

Melody Beyond Keys: Navigating the Dynamics of Online Piano Proficiency Courses in Music Education

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Abstract

The transition to online piano proficiency courses in music education, spurred by the need for adaptability in digital environments, marks a pivotal change in pedagogical approaches. This study employs qualitative methods, analyzing interviews with educators and students to explore the dynamics of online piano learning. Findings reveal that while such courses enhance accessibility and offer new learning opportunities, they also present challenges, including technological barriers and the absence of direct physical guidance. The research underscores the importance of developing specialized online tools and platforms tailored for music education to support effective learning and engagement. Further investigation is suggested into the long-term impacts of virtual piano instruction on students' musical development. This study illuminates the complexities of online music education, advocating for innovations that cater to the unique demands of remote piano teaching and learning.

Keywords: *Online Music Education, Piano Proficiency, Virtual Teaching Methods, Digital Learning Platforms, Pedagogical Adaptation*

INTRODUCTION

The rapid development of economy and technology has improved people's living standards significantly. When basic needs of life were guaranteed, people started to pay attention to the cultivation of their offspring. This reason catapulted education into a trendy topic over the last couple of years. Music is one of the subjects in the educational field. According to Yang (2024), as an artistic course, music plays an indispensable role in fostering the all-round development students, including morality, intelligence, and aesthetics, etc. Moreover, Nawirzovich (2024) proposed that music education takes vital position in modern education in its unique way, especially in the formation of virtues in the hearts and minds of young people generation. Therefore, it is necessary for teachers to guide students to learn and appreciate music with a positive stance through the educational function and the characteristics of music.

Music is rather a broad field which offers many different courses focusing on different instruments and varied musical theories. In this regard, the piano proficiency course is one of the musical courses which are offered. Based on The Piano Proficiency Exam Review Book (Madden, 2020), in which the preliminary piano playing theories and skills are introduced encompassing posture, hand position, finger strengthening and note-reading. Students are required to play basic melodic harmonization, basic piano repertoire and acquire the basic theory of improvisation accompaniment. In short, this course is offered to students who major in music education in universities.

However, with the current development of online class, this has turned student's leaning way upside down. Likewise, the traditional teaching mode has been shifted from face-to-face to online. Zhang et. al (2024) indicated that it is a great challenge for the music major. For example, courses such as musical instruments cannot be taught solely via conventional approaches. Thus, teaching methods applied by lectures are innovated upon the evolution of teaching mode. Meanwhile, Biasutti & Schiavio (2021) have further reported that online class not only has a great influence on music teaching and learning, but also exerts impact on curriculum evaluation. Therefore, how piano proficiency class is taught online is still a very debated and unresolved issue. It calls for the teachers to continue exploring the most proper systems and approaches to give online piano proficiency courses remotely.

Piano proficiency course plays an important role in music education program. According to Ning et. al (2024),

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it is essential for students majoring in a music education program to master the basic theories and skills of piano playing. Moreover, students are also required to master the basic theories of melodic harmonization. On the one side, the theory of music is related, and the theoretical knowledge of this course helps students to understand other courses better. For example, when students learn the basic scales and chords in the piano proficiency class, it will be much easier for them to further their learning in composition, performance and so on. (Snell, 2021; Mehmood, 2023).

On the other side, apart from scales and chords, students also learn melodic harmonization in this course. Bohman (2024) proposed that as far as social needs and training objectives in music education program are concerned, piano teaching should place improvisational accompaniment at the center. The vast majority of those who graduate from music education program likely to be teachers, yet in some areas music classes are not yet well-equipped. In most schools, piano is the only available option for music classes, to provide students with good piano training and experience, the music teacher has to master both the basic piano playing skills and melodic harmonization skills.

However, the teaching methods of piano proficiency course are completely different from the face-to-face teaching. Schweder & Raufelder (2024) has suggested that environment is one of the factors that affect learning. The current application of online class was streamed drive teachers to record videos, with which students can imitate and practice accordingly. Furthermore, teachers carry out the evaluation of the class and set the assignments for students simultaneously online. Besides that, the piano proficiency course is given on a group basis. According to Tan (2023), the teacher has more than one student in the piano group class, hence the tailoring of pedagogies would support the teacher to look after all the students in the class which would guarantee the success of the group piano lesson. There are some advantages of group piano teaching, such as: students can develop their cooperation ability, have the opportunity to learn from other students, reduce stage fright and so on. Nevertheless, disadvantages cannot be overlooked. For instance, the teacher gives limited personal attention to each student in the group lessons. Thus, it is important for teachers to find an adjustable way to adapt all students into group piano teaching.

