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Instructors' perspectives on teaching music online after the COVID-19 lockdown: A qualitative analysis in Indonesia

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Abstract

The current study analyzes the practices and strategies used by university instructors in Indonesia to deliver online music classes after the COVID-19 lockdown. Using a qualitative method based on semi-structured interviews, perspectives from music professors were gathered to explore various aspects, including the support provided by universities, teaching practices adopted by instructors, students' reactions, limitations, and advantages of online music learning. The data were analyzed with an inductive method based on grounded theory. Participants highlighted several strategies utilized during online learning, such as (a) the use of video recordings to focus on specific aspects of music performance; (b) the implementation of project-based assessments to address various learning outcomes in different classes; and (c) the development of teamwork for sharing the best teaching practices. Teachers reported being more responsive to the students, placing a greater emphasis on self-reflection and becoming more effective educators. While recognizing several limitations associated with online music learning, the participants believe that this will be the teaching approach of the future, attributing it to improvements in students' independence and self-assessment skills, teachers' self-reflexivity, and enhanced flexibility in scheduling. Implications for institutions and university professors regarding the development of policies and curricula for online music education are also discussed.

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Introduction

The recent COVID-19 health emergency forced teachers worldwide to move their teaching online, accelerating the digital transformation (Rospigliosi, 2020). In Indonesia, the government issued a mandatory work-from-home policy in March 2020, stopping primary, secondary, and tertiary education to conduct classes onsite (Cahyadi et al., 2022). According to the Association of Private Higher Education, only 30% of Indonesia's private universities were ready at the time to implement distance learning (CNN Indonesia, 2020). The problem may have been due to the lack of reliable internet access in rural areas (Churiyah et al., 2020) and the competence to navigate online learning systems (Akbari & Pratomo, 2022).

Some adverse effects reported during the pandemic were increased stress (Cheng & Lam, 2021) and lower levels of well-being (Habe et al., 2021). The lockdown forced music instructors to learn how to manage their classrooms online (Gül, 2021) and utilise software for music teaching (Merrick & Joseph, 2022; Thomas et al., 2021). The poor sound quality of software not tailored for musical performance (Kruse et al., 2013) caused ineffective summative assessments and an unsatisfactory listening experience.

Universities have now resumed their music lessons face-to-face, so it is relevant to consider the degree to which online music education will continue even after the pandemic emergency is over. The present study focuses on teachers' perspectives on online music education after the COVID-19 lockdown, exploring the effectiveness of different online learning strategies in higher education (Biasutti et al., 2019; Biasutti & Concina, 2021). A qualitative approach based on semi-structured interviews was used to collect data from music teachers in Indonesia. The questions focused on participants' personal experiences in delivering general and instrumental music lessons, including the limitations and strengths of the use of technology for online music teaching. The research questions of the study are as follows:

(1) What practices and strategies have teachers adopted to deliver music lessons online?

(2) What are the future perspectives for teaching music online?

Literature Review

Teaching Music Online During the Pandemic

Due to the sudden change from face-to-face to online learning, music lecturers needed help adapting their pedagogical approach, particularly in designing lessons (Shaw & Mayo, 2022), maintaining classroom interaction (Li et al., 2021), and managing classrooms (Gül, 2021). These issues may stem from a lack of teacher training (Daubney & Fautley, 2020; Ünlü, 2022), limited experience in online learning (Akarsu, 2021), and infrequent discussion among music educators, especially at the university level (Kruse et al., 2013). However, more teachers were reaching out to their peers during the pandemic for help and support, leading to the sharing of pedagogical materials and strategies for online learning (Thorgersen & Mars, 2021) and remote music-making collaboration (Fram et al., 2021).

Research on music practice time during the pandemic has shown mixed results. Self-regulated students were able to maintain their routine and amount of practice time, while others practised less (Nusseck & Spahn, 2021; Spiro et al., 2021). The decrease in practice time may have been

due to a shift in motivation (Antonini Philippe et al., 2020) or a more efficient way of practising (Fallowfield & Gomez, 2022).

Regarding technology, the pandemic lockdown induced both students and lecturers to explore more software and applications for music education (Merrick & Joseph, 2022; Pozo et al., 2022), and they experimented with digital media and learning tools to improve teaching practices (Biasutti et al., 2022; Fallowfield & Gomez, 2022; Ng et al., 2022).

Although there has been limited research on Indonesian higher music education, the existing research indicates that the situation is comparable to that in many other countries. The government implemented a work-from-home policy in March 2020, resulting in approximately 3,000 students in tertiary education transitioning to online learning (Churiyah et al., 2020). Due to unstable internet connections, teachers experimented with creative ways of teaching online, such as submitting recorded practice videos and live performances (Nugroho & Kusumaningrum, 2021; Setiarini, 2021), which is similar to findings in other countries (Schiavio et al., 2021; Yıldız et al., 2021).

Role of the Institutions

One of the United Nations Sustainable Development Goals (SDGs) is to provide 'resilient infrastructure, promote sustainable industrialisation, and foster innovation by 2030', with one of the indicators in SDG 9c aiming to 'significantly increase access to information and communications technology and strive to provide universal and affordable access to the internet in least developed countries by 2020'. However, several studies have shown that Indonesia's rural and coastal areas have limited access to fast, affordable, and reliable internet connections, hindering the implementation of online education (Cahyadi et al., 2022; Churiyah et al., 2020; Febrianto et al., 2020; Fitriani et al., 2022).

The social restrictions entailed by the COVID-19 lockdown forced institutions worldwide to rapidly adapt their regulations and policies. Regulations are vital for teaching and learning because they provide the standards for educational methods, aims, and materials. However, music teachers saw a need for more planning and policies in music education during the shift to online learning (Shaw & Mayo, 2022). Educators reported that there was little or no preparation for online teaching (Ünlü, 2022) and called for more institutional support (Biasutti et al., 2023).

