de la COVID-19', *Revista Electrónica de LEEME*, 47 (2021): 80–97, online at [10.7203/LEEME.47.20515](https://doi.org/10.7203/LEEME.47.20515), accessed 31 August 2023.

5. Diego Calderón-Garrido and Josep Gustems-Carnicer, 'Adaptations of Music Education in Primary and Secondary School Due to COVID-19: The Experience in Spain', *Music Education Research* 23, no. 2 (2021): 139–150, online at <https://doi.org/10.1080/14613808.2021.1902488>, accessed 31 August 2023.

6. Ketil A. Thorgersen and Annette Mars, 'A Pandemic as the Mother of Invention? Collegial Online Collaboration to Cope with the COVID-19 Pandemic', *Music Education Research* 23, no. 2 (2021): 225–240, online at <https://doi.org/10.1080/14613808.2021.1906216>, accessed 31 August 2023.

7. Gerado Armando Picón, Gricelda Karina González de Caballero and Juana Noemí Paredes Sánchez, 'Desempeño y formación docente en competencias digitales en clases no presenciales durante la pandemia COVID-19', *Arandu UTIC* 8, no. 1 (2021): 139–153, online at <https://rb.gy/qgwjm6>; Fabián Román, Anna Forés, Ismael Calandri, et al., 'Resiliencia de docentes en distanciamiento social preventivo obligatorio durante la pandemia de COVID-19', *Journal of Neuroeducation* 1, no. 1 (July 2020): 72–77, online at <https://doi.org/10.1344/joned.v1i1.31727>, and Peter Miksza, Kelly Parkes, Joshua A. Russell, and William Bauer, 'The Well-being of Music Educators During the Pandemic Spring of 2020', *Psychology of Music* 50, no. 4 (2022): 1152–1168, online at <https://doi.org/10.1177/03057356211042086>, all accessed 31 August 2023.

above has been felt even more due to the peak of social outbreak, an instance that shook the foundation, not only of the national educational system, but society as a whole⁸. However, a significant level of frustration or even moderate degrees of depression felt by music schoolteachers have been reported as well from countries such as U.S.⁹

In some cases, the level of stress has been decreased after music lessons that allowed scholars to assume music therapy elements emerging from the online music lesson provision¹⁰. Nevertheless, scholars become strong advocates of face-to-face teaching¹¹, which cannot be completely replaced in order to guarantee tuition levels¹². Ana Mercedes Vernia Carrasco emphasised that digital technologies have been found especially difficult for older people, despite the importance of musical activity in their lives¹³. On the other hand, no significant difference was found in gifted students' genders and locations on the four domains¹⁴.

Unprecedented quarantine measures have been taken in Ukraine as well, forcing professional musicians, pupils, and students of art educational institutions to find opportunities for musical activity in new, unfavourable conditions. Some peculiarities of distance education for musician were discussed by Ukrainian scholars. O. V. Luzan and V. M. Samoliuk discuss preparation of audio recordings with exercises that will be used during the individual work of students¹⁵. Natalia Mykhailvna Krechko has researched possibilities and prospects of remote information and communication technology and reached a conclusion that remote methods would not replace direct contact with the music teacher, but may be useful for additional theoretical and practical classes, consultations, elements of control of unsupervised activities of students, means of expansion of communicative, professional opportunities, as well as to encourage the search for new creative

8. Raúl Jorquera Rossel, Ximena Valverde Ocariz, and Rodrigo Montes Anguita, 'Resilience of Chilean Music Teachers in the Context of COVID-19 Pandemic', *Revista Electronica de LEEME* 48 (2021): 154–174, online at [10.7203/leeme.48.21695](https://doi.org/10.7203/leeme.48.21695), accessed 31 August 2023.

9. Ryan D. Shaw and Whitney Mayo, 'Music Education and Distance Learning During COVID-19: A Survey', *Arts Education Policy Review* 123, no. 3 (2022): 143–152, online at <https://doi.org/10.1080/10632913.2021.1931597>, accessed 31 August 2023.

10. Tiiija Elisabet Rinta, 'Sense of Well-being and Increased Confidence: Perspectives from Online Music Lessons During the COVID-19 Pandemic in Primary School Children in London, UK', in *Progress in Education. Volume 68*, ed. Roberta V. Nata (New York: Nova Science Publishers, 2021), 31–52.

11. Ramon Palau, Jordi Mogas, and Maria Jose Ucar, 'How Spanish Music Conservatories Managed Pedagogy During the COVID-19 Pandemic', *Revista Electronica de LEEME* 46 (2020): 108–124, online at <https://doi.org/10.7203/README.46.18110>, accessed 31 August 2023.

12. Ana Martínez Hernández, 'Online Learning in Higher Music Education: Benefits, Challenges and Drawbacks of One-to-one Videoconference Instrumental Lessons', *Journal of Music, Technology & Education* 13, no. 2-3 (2020): 181–197, online at https://doi.org/10.1386/jmte_00022_1, accessed 31 August 2023..

13. Ana Mercedes Vernia Carrasco, 'Música y tecnología contra el COVID-19: un caso en personas mayores' [Music and Technology Against COVID-19: A Case in Older People], *Revista Prisma Social* 32 (2021): 244–261, online at <https://revistaprismasocial.es/article/view/4050/4788>, accessed 31 August 2023.

14. Mohammed Jais Ismail, Azu Farhana Anuar, and Fung Chiat Loo, 'From Physical to Virtual: A New Learning Norm in Music Education for Gifted Students', *The International Review of Research in Open and Distributed Learning* 23, no. 2 (2022): 44–62, online at <https://doi.org/10.19173/irrodl.v23i2.5615>, accessed 31 August 2023.

15. O. V. Luzan, and V. M. Samoliuk, 'Specificity of Concertmaster's Work in the Conditions of Distance Learning', *Imidzh suchasnoho pedahoha* 6, no. 195 (2020): 92–95, online at [1033272/2522-9729-2020-6\(195\)-92-95](https://doi.org/10.1033272/2522-9729-2020-6(195)-92-95), accessed 31 August 2023.

solutions to the realisation of an artistic idea¹⁶. Yuliia Lebid, Valentina Sinelnikova, Tetana Pistunova, Veronika Tormakhova, Alla Popova, and Oksana Sinenko believe that distance education makes it possible to introduce innovative technologies into the process of professional training of musicians, to build an individual educational trajectory, considering the needs of students¹⁷.