Recent study has reported that there are many factors that affect music teaching, and this field still confronts multiple issues (Karlsen, 2021). Under the online environment where lessons have to be given remotely, abstract subjects such as music are facing more challenges and obstacles that were never seen in the previous teaching mode before.

Most students have different levels of piano skills before entering university. Therefore, different levels indirectly affect the teaching of piano proficiency courses. Cui & Xie (2024) proposed that some parents were supportive in encouraging their children to learn music, while others discourage their children from studying music subject. Furthermore, Cui & Xie (2024) also stated that the change in policy has caused concerns among parents. Overall, there are two groups of opinions, with parents either being supportive and prioritizing sending their children to music classes after school and those who are less involved or even indifferent on this front.

For the above reasons, it occurred to teachers that students' proficiency in piano varies from one another. There are students who had studied the piano before entering university so that whatever taught in this class was deemed as way too easy by them. However, such classes are still challenging for students who do not have basic knowledge in piano playing. Since the piano proficiency course is taught in a group, it is totally different from the one-to-one teaching of the piano major. In the offline classes, students can be further divided into sub-groups of different levels to proceed with the learning. Whereas for teachers who give the lessons online, unforeseen external factors may change the duration of the class, which could place more hurdles to the teachers in delivering what is planned prior to such lessons. Therefore, teachers need to develop a teaching method that can be adapted to the whole group so as to address the learning needs of all the students in this class.

In addition, Leung (2024) pointed out that students' learning background prior entering the university would also serve as a variable to the efficiency of learning in the class. The content might be a piece of cake for those who have acquired basic knowledge in music, which could drive such students less active in the class. He (2024) further stated that the level of the students is more likely to shape the atmosphere of the class, which can be

spotted in the classroom. It might not be realistic for the teacher to call the roll and address every student in a single group class, which may squander the time for the lesson unnecessarily. Ever since the start of distance learning, teachers have lost control of their students' activity in class. As a result, the students with in-depth basic knowledge or skills are less likely to be serious and active in piano proficiency class given online.

When students take the piano lessons online at home, some of which do not have piano at their disposal, which makes difficult for them to practice and translate the knowledge delivered in the class into applicable skills right after the lesson. Chawake (2023) proposed that piano lessons call for a lot of practice and intensive preparation after class. The absence of such facilities also makes it rather challenging for students to bridge the distance between theories and practice. Therefore, suffice it to say, practice is an indispensable part of piano proficiency course.

Another factor moderating the curriculum is the insufficient time provided by the university. Rodriguez-Ascaso et. al (2024) reflected that to address the basic needs of students, sufficient time should be given. Students are only given two hours to learn the course on a weekly basis, with other time spent on practicing. Two hours a week is a very limited time for teachers to teach new knowledge. At this stage, teachers ought to confirm whether the equipment of online classes can be utilized properly at the outset. Inevitably, time might be wasted on this front as well. For students lacking the facilities to practice, the time of studying piano proficiency course is further squeezed. As a result, the lack of time and practice in the course makes it hard for students to memorize the basic piano playing skills recently acquired.

Recent study has also unveiled that online class is also influenced by the connectivity of the network as well as the online teaching platform (Budur, 2021; Stambekova et al., 2023). These can be seen especially during the special period of COVID-19 where online classes have become a bridge connecting teachers and students to realize the normal operation of courses. At present, the network environment appears to be another prominent variable affecting the online piano proficiency class. Some external conditions are beyond the control of teachers, such as rainy weather and sudden power cuts, which may affect the network and connectivity to a great extent. These factors may prevent students from attending the courses on time and when conditions allow them to return to the online class, they might have missed the parts where the key knowledge was delivered by the teacher.

The network problems described above do not only afflict students, but teachers can also be victims as well. More importantly, virtual online classes are rather challenging to formulate the standard for evaluating students' marks. To make matters worse, given the lack of musical equipment, teachers also need to grapple with the assigning setting and the instruction of practical skills via virtual channel.