Due to the financial impact of the pandemic, musicians called on institutions to provide financial support to purchase laptops and subsidise internet costs (Li et al., 2021). Another support for online learning would involve developing technological tools for authentic music-making experiences, especially low-cost technology that provides visualisation for learning a musical instrument (Acquilino & Scavone, 2022). Online music education is continuing to evolve after the COVID-19 pandemic, so teachers must be prepared to conduct lessons online. The limitations in distance education pedagogy could be addressed by better technological infrastructure and teacher training (Yıldız et al., 2021).

Approaches to Teaching Music Online

Research prior to the COVID-19 lockdown suggested that online music education could provide a viable alternative to face-to-face instruction (Dumlavwalla, 2017; Hamond et al., 2019; Pike & Shoemaker, 2013). In addition to software and applications, social media and video-sharing

platforms like YouTube can complement music education. Facebook, Edmodo, and Google Classroom all provide places for teachers to provide supportive and constructive feedback (Albert, 2015).

Different pedagogical methods, such as flipped classrooms, can be tailored to the needs of different students by shifting back and forth between online and face-to-face (Ng et al., 2022). This benefit will enable students to learn at any time from anywhere and reduce the instructor's teaching time. Regarding learning outcomes, research has suggested that there is little difference between online and face-to-face learning (Karahan, 2016; Yungul, 2018).

Many musicians are only familiar with basic music technology, such as recording devices, speakers, and digital metronomes. A survey by Waddell and Williamon (2019) found that musicians have positive attitudes towards technology for teaching and learning. However, adapting technology to the classroom requires more work because musicians need more confidence in using audio and video recording devices for musical training purposes.

Students' Perspectives

The COVID-19 lockdown impacted students' mental health and well-being. Some students could not learn effectively due to a lack of communication from teachers (Schiavio et al., 2021) and the absence of the classroom environment (Yıldız et al., 2021). Social restrictions also made it challenging for students to engage in unmediated communication with their peer students, teachers, and other musicians, resulting in anxiety, depression, and stress (Odriozola-González et al., 2020).

However, the isolated nature of practising music can have positive effects on music students during the COVID-19 lockdown. Musicians are used to rehearsing for many hours before going into their lessons, playing with an ensemble, or performing in public. With more time by themselves and less time spent commuting to class and other activities, music students can develop greater self-reflection (Antonini Philippe et al., 2020), self-regulated learning strategies (Nusseck & Spahn, 2021), and increased autonomy in their learning (Spahn et al., 2022; Yıldız et al., 2021). Additionally, the use of video recordings gave students more time to evaluate their playing, resulting in a more accurate evaluation (Rucsanda et al., 2021).

In Indonesia, students in both urban and rural areas have shown similar levels of enthusiasm for independent and collaborative online learning (Martha et al., 2021). However, students from rural and coastal areas still view their teachers as the sole educational resource, which negatively impacts their motivation to search for online resources or use digital platforms (Febrianto et al., 2020; Fitriani et al., 2022). Conversely, some students in higher-level e-learning culture universities adapted quickly to different learning styles in an online context, demonstrating great discipline and independence in their learning (Martha et al., 2021).

Limitations and Advantages of Teaching Music Online

Music education requires visual, motor, and auditory feedback in online settings, which leads to several challenges. Many lecturers and students do not have a stable internet connection (Güsewell & Terrien, 2021; Li et al., 2021; Okay, 2021; Yıldız et al., 2021) or access to music technology for satisfactory sound quality (Kruse et al., 2013), which are essential for music performance assessments. Another limitation includes physical distance, which prevents the

teacher from providing technical guidance to students during virtual lessons (Biasutti et al., 2022; Fujiawati & Raharja, 2022).

The COVID-19 pandemic magnified the inequality of access that threatens the sustainability of music education because the quality of teaching and learning was required to match the quality of technology for the parties involved. While on campus, students can access quality instruments and various kinds of software and other technologies. However, during the lockdown, they could only work with resources at home that did not necessarily provide high audio-video quality (Greher et al., 2021). Additionally, the quality of instruments did not match what can be used on campus (Ünlü, 2022). Students of lower socioeconomic status may have a less effective and less positive online learning experience that can cause a significant disparity when they resume classes on campus (Daubney & Fautley, 2020).

As an advantage, online learning provides time flexibility, allowing students and lecturers to conduct classes and access learning materials at any time (Li et al., 2021; Setiarini, 2021). Another benefit is the ease of finding high-quality music teachers from around the world. Online learning enables students to study with teachers without travelling outside their hometowns (Duffy & Healey, 2017; Kesendere et al., 2020; Li et al., 2021).

Summary of the Theoretical Background

The literature review sheds light on various aspects of teaching music online during the COVID-19 pandemic, including the role of institutions and the perspectives of students. One of the central components of online learning is its technological infrastructure, which encompasses communication software and internet connectivity and enables a more authentic music-making experience. Despite several limitations to online learning, music teachers have found ways to incorporate creative teaching methods by utilising video recordings and video-sharing platforms (Biasutti et al., 2022; Ng et al., 2022; Rucsanda et al., 2021). Regarding institutional support, teachers mentioned receiving assistance such as financial aid, technological infrastructure, and teacher training.

Most of the research on online learning cited in the literature review was conducted during the lockdown and focussed on the practices and strategies implemented for emergency remote teaching (Biasutti et al., 2022; Nusseck & Spahn, 2021; Odriozola-González et al., 2020; Pozo et al., 2022; Rucsanda et al., 2021; Yıldız et al., 2021). With most countries having lifted social restrictions, universities have resumed teaching and learning on campus, eliminating the obligation to carry out online music learning. However, due to the development of virtual music teaching strategies and exposure to digital technologies during the lockdown, higher music education may undergo lasting changes (Daubney & Fautley, 2020). Consequently, there is a need for a future-oriented dimension to online learning, considering teacher perspectives and best practices for virtual music classes.