However, there is a lack of research regarding the impact of the COVID-19 pandemic and all the subsequent restrictions on the functioning of music education around the world and in Ukraine particularly. We emphasize the fact that all the above-mentioned frustration was not just the subsequence of the pandemic itself, but the restrictions and prohibition announced by authorities. Therefore, the key question to discuss is how have the restrictions changed teachers' lifestyle, work, and their attitude toward local authorities? Discussing the impact on music education, we try to answer the following questions: does the COVID-19 pandemic circumstances motivate or demotivate students to learn music? do these circumstances make teachers' work easier or harder and do teachers agree that all COVID restrictions are justified in long-term perspective? The goal of this article is to answer the questions above at least concerning Ukraine educational system. This investigation is limited to the situation in Ukraine, though it is believed that results achieved could be either extrapolated or compared with results in other countries.

Materials and methods

There are two ways to evaluate the impact of the COVID-19 pandemic on music education. The first is to analyse what educational practices are weakened due to pandemic restrictions and how the lack of these methods could be or could not be effectively compensated by remote communication technologies. The first way mentioned could be accomplished by analysing the restrictions provided by the Ukrainian government and those practices that became impossible under these restrictions, as well as practices used instead. The second is to analyse the opinion of teachers and their experience of working under lockdown conditions.

To address the second way, a survey of Ukrainian music schoolteachers on their experience under lockdown restrictions was conducted. This survey was done using Google Forms and covered 283 specialists from different regions of Ukraine. To increase participation, the call was announced in a Facebook group «Institutions of primary art education»¹⁸, which was created by the Board of Directors of primary art education institutions for the experience exchange of music schoolteachers. The survey was conducted in November 2021, and, therefore, it reflects the pre-war situation in Ukraine and does not reflect any changes in public opinion that occurred after the Russian invasion.

16. Natalia Mykhailyna Krechko, 'Information and Communication Remote Technology in Music Education Practice', *Visnyk KNUKiM* 45 (2021): 100–106, online at <https://doi.org/10.31866/2410-1176.45.2021.247374>, accessed 31 August 2023.

17. Yuliia Lebid, Valentina Sinelnikova, Tetana Pistunova, et al., (2021). 'Organization of Qualitative Education of Music Students in the Conditions of Distance Education', *Postmodern Openings* 12, no. 3 (2021): 76–93, online at <https://doi.org/10.18662/po/12.3Sup1/352>, accessed 31 August 2023.

18. <https://www.facebook.com/groups/390347044632724>, accessed 31 August 2023.

Table 1. Four waves of COVID-19 in Kyiv (2020–2021)

Wave	Periods of highs and lows	Maximum and minimum 7-day average daily number of cases	Maximum 7-day average daily number of deaths
First wave	Beginning of May 2020	480	18
Second wave	End of November 2020	13,860	227
<i>(decline)</i>	<i>Beginning of February 2021</i>	<i>3,500</i>	<i>100</i>
Third wave	Beginning of April 2021	16,500	400
<i>(decline)</i>	<i>July 2021</i>	<i>450</i>	<i>15</i>
Fourth wave	Beginning of November 2021	22,000	684

Results

Background

As of the end of 2021, Ukraine had survived four waves of the COVID-19 pandemic, which killed, according to official statistics, almost 90,000 Ukrainian citizens. Table 1 represents COVID-19 statistics in Ukraine.

These official figures are likely to be underestimated compared to the real situation due to limited availability or high prices for COVID-19 testing. This results in a significant proportion of citizens who contracted the disease but did not receive a confirmation. This assumption was confirmed in April 2021 by a survey conducted by Kyiv International Institute of Sociology (KIIS). According to this survey, twenty-nine percent of citizens considered they had been sick with COVID-19, of which seventeen percent determined it by tests, and twelve percent only by symptoms. According to official data as of the date of the survey, only 1,974,056 cases of infection were recorded, which is not more than five percent of the population of Ukraine¹⁹.

The authorities' response to the COVID-19 pandemic was the implementation of unprecedented quarantine measures, which fully affected the educational process. With the beginning of the COVID-19 pandemic in Ukraine, information about the new virus and the necessary security measures began to spread through official government channels, media, and social networks. The dissemination of information has faced certain challenges, including distrust of government announcements, difficulties in translating and understanding medical terms, and widespread conspiracy theories.

Society's response to the pandemic has been varied, but in general, people have shown a willingness to adhere to new restrictions in order to protect their family and community. During the lockdown, people in large cities faced not only new realities of

19. 'There are more patients with COVID-19 in Ukraine than according to official statistics! Opinions of the population of Ukraine on the problems of the COVID-19 pandemic: assessment of morbidity, risk of infection and attitudes to vaccination' (2021), Kyiv International Institute of Sociology; online at <http://kiis.com.ua/?lang=ukr&cat=reports&id=1032>, accessed 31 August 2023.

life, but also a psychological burden. Unexpected lockdown, closure of borders, restrictions on movement ‘hit’ the inhabitants of megacities. Due to the fact that the pace of life in large cities is much faster and more intense—the usual things have become impossible—and in the future caused psychological harm. As noted in the KIIS study, people in large cities were psychologically more severely affected by quarantine restrictions than people living in settlements or small towns.

In 2020, Ukraine was forced to make a ‘quantum leap’ in the development of online education. Most of the curricula of schools and universities have ‘moved’ online. The methodology of teaching online varied: some teachers used modern tools for data exchange and for online conferences, while some were limited to sending photos with task pages for a specific lesson. The transition to distance education has become a serious challenge for many families, especially for those who did not have adequate access to the Internet or computer equipment.