On the other hand, there are music teachers who don't have abundant experience in teaching musical instrument online. Students and teachers meet through the screen, and when postures of students are incorrect, the teacher can't rectify them right away by hands-on. It is difficult for teachers to manage online classes well, and teachers are unable to ensure whether students acquire this knowledge and the quality of their learning.

Therefore, the purpose of this study is to discuss the implementation of piano proficiency course in the existing music education program. This includes the teaching methods, the environment, and the influencing factors of this course. It is also concerned about the learning outcomes of the students in piano proficiency course.

The follow is objective of this study:

1. To investigate the strategies for piano playing used in piano proficiency online class.
2. To investigate the student's learning outcomes for piano playing in piano proficiency online class.
3. To investigate the limitations for piano playing in piano proficiency online class.

The goal of this study is to investigate the strategies used in online classes and evaluate the perceptions and improve suggestions of students in piano proficiency courses. It is anticipated to explore the suitable methods through the analysis of the limitations that affecting the course. By learning the piano proficiency course in the university, students can apply skills in playing accompaniment in music classes when they choose to serve as

teachers in the future. This course not only trains students the basic piano skills but also equip them with the basic knowledge to teach the next generation.

LITERATURE REVIEW

As a compulsory course in music education, piano proficiency course is mainly influenced by teaching methods, teaching content and teaching mode. In this literature review, the views of previous articles on each of the factors covered by the course will be described.

Previous theories of Online Education

Theory directs the teachers in providing suitable instructions that adapts the needs of students. Teaching without a theory is like a machine running without instructions. The research was based on the theory of online education and online collaborative learning.

Nowadays, we have marched into the era of Web 2.0 and Industrial Revolution 4.0 (IR 4.0). Majid (2021) reported that Web 2.0 is a new era of developing information technology via applying the platform of Web. Ahmad et. al (2024) stated that Industrial Revolution 4.0 can be seen as the common application of information technology to promote industrial change which is also an update of intelligence. These two strands of developments thrust our lives into more advanced era with the latest information and digital technology. We can clearly feel that it is not only transforming the basic structure of our lives, the way how education is also under evolution.

As far as teaching and learning is concerned, Web 2.0 brought technology into education and Industrial Revolution 4.0 catalyzed the transformation of Education 4.0. Some researchers (Dewi et. al, 2021) stated that Education 4.0 refers to the internet is seen as the information carrier and transmission pipeline, with intelligent terminals and mobile intelligent terminals formulating the interface of the human and computer interaction, and the goal of enriching learners' spiritual experience and promoting their mental development. Therefore, the emergence of Education 4.0 elevated the popularity of online education. Meanwhile, the development of online has accelerated the development of the theory for online education.

According to Roy (2024), online education is a model of teaching and learning carried out through the network, which transfers the offline and face-to-face classes to the digital universe. Some researchers (Roy, 2024; Thirumoorthy & Sivakumar, 2024; Naqvi et al., 2023) proposed that online education boasts the features of resource sharing, which is not only a refreshing viewpoint on distance learning but also a convenient channel to access education in this digital era. Gombkötő et. at (2024) presented the following advantages of online education:

1. Online education is able to pool abundant resources and facilitate the collection of miscellaneous resources and information from different fields for students.
2. Online education is regarded as an effective tool which can reduce the cost of education.
3. Online education provides an easy way to attend the classes free of limits on the location and time, as long as students could access the Internet.

With the above advantages, online education also contains some disadvantages on the flipped side. Based on the study reported by Gombkötő et. at (2024), online education has the following disadvantages:

1. Students may not be able to focus on a screen for a long time, and they may be easily distracted by other social media platforms and websites during the online classes.
2. Students cannot interact with peers in the online class, which could grip them with loneliness and boredom.
3. The network and connectivity of the online classes could be unstable.

With the development of era, the piano proficiency course adopts the form of online class. That is to say, teachers and students not only become proficient in using it, but also need to get used to online education.

The class creates a setting for teachers and students to interact with each other. In fact, it is also a kind of cooperation between teachers and students. Winson et. al (2024) stated that online collaborative learning (OCL) is a way of encouraging and supporting students to learn collaboratively. As piano proficiency course is a group class, which calls for collaboration between teachers and students and among the latter. The theory of online collaborative learning can be taken as a guide to study online teaching and learning, which would also be conducive to reinforce the increasingly important role of online education.