Method

The present study aims to scrutinise the practices and strategies developed by music instructors to deliver online teaching after the COVID-19 lockdown. A qualitative approach based on semi-structured interviews was used to collect data from music teachers in Indonesia. A particular weight was placed on participants' opinions and personal experiences while delivering general

and instrumental music lessons, focusing on the strengths and limitations of using technology for virtual music teaching.

Participants

Fifteen (seven male, eight female) teachers of instruments or music theory contributed to the study. The participants' ages ranged from 30 to 57 (mean = 37.5; *SD* = 7.5). Participant profiles are presented in Table 1.

Table 1

Participant profiles

Participant	Age	Gender	Instrument Taught	Years of Music Teaching	Previous e-Learning experience
P1	39	M	French Horn	14	No
P2	34	F	Classical Piano	10	Yes
P3	33	F	Contemporary Vocal	10	No
P4	30	F	Double Bass	7	No
P5	37	M	Jazz Piano	7	No
P6	34	F	Violin	10	No
P7	45	M	Classical Piano	19	No
P8	34	F	Classical Piano	8	No
P9	40	M	Classical Piano	14	No
P10	33	M	Classical Vocal	14	Yes
P11	30	F	Classical Piano	7	No
P12	48	M	Classical Guitar	22	No
P13	38	M	Jazz Piano	12	No
P14	31	F	Contemporary Vocal	10	No
P15	57	F	Classical Vocal	18	No

All participants have a music degree in their field from a conservatory and are active teachers at Indonesian higher education institutions. They were recruited because they taught music online during the COVID-19 lockdown and were acknowledged via personal contacts. All participants had at least seven years' experience in teaching music (mean experience = 12 years; *SD* = 4.6), and some held relevant positions at their university, such as head of academic standards, head of community service, coordinator of music education, and coordinator of pop and jazz music.

They taught a range of instruments and disciplines: classical and contemporary piano, strings (violin, double bass), guitar, classical and contemporary vocal, and French Horn.

Semi-structured Interview and Data Collection

The semi-structured interview instrument was developed with reference to previous qualitative studies of teaching music online during COVID-19 (Antonini Philippe et al., 2020; Biasutti et al., 2022; 2023; Schiavio et al., 2021). The aim was to collect the teachers' practices and strategies for delivering online music lessons. The interview questions focused on university support, instructors' practices and strategies regarding curriculum design, student's reactions, and the limitations and advantages of online music learning. The complete list of questions of the semi-structured interview instrument can be found in Appendix 1.

Each participant voluntarily agreed to take part and was informed that their answers were collected anonymously and used for research purposes. Interviews were conducted individually, either face-to-face or using the Zoom video meeting service. Each interview lasted between 26 and 80 minutes and was recorded with a mobile phone or computer as a .wav file. Interviews were transcribed verbatim and then sent to participants, who had the opportunity to review the transcript to guarantee the accuracy of their comments and correct any misrepresentations of their opinions.

This study was conducted in accordance with the Declaration of Helsinki (World Medical Association, 2013) and the Code of Ethics and Conduct of the British Psychological Society (2009). The Pelita Harapan University's (*Universitas Pelita Harapan*) Research Ethics Committee provided ethical approval for data collection. All participants provided informed consent before taking part.

Data Analysis

An inductive method framed in grounded theory was adopted for the analysis. As the researchers examined the interview transcripts, codes and categories emerged from the data (Biasutti et al., 2023; Schiavio et al., 2018). The data analysis consisted of several phases: 1) preliminary coding, 2) memo writing, 3) regular reviewing and coding until an updated codebook was developed, and 4) sorting the codes into categories and sub-categories. Participants were anonymised and assigned pseudonyms from P1 to P15.

The data analysis started with an immersion phase in which the researchers read all the interview transcripts many times to acquire an overall awareness of the participants' answers. Similar to other grounded theory analyses, the researchers used *in vivo* coding, open coding, and process coding for the first coding cycle (Charmaz, 2006; Saldaña, 2013). They examined the interview transcripts and carried out line-by-line coding to fully understand each participant's perspective (Charmaz & Thornberg, 2021). This type of coding is necessary to move researchers away from their preconceptions and to ground the analysis in the original data, fulfilling the quality of fit and relevance in grounded theory (Charmaz, 2006; Glaser, 1978). The text was carefully re-read to avoid redundancies and repetitions while codes were identified. During the coding process,

researchers regularly wrote analytical memos to provide reflexivity and an understanding of the data, thus reducing subjectivity (Berthelsen et al., 2018; Charmaz, 2006; Saldaña, 2013).