Thus, the Resolution of the Cabinet of Ministers of Ukraine (CMU) No. 211 of 11 March 2020 in prohibited ‘visits to educational institutions by its applicants’²⁰. On 17 March, the CMU Resolution was supplemented by a ban on passenger transport, which in the case of large cities made private lessons virtually impossible—most of students do not own a car and were not able to visit their teachers or vice versa. The Resolution of the CMU No. 392 of 20 May 2020 replaced the previous one, cancelling the ban on visiting parks and public transport, but keeping the ban on visiting educational institutions, except for passing the external independent testing (EIT) for admission to universities²¹. Thus, not only current classes, but also final exams were held remotely.

In the Resolution of the CMU No. 641 of 22 July 2020, the general prohibition of visiting schools was cancelled, instead, ‘levels of epidemic danger’ were introduced, separate for each of the regions of Ukraine based on the assessment of epidemic indicators²². According to this Resolution, visiting educational institutions were prohibited only in those regions where the ‘red’ level of danger was established (together with the ban on public transport), but was allowed in others. On 13 October 2020 in the Resolution of the CMU No. 956, it was recommended for higher education institutions to switch to ‘distance learning with the recommended departure of students from dormitories’, which made it virtually impossible to conduct face-to-face classes in these institutions throughout Ukraine²³. The all-Ukrainian ban on visiting educational institutions was in force from 8 to 25 January 2021 in accordance with Resolution No. 1236 of 9 December 2020²⁴.

Since summer 2021, several resolutions have been adopted to oblige teachers to get vaccinated. According to the Resolution No. 787 of 28 July 2021, it was prohibited to visit educational institutions if more than 20 percent of the staff do not have a document

20. The Resolution of the Cabinet of Ministers of Ukraine No. 211 (2020); online at <https://zakon.rada.gov.ua/laws/show/211-2020-%D0%BF#Text>, accessed 31 August 2023.

21. The Resolution of the CMU No. 392 (2020); online at <https://zakon.rada.gov.ua/laws/show/392-2020-%D0%BF#Text>, accessed 31 August 2023.

22. The Resolution of the CMU No. 641 (2020); online at <https://zakon.rada.gov.ua/laws/show/641-2020-%D0%BF#Text>, accessed 31 August 2023.

23. The Resolution of the CMU No. 956 (2020); online at <https://zakon.rada.gov.ua/laws/show/956-2020-%D0%BF#Text>, accessed 31 August 2023.

24. The Resolution of the CMU No. 1236 (2020); online at <https://zakon.rada.gov.ua/laws/show/1236-2020-%D0%BF#Text>, accessed 31 August 2023.

confirming receipt of a full vaccination course²⁵. According to the Resolution No. 1240 of 24 November 2021, this requirement was tightened, namely, all of the staff must have an appropriate vaccination certificate²⁶. If all the staff have been vaccinated, educational institutions are allowed to function even if the 'red' level of danger is set, and even if none of the students have been vaccinated. According to the Order of the Ministry of Health of Ukraine No. 2153 of 4 October 2021²⁷, all education workers are required to be vaccinated otherwise they are to be removed from their job. The delay in the spread of the vaccine in Ukraine has prolonged the duration of the pandemic and the suspension of music classes. The reasons for this delay were limited availability of the vaccine, logistical difficulties, as well as distrust on part of the population to vaccination.

Peculiarities of music distance education

Musical training at all levels of education, both primary and secondary, includes a set of disciplines that can be divided into two types—music theory and practicing, such as playing a musical instrument or singing. Music practicing can also be divided into two types—solo (individual) and collective (ensemble). The corresponding feature is reflected in the regulations of the Ministry of Culture. Individual classes are aimed to develop the individual student's skills. Disciplines such as solo singing, voice acting, playing a musical instrument, and conducting are usually individual in Ukrainian art institutions. Individual lessons assume that a teacher is completely focused on one student during a lesson, fully controlling his/her activities. It is important for the teacher to hear what and to see how the student is performing the task. This is because playing an instrument requires proper muscle coordination of movement and the teacher's task to control this process as well.

In some universities of Ukraine, several attempts were made to replace individual classes with group ones. However, the result of such attempts was only a reduction of the actual time for classes. The form of the lesson itself did not change—the teacher still deals with students individually, although other students could be present and observe the lesson. Collective music practicing has a certain specificity. It develops the ability to play music, focusing on the playing or singing of partners in real time. We emphasise that we are talking about real time and the instant reaction of the student to certain performance features of other team members. Collective playing skills are fundamental to a musician's future work in choirs or orchestras. Real-time interaction is also necessary in instrumental lessons with an accompanist (vocal classes, strings, and wind instruments).

In the case of distance education, all the participants of the process are remote and could observe each other only through a special means of communication such as a phone (smartphone) and/or a computer (laptop) with the appropriate software installed (including Skype, Viber, Facebook Messenger, Zoom, and others). Depending on the

25. The Resolution of the CMU No. 787 (2021); online at <https://zakon.rada.gov.ua/laws/show/787-2021-%D0%BF#Text>, accessed 31 August 2023.

26. The Resolution of the CMU No. 1240 (2021); online at <https://zakon.rada.gov.ua/laws/show/1240-2021-%D0%BF#Text>, accessed 31 August 2023.

27. Order of the Ministry of Health of Ukraine No. 2153 (2021); online at https://zakononline.com.ua/documents/show/500964___687837, accessed 31 August 2023.

quality of the microphone on the device used by the student and the quality of the speakers on the device used by the teacher, the latter receives audio information with more or less loss of quality. If the loss of sound quality is significant, it may not allow the teacher to fully assess how well the student performs the task. This is especially relevant for singing, where the peculiarities of the tone of voice at any given time may indicate if the elements of the vocal apparatus are used correctly or not.

The quality of the image transmitted by computers can also vary due to the quality of the lens on the image receiving device. In addition, when making music, the student must lock the device in a certain position so that the hands are free to play the musical instrument (or to conduct). This allows the teacher to observe the student from one angle of view only. It also makes it difficult for the teacher to control the correctness of the student's musculoskeletal system. However, the biggest problem is the delay in transmitting information over the Internet. As is known, when using digital communications, the transmission of audio or video signal occurs in several stages, such as recording and encoding video, transmission from the encoder to the media server, media stream processing, transmission from the media server to the client, and decoding and displaying on the user's device. This causes a split-second delay felt by both communicators. In 2003, the International Telecommunication Union (ITU) recommended the one-way transmission delay up to 0.4 seconds. In later publications, high-quality communication is characterised by a delay of up to 0.2 seconds²⁸.