Group Piano Teaching of Piano Proficiency Course

Piano proficiency course is a class of group piano teaching. Zhang & Gao (2024) stated that group piano teaching is a classroom teaching mode suitable for a large number of students. To date, group teaching mode has been widely used. Meanwhile, Group teaching provides a platform for students to communicate with each other, and also creates a strong collective atmosphere of music learning environment.

According to Wang (2021), to catch up with the latest development of the society, group piano teaching in universities have been developed and innovated. Compared with the traditional one-to-one piano teaching method, group piano teaching can solve the problem of too single teaching form. It can enable students to learn from peers in teaching and stimulate the enthusiasm of learning.

Apart from that, Bohman (2024) proposed that group teaching of piano proficiency courses underlines the systematics and integrity of teaching. Wu (2024) stated that systematic is the combination of teaching elements into a whole with certain teaching functions so as to achieve the teaching purpose, and integrity shows the complete teaching approach. Therefore, in class, students are able to observe the performance of group members and further reflect upon their own cons and pros in learning to adjust their learning methods.

To add on, through the application of group piano teaching, effective information can be transmitted, and students' knowledge could be broadened. Moreover, this model of group piano teaching is also conducive for students to actively explore and identify problems, thereby makes the classroom atmosphere lively.

Online Classes of Music Teaching

Online classes have shattered the traditional teaching model and also provoked teachers to rethink the teaching of musical instruments. Using the internet to develop the interaction between teachers and students is the change and characteristics of this era. Online classes will gradually innovate and become a trend of the new era.

Chen (2024) explained in the research that it is challenging and daunting to implement piano teaching activities on social media online platforms, which undoubtedly poses impact on practical teaching. Teaching theoretical knowledge in online classes can present a variety of different approaches and broaden students' horizons. However, the online class of musical instruments requires high interactivity in the actual operation process, which is more often limited.

Online classes have two sides which include both advantages and disadvantages, the digital age cannot be separated from the development of network teaching. It is the need for teacher's continuous innovation and reform of network teaching. Maheswari (2024) explained that online class creates new cross-border and cross-language connections in the form of digital media, promotes the expression of music, and connects people closely.

METHODOLOGY

Research Design

This research design laid emphasis on the data derived from qualitative research method. While the description of the phenomenon was emphasized therefore the researcher planned to use interview as a kind of survey in this research to dissect the implementation of online piano proficiency course in the music education program in UPSI. The researcher incorporated and revamped the interview questions from Biasutti (2021) and Young (2016), According to them, the questions can be used in either a survey or an interview. In addition, the semi-

structured interview of qualitative method was developed in this research through arranging a one-on-one conversation through online interviews were adopted in this research. In order to acquire valid data of the result, it is essential to define the suitable sampling to represent the whole population. In this research, non-probability sampling is adopted as this research is underpinned by qualitative method. The sampling of this research is mainly composed of two parts. Teachers who teach piano proficiency course in university and selected music education students of degree level who enroll in this course from faculty of music. Therefore, n=5 participants were selected through non-probability sampling to participate in this research.

Data Analysis Method

Content analysis method will be used in the first part of the interview because it aims to analyze data from the specific questions of the interviews. Hence, the researcher used coding in the research. The first step is to sort out the contents and questions of the interview and list the categories. The researcher divided the content of interviews into four categories which includes information of course, teaching methods, problems and continuous assessment. Next, based on the four categories, the researcher classifies the answers of interview questions and coded them under each category. Finally, a figure by Microsoft Word 2010 was created and the information from the figure shows the data of the first part of the interview in a crystal-clear fashion.

Furthermore, thematic analysis will be used in the second part of the interview since participants will be interviewed in accordance with the topics and questions assigned by researchers. The first step is to classify the topic, followed by the sorting of the questions and the answers according to the topic. There are two thematic analyses in the second part of the interview which includes learning outcomes and limitations. Within the thematic of learning outcomes, there are four sub-thematic including produce interest, learn useful skills, study other music course easier and use it in future career. Within the thematic of limitations, there are six sub-thematic including background of piano playing, class model of group piano online lesson, communication of online class, technology, practice and the time collection of class. The second step is to make a figure of the classified information by Microsoft Word 2010. The last step is to transfer the information of the figure into words so as to explain the data of the second part of the interview in a clear view.