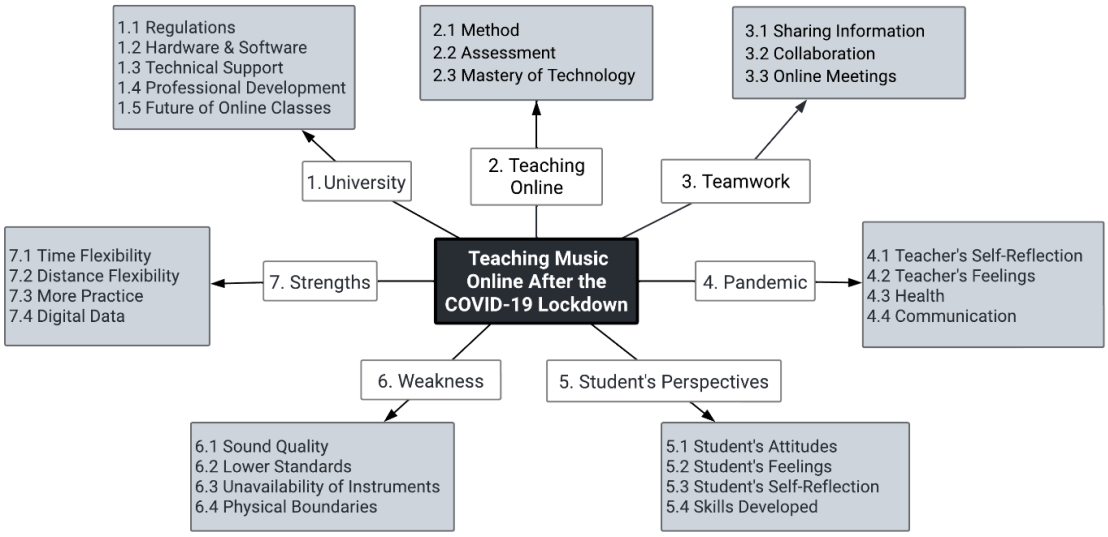
The researchers collaboratively developed a preliminary codebook and subsequently tested it on previously uncoded data before applying it to the entire dataset (Richards & Hemphill, 2018). In weekly research meetings, the researchers compared and discussed their individual versions and interpretations of the coding scheme, adjusting the codebook whenever necessary until they reached a consensus. This constant process of checking and reviewing between the codebook and analytical memos built quality into the data analysis as those tools became more definitive and analytic (Charmaz & Thornberg, 2021). Finally, the codebook was classified into categories and sub-categories that described the participants' perspectives. In addition, an independent research assistant discussed any conflicting results in the coding process until full agreement was obtained (Biasutti, 2017, 2018).

Results

The coding scheme that emerged from the analysis is based on the seven categories, and related codes are presented in Figure 1.

Figure 1

Categories and related codes emerged from participants' semi-structured interviews



Supporting quotations extracted from the interview responses are reported in Table 2.

Table 2

Supporting quotations for codes extracted from interview responses

Categories	Codes	Quotations
1. University	1.1 Regulations	'There must be a standard from the campus'. 'I'm glad they trust us. It means we can be flexible, it means we can run it all; that's what I think the support is, right?'. 'The quality of the media from the teacher and the students should have a standard'.
	1.2 Hardware & Software	'[We were given] a Zoom account, then given the [Microsoft] Teams application, which is very helpful'. 'We were provided [with] Teams; then we were also given training lessons about [Microsoft] Teams, then about Moodle'. 'Support means like Microsoft Teams was also very helpful at that time'.
	1.3 Technical Support	'Yes, I think the facilities are helpful; like for making a video, we have a team and ask that team to help make the video'. 'The internet; they increased [the bandwidth]'. 'Increasing the server yes. […] It's not really that fast, but enough to make do'.
	1.4 Professional Development	'[The lecturers had] to create videos and recordings like a YouTuber. [We had to] make a short video based on the training that we had'. 'There were different training modules of all kinds'. 'Training, yes. [There was] training, yes'.
	1.5 Future of Online Classes	'In the future, classes will be eliminated. […] Now learning music theory, learning music history does not need to be in class'. 'I'm okay if, for example, suddenly there are obstacles like people want to talk or people ask for seminars, but they cannot be onsite; they have to be online, [then I am] okay'. 'Right now, I'm really open. Oh, there's another option [to go online] '.
2. Teaching Online	2.1 Method	'The goal before lockdown or after lockdown is of course the same […] even though during the lockdown, [performing live] could not be done; it changed to recording'. 'Well, they [the students] eventually performed online but not streaming; they recorded it first'. 'As much as possible, the time was used with various approaches. So it is not just linear: […] using storytelling, talking about me [my experience] first, how to build a music group'.
	2.2 Assessment	'The assessment is more about their efforts, not the results of their efforts'. 'It is the same in assessment; it is more like musicality, articulation, and there is nothing too different—same assessment'. 'Now, in the online period, I focus more on the progress of the students'.
	2.3 Mastery of Technology	'There is so much technology. Like, you can try apps; you can even make your own apps'. 'I'm now switching to mostly digital scores'. 'Students upload the pre-recorded video to either Google Drive or YouTube, so I'll watch it on there'.
	2.4 Video References	'We have some videos we have made or videos from YouTube that already exist'. 'Now I show videos more often, such as a video of an excerpt from a lecture or a performance, to illustrate my point'. 'I look for videos or something so that students can understand'.