The authors of this article conducted experiments to determine the delay when using two cell phones and two laptops via Facebook Messenger. In both cases, the devices were physically located next to each other, but the communication was provided via IP telephony (in the first case) or the Internet (in the second). Communication was recorded on a Dictaphone, which made it possible to measure the interval between the original signal and the response signal with sufficient accuracy. The experiment showed that the best signal transmission speed was achieved when using a mobile phone—the delay remained within 0.2 seconds, but in this case, we were limited to transmitting the audio information only. However, while using Facebook Messenger (video transmission was also included), one-way delay reached 0.3 seconds or even more, depending on the method of connection to the network via cable (less delay) or via Wi-Fi (longer delay).

In the context of the research goal, the following question arises: how critical is the signal delay of 0.2 seconds (minimum delay) for group music practicing? In other words, can two students (more broadly, any musicians) play (or sing) in an ensemble over the phone? As is known, in music, durations are usually expressed in relative units (quarters, eighths), but if necessary, can be expressed in absolute terms, if the tempo of the music performed is known. When performing in the tempo *Allegro* with a metronome mark of 120 beats per minute (bpm), the duration of one quarter will be equal to 0.5 seconds, eighths 0.25 seconds, etc. In a faster tempo, for example 150 bpm (*Vivace*), one eighth will be equal to 0.2 seconds—actually the latency time, just revealed during the experiment with a phone.

This means that performing music in fast tempos makes musicians hearing each other with a delay as long as one eighth note. Moreover, the signal transmission time in

28. O. Y. Dmytrienko, B. V. Bilodid, and M. Y. Ternovoi, 'Analiz prohramnoho zabezpechennia Internet-telefonii' [Internet telephony software analysis], *Elektronika i sviaz* 2–3:1 (2009): 252–254.

the opposite direction is also 0.2 second. Therefore, if musicians play a duet and start to play one after another and the second musician starts exactly focusing on the first one, the latter will hear the partner in 0.4 second later than they should. Obviously, this will make the musician stop and wait for 0.4 seconds to synchronise the performance. Instead, such behaviour of the first musician will surprise the second, and at least will similarly make them stop and wait for 0.4 seconds for the partner to restore synchronicity. Obviously, this chain of «waitings» would stretch endlessly, making the artistic performance unsuitable.

If performance takes place via Facebook Messenger with 0.3 seconds delay, an even stronger effect occurs. As simple calculation shows, the difference in one musical beat will occur if musicians play at a tempo of 100 bpm (*Allegretto*). Of course, such situations make ensemble practicing impossible. This flaw may remain less noticeable in a slow tempo while playing musical instruments that do not feature a clear sound attack or when singing *legato*. On the contrary, the flaw is most noticeable in a fast tempo while playing percussive sounds or in a *staccato* manner. It follows then, that the delay makes remote ensemble music practicing almost impossible. This also applies to lessons with an accompanist, necessary for vocalists and winds, as well as string instrument players. The only form of ensemble music practicing available is producing one-by-one recording, which means musician overdub music layers on top of each other. This form of learning may be useful for future studio work, but it does not serve a purpose of communicating with a partner and controlling the ensemble in real time.

Assumptions

We assumed that the feasibility of online education could be evaluated by educators differently depending on two main circumstances. The first one is the type of residence where the educators work that correlate to the economic potential of the community. The second one is the educator's individual attitude to a COVID-19 threat and corresponding measures of prevention. Therefore, firstly we assumed that large and small cities were differently affected by lockdown restrictions due to their different economic potential. The more economic strength of the region, the more possibilities to compensate loss caused by lockdown. So respondents were asked to attribute themselves to one of the following categories: residents of Kyiv (thirty respondents), residents of regional centres (seventy-one respondents), residents of district centres (sixty-nine respondents), small towns and villages (eighty-six respondents), and residents of rural areas (nineteen respondents) (see Table 2).

Also, we assumed people may evaluate the effect of lockdown restrictions on music education differently depending on their attitude to lockdown restrictions in general. We assume that people who do not recognise any prevention measures against COVID-19 in general, would be more critical to any restrictive measures in education. These persons are conditionally called «scepticists» in this article, meaning their scepticism applies to all issues related to COVID-19. Vice versa, it is assumed that persons who mentioned no problems concerning the vaccination campaign could experience fewer educational problems as well. These persons are conditionally called «vaccinists» in this article, though not meaning that they administer vaccines, but strongly support vaccination campaigns. To check this assumption, we asked respondents what of the following prevention measures do they regard as effective: vaccination, using masks in

Table 2. Respondents by type of residence.

Type of residence	Number of respondents
Kyiv	30
Regional centre	71
District centre	69
Small town	86
Rural area	19

Q: What of the following prevention measures do you regard as effective from COVID-19?

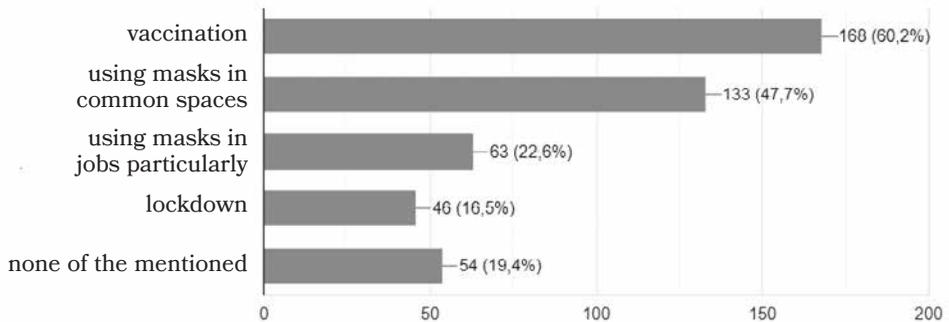


Fig. 1. The effectiveness of COVID-19 prevention measures according to respondents' opinion.

common space and in their jobs particularly, lockdown, or none of the above. As can be seen in a diagram as much as forty percent of teachers do not regard vaccination as effective, almost fifty percent do not appreciate wearing masks, and almost twenty percent do not appreciate either vaccination or wearing masks (see Figure 1).