RESULTS

Analyze Interview Data of Teachers

The structure chart of all the codes and the categories produced from the semi-structured interviews was presented in Figure 1. There were four categories found on piano proficiency course in the structure chart-based form the interview as below:

1. Information of course (4 codes)
2. Teaching methods (2 codes)
3. Problems (3 codes)
4. Continuous assessment (2 codes)

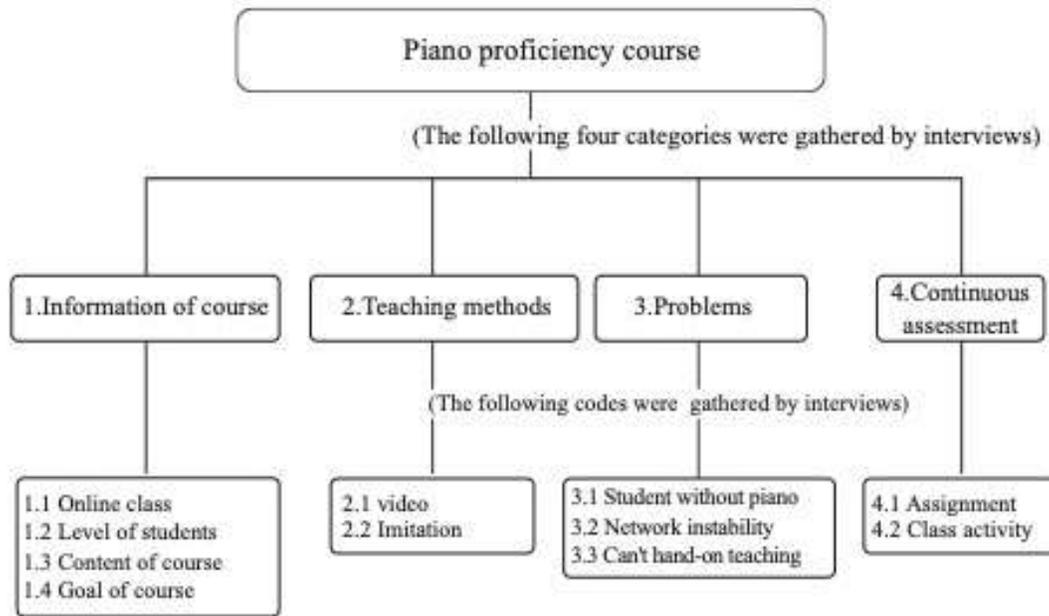


Figure1: The figure of all codes and categories produced from the semi-structured interviews of teachers

The first category of Part 1 as shown above is 1) information of the course and the four codes included. The four codes were 1.1 - online classes; 1.2 - level of the students, content of course and goal of course. In the class, students are required to enroll one semester of two credit hours weekly in a piano proficiency course. Online classes were conducted in the form of Google meetings. Based on the interviews the teachers mentioned that the online piano proficiency course emerged as a new challenge in teaching, as they were confronted with assorted barriers. Some of the data collected reflected the hurdles on multiple fronts 1) classes are more time consuming than face-to-face teaching; 2) it is difficult for teachers to draw up the curriculum plan of online piano proficiency course to ensure the time of class; and 3) controlling the atmosphere of the class via distance communication with students. Due to the various hassles of online classes, it is barely possible to group students according to their level like before. Teachers have to regard all the students as the beginner of this course.

The content of this course focuses on posture, hand position, finger strengthening and note-reading. Teachers selected suitable repertoires for students in this course. The teaching contents of the piano proficiency course resulted in the goal of this course. Therefore, the goal of this course was based on the Pro-Forma of the subject is to teach the students to know about basic skills and theory in the piano proficiency 1. They were able to learn a basic level of melodic harmonization through this course.

As for the second category in Part 1, teaching methods were explored through interviews as well. This category consisted of two codes which included video and imitation. Teaching methods are tailored to the teaching model, so teaching approaches were changed based on the teaching context due to the shift from face-to-face class to online class. Teachers mentioned that video became the most important tool, and they would prepare videos for students to watch in the class which would also enable them to review after class.