Categories	Codes	Quotations
3. Teamwork	3.1 Sharing information	‘More intense in communicating or exchanging information’. ‘As colleagues, we support each other, pray for each other, and encourage each other. [...] I ask more questions to people [teachers] who are used to being in front of a laptop [when teaching]’. ‘Everyone […] uses Google Docs, so everyone can edit [together]’.
	3.2 Collaboration	‘Later, the final assessment for the instrument is not only [by] me but from all lecturers in the study program’. ‘It is more like a collaboration of putting it [the recording] together, such as a piano and violin; then we grade [the students] together’. ‘The harmony course is combined with the consultation project course, for example; that results in one project; namely, film scoring’.
	3.3 Online Meetings	‘There are also many Instrument players [outside the country] who want to perform for free; that is easier too, [for those who] want to give masterclasses to students’. ‘Now online meetings go by quickly. […] It is easy; just say what time, and then it is done right away’. ‘We can do it online, so even though I’m on the way or [at] home, I can still have my meetings like that’.
4. Pandemic	4.1 Teacher’s Self-Reflection	‘Our focus is more on the students. But when it is hybrid, we focus in two directions: whether I am teaching correctly, or whether students can understand what I teach’. ‘There are things that I’m not satisfied with online […] so the reflection is actually more frequent’. ‘I learned to be more sensitive […] to be more responsive to the students’ condition’.
	4.2 Teacher’s Feelings	‘The student also does not feel comfortable with the tone, so it’s also frustrating; it’s really difficult’. ‘There are many negative aspects. […] It wasn’t very good. Not good at all’. ‘It used to be really annoying; […] I can’t do it. I can’t do it, so maybe it’s time to take a break too, retire and really enjoy life’.
	4.3 Health	‘There are those [parents] who are reluctant for their students to come, maybe because of time. And because of health too’. ‘There was one student at that time. […] Because she was hit by COVID one day, so I thought oh well, [switching to] online once is okay’. ‘At that time, half the class was sick. The ones who were sick were the ones who were supposed to sing […] the PPE [studio class] could not be held’.
	4.4 Communication	‘Communication is difficult, so we like to collab, so that on team teaching, we can have different perceptions’. ‘Indeed, there was some inconvenience in terms of communication’. ‘They [the students] are also more limited in communication’.
5. Student’s Perspectives	5.1 Student’s Attitudes	‘It turns out that online students are somewhat passive’. ‘Because I know that student morale is also low. Willingness to practice is low too’. ‘They grow more independent. [Preparing the] metronome, start preparing the music.’
	5.2 Student’s Feelings	‘Why am I stressing everyone out? Both students and lecturers are stressed, so do not complicate an already difficult situation’. ‘And if they have a breakdown and burn out, they really – literally – cry in front of the camera’. ‘There is one student whose mom is feeling unwell, so she can get stressed because of that’.

Categories	Codes	Quotations
	5.3 Student's Self-Reflection	'Now it is more like a student reflection, you might say.' 'Yes, I still request recordings from them occasionally. It is beneficial for them to evaluate themselves as well'. 'They can analyse their weaknesses so that later when they listen to their own recordings, they get used to analysing their weaknesses'.
	5.4 Skills Developed	'Hopefully, they still have those listening skills'. 'Self-evaluation skills, good analytical skills are also very important'. 'It is beneficial for them to evaluate themselves as well. [It leads to] more awareness, which helps a lot in their critical thinking'.
6. Weakness	6.1 Sound Quality	'Because the bandwidth is small, the audio is compressed, so no matter how good our mic is, it still sounds bad'. 'If the students do not use the right tools or microphones, then the sound becomes very unclear'. 'You cannot hear the voice projection through the electronics'.
	6.2 Lower Standards	'There's a lot letting go [of standards]'. 'The content of learning the material is exactly the same – yes, even though I still lower the standard'. 'Sometimes I have to let go of the little details because it is hard to go back and forth, so I'm more into that: just goal-oriented'.
	6.3 Unavailability of Instruments	'Because they do not have the tools: no keyboard, no piano'. 'Not all of them have instruments at home'. 'The [condition] of students' pianos is varied. They do not invest in a good grand piano'.
	6.4 Physical Boundaries	'I asked some major students, "OK, try asking your mom to hold you, for example. Right, are your ribs sideways? Is your chest still up?" because […] they need someone to help them look.' 'If you want to see both the hands and feet from a distance, [the camera is moved further away, but] the microphone cannot reach that much, right? But if you get too close, then you cannot see them [students' expressions]'. 'Maybe if I am onsite, I might be able to hold their ribs and oblique muscles to know how they breathe. But online, you cannot'.
7. Strengths	7.1 Time Flexibility	'If they go online, their time is more flexible. They can study at night, they can study during the day, and the modules are there'. 'Because with the recording, we can play it back and evaluate it'. 'We can just be there and boom! And start it [the lesson]. Which [is why] my students also come [on time].'
	7.2 Distance Flexibility	'For students who have graduated from junior school or high school -they usually go to Singapore or somewhere-, they still continue their lessons because they can still go online'. '[Being] flexible as long as it is online. But here [on campus], I can't be flexible about the day. There are schedules; there are rooms [bookings]'. 'When you are teaching one student [online], it's only 60 minutes, but when you come to campus […] you have to add the time going to campus and going home'.
	7.3 More Practice	'I asked them to upload it to YouTube. It makes them practice harder to overcome it'. 'I see that he is [the student] even more diligent because maybe he feels he has to record […], so it is like he is more prepared'. 'It is quite [a lot of] extra work because they have to do multiple takes, right? It is an exercise because you have to repeat it many more times'.

Categories	Codes	Quotations
	7.4 Digital Data	‘But if you want it [online] for administration, it is okay; it is very easy’. ‘We use the SPOT system [for everything] from attendance to assessment. […] We do not have to bother anymore to fill in the grades; it is automatic’. ‘Yes, there are positives. […] Paperless, yes; I think it can make things easier’.

University

This category comprises teachers’ thoughts, opinions, and experiences regarding their university’s role in teaching music online. The five codes were regulations, hardware and software, technical support, professional development, and the future of online classes.

Regarding regulations, participants reported that their institutions supported them in implementing online classes; they recognised the need for precise rules and regulations for organising virtual lessons and argued that standards for teaching and media must be defined: ‘Lecturers are different in the field, so there must be a standard from the campus’ (P1). ‘The quality of the media from the teacher and the students should have a standard’ (P10).

Regarding hardware, participants mentioned that they used their own hardware while the university provided most of the software, such as Microsoft Teams and Moodle. Teachers argued that these tools are not specifically designed for music lessons.