Lastly, it is interesting to investigate if there are significant differences in the opinion of primary school teachers and professors at colleges and universities. To check this, the respondents were asked to specify their status. Unfortunately, only primary school teachers were active on the survey (257 respondents), while the number of college (fourteen respondents) and university professors (eight respondents) who replied was not enough to make conclusions about such differences. As it follows from the diagram, the first lockdown affected almost all music schools, while the next three affected only forty to seventy percent (see Figure 2).

More often music schools in Kyiv were reported closed and less often in rural areas (see Table 3).

Since the vaccination of teachers against COVID-19 had been proclaimed by authorities as mandatory, a lot of teachers faced problems either with vaccination itself or with their job if they had not been vaccinated. The survey reveals about half of the participants testified that they faced certain problems, such as restrictions to unvaccinated people's rights (thirty-four percent), long queues at vaccination points (15.1 percent), inability to choose the desired vaccine (7.6 percent), and problems with signing a

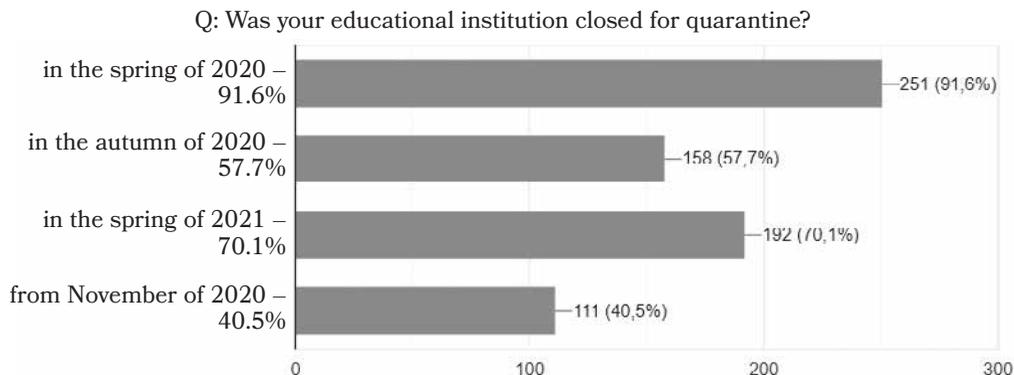


Fig. 2. Percentage of music schools affected by lockdown restrictions by season.

Table 3. Percentage of music schools affected by lockdown restrictions by season and by type of settlement.

	Spring 2020	Autumn 2020	Spring 2021	Autumn 2021
Kyiv	96.7%	70.0%	83.3%	83.3%
Regional centre	94.4%	74.6%	76.1%	43.7%
District centre	91.3%	53.6%	58.0%	44.9%
Small town	83.7%	46.5%	67.4%	22.1%
Rural area	73.7%	21.1%	52.6%	21.1%

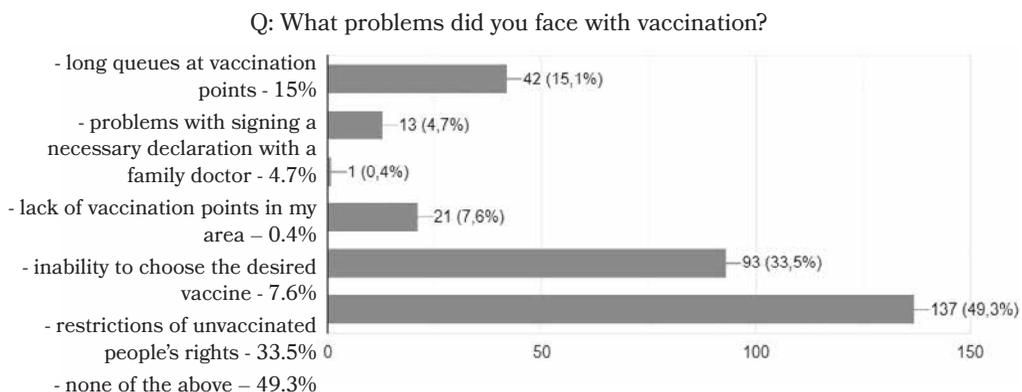


Fig. 3. Problems faced by respondents due to vaccination.

necessary declaration with a family doctor (4.7 percent) (see Figure 3). These problems were more prevalent for respondents from regional centres and less prevalent for respondents from rural areas (see Table 4).

Dismissal of unvaccinated persons was recorded in about half of the institutions. The high percentage of uninformed respondents (24.4 percent) could be explained by the

Table 4. Problems faced by respondents during the vaccination by type of settlement.

	Restriction of unvaccinated people rights	Long queues at vaccination points	Inability to choose the desired vaccine	Problems with making a declaration with a family doctor	None mentioned
Kyiv	36.7%	23.3%	0.0%	10.0%	46.7%
Regional centre	45.1%	9.9%	5.6%	5.6%	42.3%
District centre	27.5%	18.8%	11.6%	1.4%	49.3%
Small town	27.9%	12.8%	7.0%	2.3%	52.3%
Rural area	21.1%	10.5%	15.8%	10.5%	63.2%

Q: Were unvaccinated teachers dismissed from the work in your school?

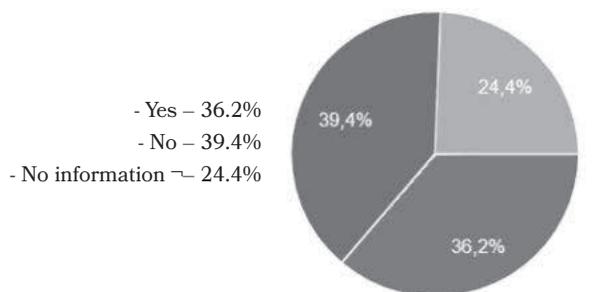


Fig. 4. Cases of dismissal of unvaccinated staff.