Teachers recorded the video of their playing which became the primary teaching tool, and it also became even more important under the online environment. Students used video playing as a basis to learn piano. Hence, imitation has turned into one of the main approaches for students to get knowledge of piano playing. By imitating their teacher's video, they can learn and practice the skills in a convenient way.

The third category in Part 1 - 3) Problems; three codes were identified from the interview conducted. The first code is students without piano, the second code is network instability and the third code is that teachers could not use hands-on teaching. Teachers described that the biggest problem in online piano proficiency course is

that students do not have piano at home. This has resulted in differing expectations from the expectations of reality. In addition to the biggest problem of all, network instability was also an unpredictable problem. Network is an indispensable tool for the interaction between teachers and students in online courses. Sometimes, the lag of the network fails to synchronize the screen sharing, which consumes more time in the class. Meanwhile, this factor also sometimes leads to students' absences. Furthermore, teachers also pointed out that "distance course" caused them can't conduct hands-on teaching. As it known to us, piano proficiency course is a practical subject which needs to combine brain and body. Matzek et al (2024) believed that hands-on teaching will facilitate students to understand and rectify mistakes immediately with the assistance from the teacher aside.

The last category in Part 1 showed a continuous assessment in piano proficiency course that contained two codes which are assignments and class activities. According to Calderon et al (2024), continuous assessment is a way of course assessment which does not depend on examination results. It assesses the cognitive, emotional and spiritual aspects of students. Continuous assessment is the comprehensive assessment approach and is more suitable for music courses. Teachers proceeded with the assessment of this course based on their assignments and class activity. They mentioned assignments and class activities are student's feedback to this course.

Analyze Interview Data of Students About Learning Outcomes of Piano Proficiency Course

As explained in earlier, this research used an anonymous indicator where the names of the five students will be replaced with numbers from one to five. The researcher used thematic analysis approach to analyze the data from interviews of students. Regarding the content of the interview on the theme of learning outcomes, and the data from the interview are classified into four codes, which are: 1. Produce interest; 2. Gain useful skills; 3. Study other music courses easier and 4. Use it in your future career. The figure shows it in a clear vision as follows and the tables for each code illustrated the comments of participants in detail.

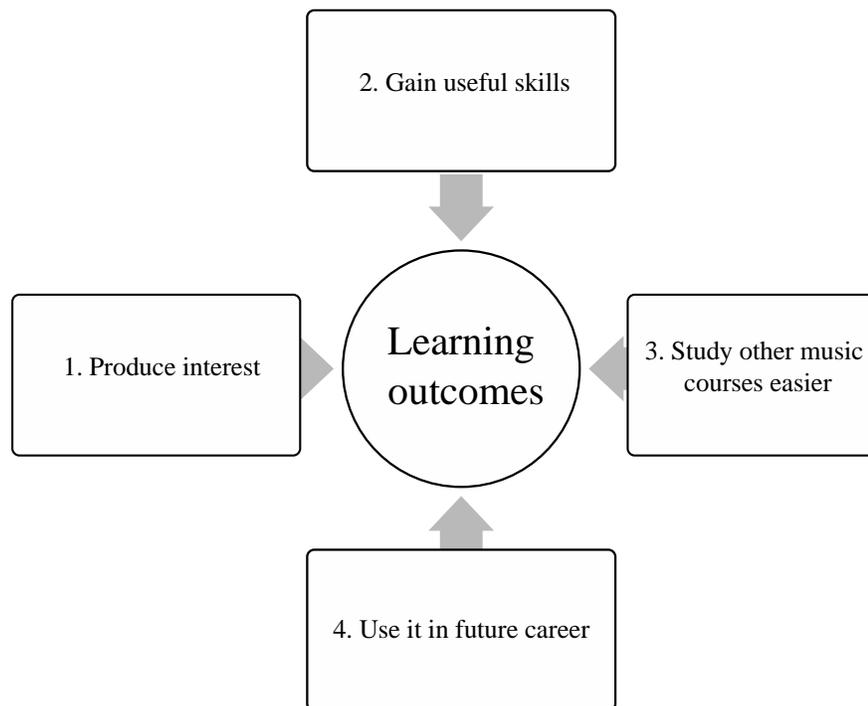


Figure: The figure of all codes about the analyzed data was from interview of students on the theme of learning outcomes

Table 4. 1 Participant’s comments about interest of piano proficiency course

Participants	Comments
1	This course introduced me to piano and kindled my interested in it.
2	This course made other music classes appealing to me.
3	After completing this course, I still have no interest in piano.
4	I would like to further study piano playing.
5	I want to learn more about piano.