Participants reported that universities offered a variety of technical support and services, including higher internet speed, an additional internet quota, and an editing team for creating digital modules and videos: ‘We have a team and ask that team to help make the video’ (P2). ‘They increased [the bandwidth]. Now it is fast, cool, no delay’ (P9). Regarding professional development, participants reported that universities provided adequate activities, such as training sessions regarding platforms and software: ‘There were training lessons about [Microsoft] Teams, then about Moodle, and so on’ (P3).

Participants believe that online music learning will be the teaching approach of the future, particularly in situations where face-to-face classes are not possible. Online classes are in line with Indonesia’s Ministry of Education’s intentions: ‘So the Minister of Education wants to adopt [online learning] so that every student can study anywhere. […] In the future, classes will be eliminated. The campus [will be] all online’ (P1).

Teaching Online

This category focused on the approach of methods, assessments, and strategies used in teaching music online. While the contents and assessments in face-to-face and online classes are generally similar, some strategies, such as technology and video references, apply only in online classes.

Participants mentioned that, in general, there were no significant differences in the content taught in face-to-face and online classes, especially in individual instrumental classes. However, some modifications were reported in the approach, such as introducing storytelling and discussing the professor’s experience in building a music group: ‘The time is used with various approaches […] like, using storytelling, talking about me [my experience] first, how to build a music group, even though we are classical’ (P12).

Another difference regarded the use of media and the request for weekly performance recordings to improve sound quality. '[The students] records the audio themselves and then sends it; […] it is clearer than via Zoom' (P7). Regarding teaching methods, a shift was highlighted: 'Maybe in the past, it was more teacher-centred; we talked to them, we told them this, and they just accepted it. Now we give questions to them, and they search and explore themselves' (P4).

As to assessment, some participants used the same rubric and criteria for online and face-to-face teaching, while others focused on each student's weekly progress. 'Now, in the online period, I focus more on the progress of the students' (P14). 'The assessment is more about their efforts, not the results of their efforts' (P1). Self-assessment techniques were mentioned, as was the use of key performance indicators (KPIs): 'I use KPIs for each student. […] So, it is like they report what their plan is for this week […] and what they have achieved in terms of results for the week' (P2). Moreover, there were mentions of peer assessment techniques: 'I do mutual evaluation between students' (P5).

Concerning the mastery of technology, participants reported that they explored technology such as digital scores, learning apps, and file-sharing platforms during online lessons: 'There is so much technology. Like, you can try apps; you can even make your own apps if you want to' (P3). Some tried to create an app for learning traditional instruments such as gamelan, a traditional Indonesian percussion instrument: 'The instrument [lesson] requires all lecturers to have interactive teaching materials; […] we actually create applications for learning gamelan' (P10).

Professors reported using more video references while teaching online than before the pandemic, providing students with performance examples and giving further explanations: 'It tends to be effective to use media because we can explore further, and the comparison can be more authentic' (P10).

Teamwork

This category reports on the communication, collaboration, and teamwork between teachers. Participants argued that their teamwork was based on trust, communication, and mutual help. It was an occasion for sharing best practices regarding the management of the platforms, the utilisation of the technology and the overall organisation of the virtual classes.

Regarding sharing information, the participants reported sharing adopted practices and strategies among colleagues during online learning activities: 'We communicate with each other. Now it is still going on' (P12). The teachers collaborated on aspects such as grading assessments and projects from different classes: 'The final assessment for the instrument is not only [by] me but from all lecturers from the study program. So, I will also assess for the violin and piano' (P10). They created a project-based assessment for several learning outcomes from different classes: 'We combine one course [with] another course; for example, the harmony course is combined with the consultation project course. That results in one project, namely, film scoring. […] So they [the students] collaborate with other people' (P2).

Concerning online meetings, participants reported that virtual meetings and webinars were more effective and would continue after the COVID-19 lockdown. 'Actually, it helps me […] so even though I am on the way or home, I can still have my meetings like that, and I can still be in the meeting because it is online. Online helps my life' (P3). 'It's like webinars now, right? People rarely

give in-person seminars anymore. Webinars are really good. I think they will continue to exist, webinars' (P11).

Pandemic

This category focused on the impact of the pandemic on students and teachers. Participants described their self-reflection skills, feelings, health conditions, and communication. They reported differences in terms of intensity and ways of communicating: 'Yes, when we were on lockdown, we were more intense because we had to be. […] Now it is still going on anyway; it is just not as intense as during the lockdown' (P12).

Participants indicated that health had become a major concern during the COVID-19 lockdown. They had to take extra precautions when meeting face-to-face, which affected the progress of teaching and learning: 'At that time, half the class was sick. The ones who were sick were the ones who were supposed to sing. The PPE [studio class] could not be held' (P15).

Concerning their feelings, the teachers reported having a difficult time with the transition to online learning. Issues such as disorientation, fear, and stress also emerged concerning students' situations: 'The student also does not feel comfortable with the tone, so it is also frustrating. It is really difficult' (P1).

Participants reported being more responsive to students during the lockdown. They focused more on self-reflection and how to be more effective educators: 'It seems that during COVID, the focus was on myself' (P2). 'I learned […] to be able to ask students more, "What do you think?" "So, what do you feel?" I myself have become more sensitive to what they feel' (P4).

Student's Perspectives

This category covered student's perspectives as viewed by the instructors, who shared their experiences regarding students' attitudes, feelings, self-reflection, and skills developed during online learning.

In terms of student attitudes, the teachers mentioned that students were more passive, more timid, and less motivated to practice: 'I try to get it right during the class despite the amount achieved. For example, the amount in terms of a number of bars is less. But repeat and make it polished, polished, polished, instead of discussing the whole movement. So shorter, more repetition […], because I know that student morale is also low' (P7). However, participants also mentioned that students were quite cooperative in doing online learning during the lockdown: 'It was quite positive at the start – when we were in lockdown – because we couldn't do anything; they were quite positive with online one-on-one Zoom lessons' (P11).