Table 5. Cases of dismissal of unvaccinated staff.

	Reportedly dismissals occurred	Reportedly dismissals did not occur	No information
Kyiv	50.0%	10.0%	40.0%
Regional centre	52.1%	22.5%	23.9%
District centre	31.9%	42.0%	26.1%
Small town	25.6%	53.5%	19.8%
Rural area	15.8%	73.7%	10.5%

fact that the survey was conducted in a short period of time after restrictions had come into force (see Figure 4). Most dismissals occurred in Kyiv and regional centres and less often in rural areas (see Table 5).

Q: Did you have an experience of distance lessons before the pandemic?

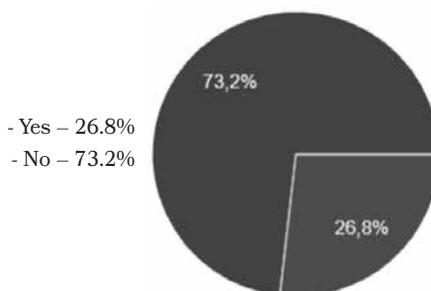


Fig. 5. Respondents' experience in distance method before pandemic.

Table 6. Respondents' experience in distance method by type of residence.

	Experienced	Not experienced
Kyiv	30.0%	66.7%
Regional centre	28.2%	71.8%
District centre	18.8%	81.2%
Small town	31.4%	68.6%
Rural area	26.3%	73.7%

Table 7. Respondents' experience in distance method attitude to COVID-19 measures.

	Experienced	Not experienced
«Vaccinists»	34.3%	65.7%
«Scepticists»	25.0%	75.0%

Most of the respondents did not have any experience in distance learning before the beginning of the pandemic in 2020 (see Figure 5). The more experienced are residents of Kyiv and residents of small towns, the less experienced are residents of district centres (see Table 6). Interestingly, teachers who trust vaccination («vaccinists») have slightly more experience in remote lessons than those who are sceptical to any measures («scepticists») (see Table 7).

The vast majority of respondents used remote communication during the pandemic (ninety-four percent), mostly via the Internet, less often via the telephone (thirty-one percent). The telephone was mostly used in rural areas (fifty-two percent), the least in Kyiv (thirteen percent).

The effectiveness of distance learning by most respondents was considered either less effective than face-to-face classes or ineffective at all (see Figure 7). The most categorical assessment was given by teachers in rural areas and «scepticists», and less categorical in Kyiv (see Tables 8–9).

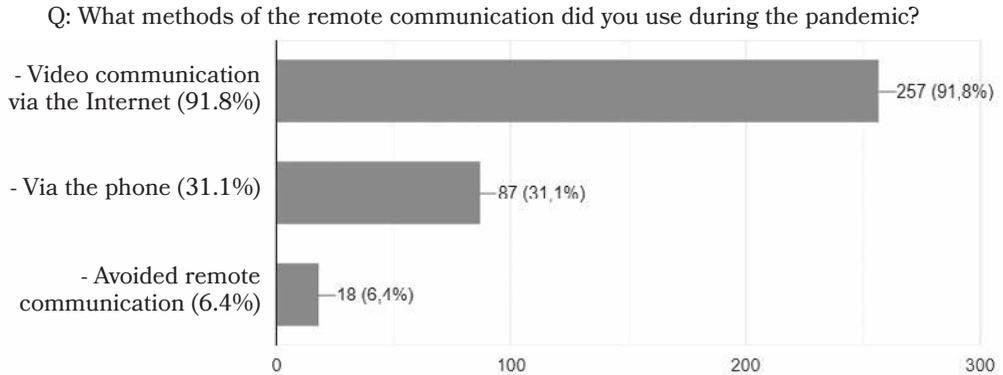


Fig. 6. Methods of remote communication used by respondents.

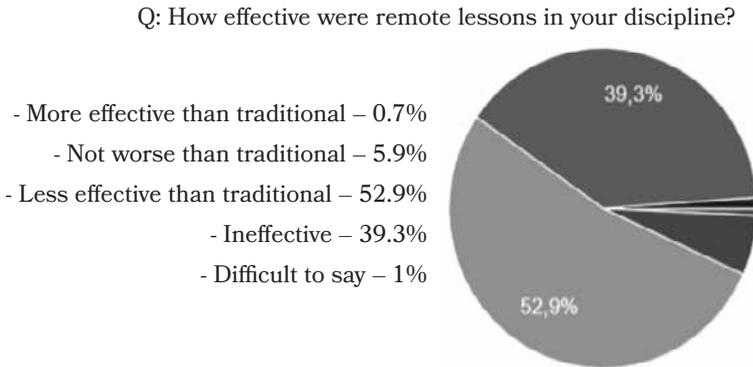


Fig. 7. On effectiveness of distance learning.

Table 8. On effectiveness of distance learning by type of residence.

	More effective than traditional	Not worse than traditional	Less effective	Ineffective	Difficult to say
Kyiv	0.0%	6.7%	66.7%	20.0%	6.7%
Regional centre	0.0%	4.2%	54.9%	39.4%	1.4%
District centre	0.0%	5.8%	55.1%	39.1%	0.0%
Small town	2.3%	7.0%	48.8%	40.7%	0.0%
Rural area	0.0%	5.3%	31.6%	63.2%	0.0%

Table 9. On effectiveness of distance learning by attitude to COVID-19 measures.

	More effective than traditional	Not worse than traditional	Less effective	Ineffective	Difficult to say
«Vaccinists»	2.9%	1.4%	47.1%	48.6%	0.0%
«Scepticists»	0.0%	3.8%	42.3%	51.9%	0.0%

Q: Were distance lessons difficult in the case of your discipline?