As is shown in Table 4.1, there are participant’s comments about interest of piano proficiency course. Four of the participants illustrated that the piano proficiency course let them produce interest in piano. It makes them want to further their study in piano playing and also would like to plunge into other music classes. However, one of the participants stated that the class did not arouse the interest in piano learning. From this table we can generally know that most students produce interest in piano playing after taking piano proficiency courses.

Table 4. 2 Participant’s comments about gaining useful skills

Participants	Comment
1	I learned the piano skills I needed.
2	I did not develop sufficient piano skills in this class.
3	I gathered useful skills from this class.
4	I did not learn the skills that were useful to me.
5	The skills that I learned are helpful to me.

Table 4.2 displayed the participants' comments about gaining useful skills. It is apparent that two of the participants stated that they did not receive useful skills by learning this course. On the contrary, three participants showed that this class provided useful and needed skills of piano playing to them. By extension, this class does offer some needful and helpful skills to them.

Table 4. 3 Participant’s comments about gaining useful skills

Participants	Comments
1	The music theory provided in this class helps me study other music classes.
2	The other course is still the same for me.
3	I learned other music lessons faster than before.
4	It does not benefit me to study other music classes.
5	Thanks to this course for making it easier for me to understand other music courses.

In Table 4.3 above, there is a clear vision of participant’s comments about studying other music courses easier. According to the participant's feedback, it is obviously seen that three of them indicated that the piano proficiency course facilitated the study of other music subjects. Meanwhile, two participants stated there was nothing particularly helpful about this course in their exploration of other music lessons. The results of this table showed that most students held that the piano proficiency courses help them to study other music classes easier.

Table 4. 4 Participant’s comments about use it in future career

Participants	Comments
1	What I learned in this class will help me in my future career.
2	It will benefit me to be a music teacher in the future.
3	Maybe I'll use it a little bit in my future career.
4	I do not think it will be used in my future career.
5	It's one of the skills I need to be a music teacher.

The Table 4.4 above described the participant’s comments about using it in future careers. What can be discovered is that three of the participants believed that the piano skills that they learned will be used in their future career. It also can be clearly seen that two of the participants in this Table felt that the knowledge gained in this course may not be used in their future career. Therefore, it can be summarized that most students think that they will use the piano playing skills from this class in their future career.

Analysis Interview Data of Students About Limitations of Piano Proficiency Course

A thematic analysis approach was applied by the researcher to analyze the data from interviews of students. The content of the interviews is classified into six codes around the thematic of limitations, following which a table was presented for each code to show the comments of the students.

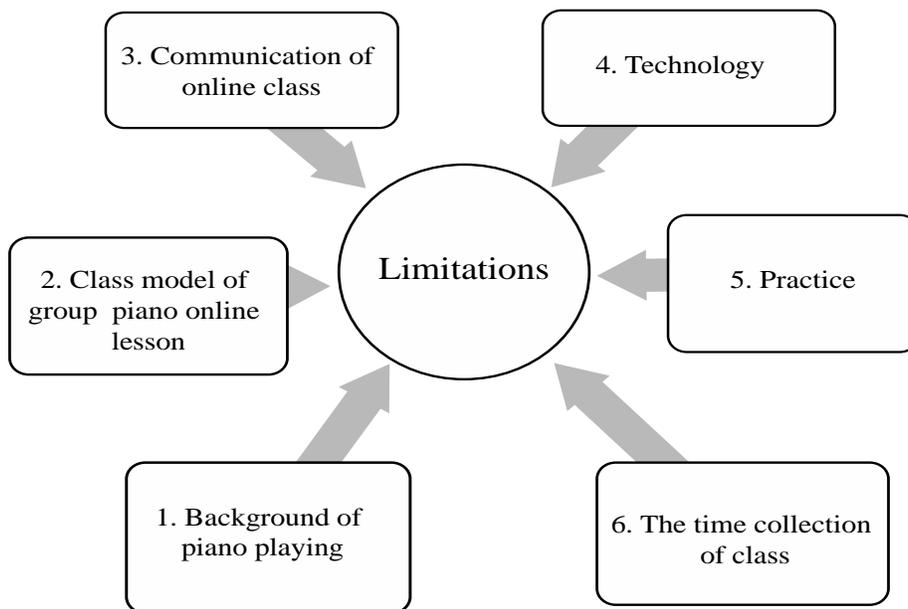


Figure: The figure of all codes about the analyzed data was from interview of students on the theme of limitations