Regarding students' feelings, the participants mentioned that students experienced increased stress and burnout during the lockdown: 'My way of thinking is this: why am I stressing everyone out? Both students and lecturers are stressed, so do not complicate an already difficult situation' (P15).

Participants reported that online learning methods led to an increase in students' self-reflection. They are now more likely to evaluate their mistakes: 'They can analyse their weaknesses so that later when they listen to their own recordings, they get used to analysing their weaknesses' (P5).

Participants also noted that the students had developed or improved several skills during online learning, including listening, analysis, and critical thinking: ‘Yes, I still request recordings from them occasionally. It is beneficial for them to evaluate themselves as well. More awareness, which helps a lot in their critical thinking’ (P6). Moreover, the online format led to an increase in students’ independence and autonomy.

Weaknesses

This category focuses on the limitations of online music learning, with four codes highlighted: sound quality, lower standards, unavailability of instruments, and physical boundaries.

For several reasons, participants reported a significant impact on sound quality during online learning. The use of low-quality devices, such as mobile phones and computers with poor microphones and speakers, coupled with limited bandwidth, contributed to the problem. These factors, in turn, resulted in reduced signal quality, leading to a poor audio experience overall.

In response to the sound quality limitations, teachers lowered their standards and focused on other aspects. One participant stated, ‘Sometimes I have to let go of the little details because it is hard to go back and forth, so I am more into that, just goal-oriented’ (P14).

Additionally, the unavailability of specific musical instruments, such as the organ and grand piano, affects the progress of online learning. One participant stated, ‘Not all of them have the instruments at home,’ (P4), which forced students to find alternatives such as practising at a church or at a relative’s home.

Furthermore, participants reported that physical boundaries posed challenges for effective online music teaching: ‘If I am [on campus], I might be able to hold their ribs and oblique muscles to know how they breathe. But online, you cannot’ (P3). This quote highlights how the lack of physical connection can limit the effectiveness of online lessons.

Strengths

Participants identified several advantages of teaching music online, with the following codes reported: time flexibility, distance flexibility, more practice, and digital data.

Time flexibility focuses on the possibility of undertaking activities at different moments of the day: ‘So if they go online, their time is more flexible. They can study at night, they can study during the day, and the [learning] modules are there’ (P2). ‘I love online because even in time management, it can really help me be more effective’ (P3). Participants reported that they considered online learning a great option because they are able to save time, reschedule lessons more easily, and have the option to rewatch materials over and over.

In addition to time, distance flexibility also emerged from the data. Participants indicated that they are able to deliver teaching and learning materials from anywhere, saving travel time: ‘For students who have graduated from junior or high school – they usually go to Singapore or somewhere – they still continue their lessons because they can still go online’ (P7). The lack of need for a physical class creates another positive aspect regarding scheduling in universities.

Participants reported that online learning also promotes more practice. Requiring students to submit video recordings instead of live online performances encourages them to practice more, resulting in better preparation before class. ‘I asked them to upload it to YouTube. It makes them

practice harder to overcome it' (P5). 'It's quite [a lot of] extra work because they have to do multiple takes, right? It is an exercise because you have to repeat it a lot more' (P7).

Finally, digital data were reported to be useful in documenting learning materials and making administrative duties easier. Participants mentioned an integrated system provided by the university that allows for automatic attendance and grading input. As one participant explained, 'It is integrated with the lecturer's grade input system […] so it is automatic' (P10).

Discussion

The present study has investigated the practices and strategies music instructors working in higher education institutions in Indonesia adopted to deliver online lessons. The qualitative analysis highlighted seven relevant categories – university, teaching online, teamwork, pandemic, student perspectives, weaknesses of online learning, and strengths of online learning – that could be used to discuss the research questions.

Regarding the first research question (What practices and strategies have teachers adopted to deliver music lessons online?), our findings indicate that teachers had the students' best interests in mind when they implemented different online teaching pedagogies. However, they encountered several difficulties, such as low sound quality (Greher et al., 2021), instrument unavailability, and physical boundaries (Biasutti et al., 2022). One solution they employed was collaborating by sharing best practices for online learning, in line with previous studies (Biasutti et al., 2022; Thorgersen & Mars, 2021). They also created a project-based assessment for several learning outcomes from different classes. Even though the lecturers used the same content, rubric, and criteria, they noticed a shift in attention regarding overall progress. Participants tend to focus on the student's efforts every week rather than considering the fine details. The exploration of different software and technologies was apparent, resulting in greater use of video references and a switch to digital scores.

The professors asked for video recordings prior to or after lessons rather than having students perform live online (Schiavio et al., 2021; Setiarini, 2021; Yıldız et al., 2021). The recording process induced the students to undertake more practice and repetition, resulting in a higher level of preparation before class. Although participants did not specifically mention the number of hours students practised, this finding is in contrast with several previous studies that reported lower levels of practice hours during the pandemic (Fallowfield & Gomez, 2022; Nusseck & Spahn, 2021; Spiro et al., 2021). Participants noticed that the video recordings served not only as summative assessments but unintentionally became tools for student self-assessment. By checking the recording before submitting it to the lecturers, they refined their listening skills and recognised their weaknesses.

Regarding the second research question (What are the future perspectives for teaching music online?), our results highlight an agreement among participants that teaching music online will increase. Most considered time and distance flexibility to be of significant benefit to their time management. They saw online music classes as a viable option when circumstances do not allow for face-to-face interactions (Dumlavwalla, 2017). Students are able to study anytime and anywhere by accessing video references and pre-recorded lectures (Biasutti et al., 2022; Ng et al., 2022). Even after on-campus classes resumed, teachers still used learning management

systems and data-sharing platforms, resulting in reduced administrative workload. Participants agreed that even though institutions offered helpful support – such as providing software for communication, data sharing platforms, teacher training, and internet quotas – they needed more explicit directions and regulations. Most participants did not have any prior experience in learning and urged university leaders and policymakers to provide a standardised curriculum for multiple modalities (as reported in Shaw & Mayo, 2022).