- Distance lessons are impossible for my discipline – 25.7%
- Distance lessons demand more time to prepare – 57.1 %
- No differences compared to traditional – 10.7 %
- Distance lessons economy my time
- It is difficult to say

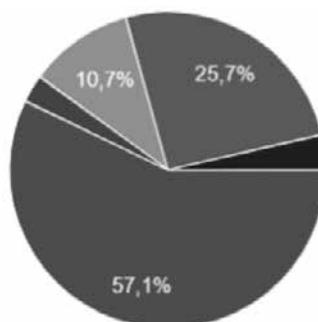


Fig. 8. Difficultness of distance lessons.

Table 10. Difficultness of distance learning lessons by type of residence.

	Demand more time	No difference	Economy of time	Impossible	Difficult to say
Kyiv	63.3%	10.0%	10.0%	10.0%	6.7%
Regional centre	59.2%	9.9%	1.4%	25.4%	4.2%
District centre	60.9%	13.0%	1.4%	18.8%	5.8%
Small town	52.3%	10.5%	3.5%	31.4%	1.2%
Rural area	42.1%	10.5%	0.0%	47.4%	0.0%

Table 11. Difficultness of distance lessons by respondent's attitude to vaccination.

	Demand more time	No difference	Economy of time	Impossible	Difficult to say
«Vaccinists»	51.4%	7.1%	1.4%	37.1%	2.9%
«Scepticists»	50.0%	5.8%	3.8%	32.7%	5.8%

Most respondents affirmed that distance learning either demands much more time than one-on-one-lessons or turns out to be impossible at all (see Figure 8). Impossibility of distance lessons was reported mostly from teachers from rural areas (see Table 10). There is almost no difference in reporting between «scepticists» and «vaccinists», but «scepticists» regard even slightly less impossible compared to «vaccinists» (see Table 11).

And the final survey question: how did the COVID-19 pandemic influence motivation to study music? Sixty percent of teachers felt that several motivated students became less motivated and thirty-seven percent of teachers found it difficult to answer, while only three percent assumed motivated students to increase in number (see Figure 9). Most definitely, feelings concerning the change of student's motivation are reported by teachers from rural areas (see Table 12) and «scepticists» (see Table 13).

Q: Did the COVID-19 pandemic influence student's motivation to study music?

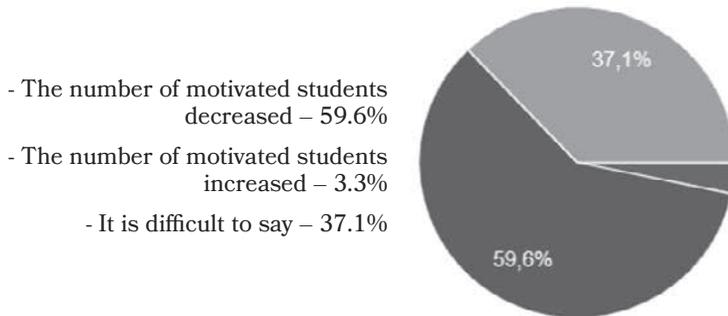


Fig. 9. Reported changes in students' motivation.

Table 12. Reported changes in student's motivation by type of residence.

	Less motivated students	More motivated students	Difficult to say
Kyiv	50.0%	0.0%	50.0%
Regional centre	62.0%	4.2%	33.8%
District centre	60.9%	2.9%	36.2%
Small town	57.0%	3.5%	39.5%
Rural area	68.4%	5.3%	21.1%

Table 13. Reported changes in students' motivation depending on attitude to COVID-19 measures.

	Less motivated students	More motivated students	Difficult to say
«Vaccinists»	58.6%	2.9%	38.6%
«Scepticists»	69.2%	1.9%	26.9%

Discussion

Firstly, the analysis shows that during 2020–2021 four waves of the COVID-19 pandemic were observed in Ukraine, and each of the following waves led to more patients and deaths. At the same time, quarantine measures implemented by the Ukrainian government were the most severe during the first (weakest) wave and the weakest during the last (strongest) wave of the pandemic. This fact assumedly led to a high level of distrust to restriction measures applied by the Ukrainian government. This conclusion should be taken by authorities before planning new restrictions by asking themselves a key question: will these restrictions provide more benefits than harm?

Secondly, we assumed the attitude to pandemic restrictions as well as to distance education may differ between music teachers in rural areas and large cities and may also correlate with the attitude toward vaccination and other measures provided by authorities. The survey shows that these differences and correlations are not as significant as might be expected. Respondents of all survey categories mainly regard distance education as less effective and motivating, or ineffective, some difference is just in the category of judgment (utterly more in rural areas and less in Kyiv). This concludes that negative tendencies in music education caused by pandemic restrictions are a matter of fact and not just an opinion of some categories of teachers.

It follows from our study that the COVID-19 pandemic has had a major impact on music education in Ukraine, especially through the transition to distance learning and the challenges that have arisen from it. These findings have important practical implications for the global community and can serve as a guide in the event of a similar situation in the future. In the context of distance education, access to quality Internet and related technology is becoming critically important.

Music education has its own peculiarities, especially when it comes to ensemble performance and group classes. In the case of such pandemic restrictions, curricula must be flexible to adapt to new realities. Educational institutions should develop and implement training programs for teachers to increase their readiness for distance learning and the use of digital technologies in the learning process. Governments and educational institutions should be prepared to provide the necessary support in this regard. Changing the format of training can affect the motivation and emotional state of students. Therefore, it is important to provide psychological support to students during such crisis situations.

Lastly, some issues arose after the research had been finished. Unfortunately, the end of the last wave of COVID-19 coincided with the Russian invasion of Ukraine that was begun on 24 February 2022, which led to numerous victims among civilians, including children. The decision of authorities in the field of education was like that of COVID-19—all the institutions switched to distance mode with all its disadvantages, including its negative influence on professional art education. Moreover, many cities were bombed by Russian missiles and suffered from power outages. This caused permanent problems with Internet connections, destabilising distance education even more. The influence of the war on music education in Ukraine could be regarded as a field for future studies. Though even now, considering all the negative effects of the forced transition to distance education during the COVID-19 pandemic, it must be expected that the consequences of the new challenges that arose because of the war would have a much more devastating effect on a quality of music education.

Applying flexibility in curricula is key to adapting to unforeseen constraints, such as those caused by pandemics and war. That is why educational institutions should be prepared to quickly adapt curricula to the current situation. For example, when switching to distance learning, it is possible to focus on developing individual skills of playing an instrument or theoretical knowledge, while group classes may be temporarily limited.

The use of electronic resources and software for music education can be useful to support distance learning. This may include online music recording platforms, virtual musical instruments, music creation software, and more.

Traditional assessment methods may not be targeted in the context of distance learning, especially in music. Institutions may consider adapting their assessment systems, for example, by introducing online performances, portfolios, or design work.

With these recommendations in mind, schools will be able to better adapt to similar cases in the future, providing quality music learning despite limitations.

Conclusion

Most of Ukrainian schools faced closure during the COVID-19 pandemic, which meant the obligatory switch to an online form of education. According to teacher surveys, this prohibition effected all schools in Kyiv, but less in rural areas. The prohibition of face-to-face lectures was not the only problem for music teachers. The other one was the obligatory vaccination, which was stressful for at least fifty percent of teachers, while more than thirty percent of teachers regarded vaccination as inappropriate. For those teachers who denied vaccination, in at least thirty percent of cases lost their jobs or were temporarily dismissed. Distance learning has been considered less effective than face-to-face classes by at least ninety percent of teachers. More than eighty percent claimed distance learning requires much more time and effort from teachers. In addition, as a result, only three percent of teachers have reported an increase in student motivation, while sixty percent observed a decrease in motivation.

English Abstract

This article investigates the impact of the COVID-19 pandemic on music education in Ukraine. In March 2020, Ukrainian authorities proclaimed a national lockdown like the ones in most other European countries. Restrictions included prohibition for students to attend lessons at schools or universities that would make any classroom musical activities illegal. Relevant legal acts have been collected in this article. To avoid closure, most of music education institutions provided a distance form of education. However, remote methods did not appear to be a worthy substitute for in-person lessons, especially in such disciplines as ensemble playing or singing. This article reveals the main disadvantages of distance music education, the most important of which is a signal delay during remote communication via the Internet. A survey of teachers in Ukrainian music schools about their experience under lockdown restrictions was conducted. The survey shows that many teachers regard distance education as much harder and less effective. Moreover, most teachers feel that students lose motivation to learn and practice music. This result does not significantly differ in rural areas from that of large cities and does not depend on teachers' attitudes to COVID-19 prevention methods, and as such, indicates an objective nature of fact. Undesirable consequences of the measures taken during the pandemic arise as a key discussion of whether the restrictions are of benefit or harm.

French Abstract

Cet article étudie l'impact de la pandémie de COVID-19 sur l'éducation musicale en Ukraine. En mars 2020, les autorités ukrainiennes ont proclamé un confinement national comme dans la plupart des autres pays européens. Les restrictions comprenaient l'interdiction pour les étudiants de suivre des cours dans les écoles ou les universités, ce qui rendait illégales toutes les activités musicales en classe. Les actes juridiques correspondant ont été rassemblés dans cet article. Pour éviter la fermeture, la plupart des établissements d'enseignement musical ont proposé une forme d'enseignement à distance. Toutefois, les méthodes à distance n'ont pas semblé être un substitut valable aux cours en personne, en particulier dans des disciplines telles que le jeu d'ensemble ou le chant. Cet article révèle les principaux inconvénients de l'enseignement musical à distance,

dont le plus important est le délai de réponse lors de la communication à distance via Internet. Une enquête a été menée auprès d'enseignants d'écoles de musique ukrainiennes sur leur expérience des restrictions d'accès. L'enquête montre que de nombreux enseignants considèrent que l'enseignement à distance est beaucoup plus difficile et moins efficace. En outre, la plupart des enseignants estiment que les élèves perdent la motivation d'apprendre et de pratiquer la musique. Ce résultat ne diffère pas de manière significative entre les zones rurales et les grandes villes et ne dépend pas de l'attitude des enseignants à l'égard des méthodes de prévention de COVID-19, ce qui indique une nature objective des faits. Les conséquences indésirables des mesures prises pendant la pandémie soulèvent une discussion capitale sur le caractère bénéfique ou néfaste des restrictions.

German Abstract

Dieser Artikel untersucht die Auswirkungen der COVID-19-Pandemie auf die Musikerziehung in der Ukraine. Im März 2020 verhängten die ukrainischen Behörden wie in den meisten anderen europäischen Ländern einen landesweiten Lockdown. Zu den Einschränkungen gehörte das Verbot für Schüler, Unterrichtsstunden an Schulen oder Universitäten zu besuchen, was auch jegliche musikalische Aktivität im Klassenzimmer illegal machte. Relevante Rechtsakte dazu sind in diesem Artikel zusammengestellt. Um eine Schließung zu vermeiden, boten die meisten musikpädagogischen Einrichtungen Fernkurse an. Allerdings schienen die dafür zur Verfügung stehenden Methoden kein würdiger Ersatz für den Präsenzunterricht zu sein, insbesondere nicht in Disziplinen wie Ensemblespiel oder Gesang. In diesem Artikel werden die Hauptnachteile von musikalischem Fernunterricht aufgezeigt. Der wichtigste davon ist die Signalverzögerung bei der Kommunikation über das Internet. Es wurde eine Umfrage unter Lehrern ukrainischer Musikschulen zu ihren Erfahrungen mit den Lockdownbeschränkungen durchgeführt, die ergab, dass die meisten Lehrer den Fernunterricht als deutlich schwieriger und gleichzeitig weniger effektiv ansehen. Darüber hinaus haben die meisten Lehrer das Gefühl, dass die Schüler die Motivation verlieren, Musik zu lernen und zu üben. Die Ergebnisse unterscheiden sich in ländlichen Gebieten nicht wesentlich von denen in Großstädten und hängen nicht von der Einstellung der Lehrkräfte zu COVID-19-Schutzmaßnahmen ab, womit sie auf eine hohe Objektivität der Studie hinweisen. Unerwünschte Folgen der Maßnahmen während der Pandemie werfen die Kernfrage auf, ob die Einschränkungen Nutzen oder Schaden hatten.