The results of the present study not only support previous research but also present an international comparison in terms of emergency remote learning in higher music education during the COVID-19 lockdown (Biasutti et al., 2022; Kesendere et al., 2020; Merrick & Joseph, 2022; Okay, 2021; Yıldız et al., 2021). Participants valued the technological advancements available for online music education but mentioned software development as the main priority for a better online learning experience. The different standards – or lack thereof – of media produced different sound outputs between teachers and students, resulting in incomplete evaluations. Music assessment highly values micro-level differences in sound to capture the different characters, nuances, and interpretations of a given work.

Despite limitations regarding the number of participants and the methodology used, the present study has several important implications for university leaders and other music education stakeholders. First, online music education could 'ensure inclusive and equitable quality education and promote lifelong learning opportunities for all' (SDG 4), due to its flexibility as to time and distance. Professors could hold masterclasses and webinars through digital platforms, enabling students from remote areas to access high-quality materials without leaving their homes (Duffy & Healey, 2017; Kesendere et al., 2020; Li et al., 2021). University leaders can help accelerate the remote learning process by providing financial aid (Li et al., 2021), free software, and teacher training (Yıldız et al., 2021), as participants in the present study noted.

Second, participants believed that online music learning would continue post-pandemic, furthering the need to address threats to the sustainability of music education. Students with different socio-economic statuses may have different levels of access to audio equipment and internet connections (Daubney & Fautley, 2020). As a result, their online experiences may differ. Therefore, public expenditure and investments should focus on helping to 'significantly increase access to information and communications technology' (SDG 9c) to strive for digitalisation equity, a fundamental element of online music education.

Last, music educators who are hesitant about implementing online learning should consider the positive impact on students' soft skills, such as self-reflection (Antonini Philippe et al., 2020), self-regulated learning (Nusseck & Spahn, 2021), and independence (Spahn et al., 2022). The participants in the present study found that students were able to advance their musical ability despite technical difficulties. They managed to implement creative pedagogies during emergency remote learning, such as asking for video recordings and using video references to illustrate their points.

Conclusions

The COVID-19 lockdown provided researchers worldwide with the opportunity to explore the application of online learning in a wide range of disciplines and institutions. The present study has aimed to discover Indonesian teachers' practices, strategies, and future perspectives regarding online music lessons. There was a consensus among participants that online music education should continue after the pandemic. They saw it as a practical option for both instrumental lessons and general music courses, with benefits that can outweigh the limitations. Music teachers have brought the practices they learned during the pandemic to their physical classrooms, such as hosting webinars, using video recordings for assessments, and utilising video references.

While the study provides an Indonesian perspective on emergency remote teaching and its continuation after the lockdown, it is essential to note several limitations. Due to the small number of participants and the qualitative method applied, the results may not be widely generalisable. Additionally, the professors in this study live in major cities in West Java, Indonesia, which has adequate technical support and infrastructure; thus, their experiences may not represent conditions throughout Indonesia. Finally, in line with other qualitative studies based on semi-structured interviews, the data may be subject to risks and challenges due to the participants' recall and the researchers' sensitivity to the data collected.

Further research is needed to compare how other teachers are applying post-COVID-19 teaching strategies worldwide. Researchers could also test the effectiveness of several approaches for online learning mentioned in the findings, such as using video recordings, learning modules, and video references. This new avenue of research could provide universities with a foundation to generate policies regarding online music education and provide feedback to software developers to add more updates specifically tailored to online music learning. Ultimately, the authors hope that research on online learning will provide an inclusive and sustainable music education experience for students worldwide.

Conflict of Interest

The authors disclose that they have no actual or perceived conflicts of interest. The authors have produced this manuscript without artificial intelligence support.

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Appendix 1

Interview: Teaching Music online after COVID-19 lockdown for teachers

Age: ____ Gender: M↑F↑Other↑

Main instrument played: _____

Instrument (discipline/s) taught: _____ Years of music teaching: ____

University degree (if any): _____

Any other conservatory diplomas: _____

Did you have previous e-learning experiences? _____

The COVID lockdown measures have transformed face-to-face instrumental music teaching into other modalities. This interview focuses on the aspects you learned during the lockdown period that you consider valuable and are still using now that the lockdown is over.

Questions

1. Please describe what have you changed in your professional line of work after having experienced online teaching during COVID?

2. What support for changing the ways of teaching did you have from your music school?

3. What did you learn during the COVID lockdown that are you still using in your lessons regarding designing and implementing a music lesson?

4. What did you learn during the COVID lockdown that are you still using in your lessons regarding the goals of a music lesson?

5. What did you learn during the COVID lockdown that are you still using in your lessons regarding the teaching methods of a music lesson?

6. What did you learn during the COVID lockdown that are you still using in your lessons regarding student assessments?

7. What did you learn during the COVID lockdown that are you still using regarding the organisation of exams?

8. What did you learn during the COVID lockdown that are you still using in your lessons regarding time management skills?

9. How have the COVID lockdown measures influenced your ability to reflect upon the music lesson?

10. What did you learn during the COVID lockdown that are you still using regarding the reactions of students?

11. What did you learn during the COVID lockdown that are you still using regarding collaboration with colleagues?

12. What are the most interesting aspects of teaching music online?

13. What are the aspects of the online music teaching that need to be improved?

14. Any other comments?