The figure of six codes around the thematic of limitations from the semi-structured interview of students was shown in the Figure 4.3 above. The six codes from interview are as listed as follow:

1. Background of piano playing
2. Class model of group lesson
3. Communication of online

4. Technology
5. Practice
6. The time collection of class

Table 4. 5 Participants’ background of piano playing

Participants	Comments
1	I didn't take piano lessons before this class.
2	It is a new knowledge to me.
3	I didn't study piano before this class.
4	I learned piano before this course.
5	I didn't know how to play piano before this class.

As Table 4.5 shows the background of piano playing from participants, we can see that participant 4 had studied the piano before this class, and the others had not. It can be understood that most of the students had no piano playing background prior to enrolling this course.

Table 4. 6 Participant’s comments about class model of group piano online lesson

Participants	Comments
1	The group class provides an opportunity to get to know other students.
2	I haven't taken group piano lessons before, so I need time to adapt to group instrument teaching.
3	I got little practical guidance from teachers through group lessons. Each student cannot play in turn in the class so the teaching method of online group class is not the best fit for me.
4	I have taken group piano classes before this compulsory course, but the teaching materials in this group class are not suitable for me.
5	I have taken group instrument classes before so I can get used to group piano teaching.

Table 4.6 revealed the comments from participants regarding the class model of group piano online lessons. Three of them had never attended a piano group class, and two of them had attended the piano group class. This model has some advantages such as it helps students to make friends with other classmates. However, it also has some disadvantages especially in the online class at present. Participants indicated that the teacher has a limited amount of time for each student. Some of them put forward that the teaching methods and materials are not suitable for every student. The majority of participants think that the class model of group piano online lessons had more drawbacks than the shining points from Table 4.6.

Table 4. 7 Participant’s comments about communication of online class

Participants	Comments
1	I can communicate well with the teachers whether it is online or not.
2	I am able to take the initiative to communicate with the teacher in class.
3	I am very willing to communicate with the teacher but will be affected by the online class.
4	In class, I do not actively communicate with the teacher.
5	I would like to communicate with my teacher.

According to Table 4.7, what is clear in this table is that four participants took the initiative to discuss with the teacher, and only one student was unwilling to communicate with the teacher. However, one of them mentioned that online classes affected interactions with teachers. This can be understood as most students would like to take the initiative to interact with teachers.

Table 4. 8 Participant's comments about technology

Participants	Comments
1	It had a big impact on me, as the district restrictions prevented the use of Google meet so that I was sometimes absent from class.
2	I can adapt to the online piano class very well.
3	The lag of the Internet sometimes makes me unable to understand what the teacher teaches in online class.
4	It was difficult for me to capture the main points and follow the teacher's step through a laptop.
5	Lack of online class platform, because only use Google meet.

Table 4.8 provides us with the information of participant's comments regarding technology. From the comments, it is apparent that half of the participants thought the technology affected the piano proficiency course and half of the participants thought they could adapt the platform to have class. Most of the comments were related to improve technology and to add various platforms for piano proficiency online class.

Table 4. 9 Participant's comments about technology

Participants	Comments
1	I have a piano to practice after class and assignments are suitable for me.
2	When I practiced after class, I found I cannot correct mistakes by myself since assignments are not easy for me.
3	The materials of practice are not appropriate.
4	It is easy for me to practice after class.
5	I can complete the practice required by the teacher

The Table 4.9 above shows participant's comments about practice. From their perspective, we can see that all of them practice after the class. However, two of them deem the materials of practice are not suitable especially when they self-practice, they do not know how to correct their mistakes. The other three of them felt that practice could be done well.

Table 4. 10 Participant's comments about the time collection of class

Participants	Comments
1	The time collection for this course is enough for me.
2	It is impossible for us to learn the skills in detail because we have only one semester to learn this course.
3	The time of each class is too short to learn limited knowledge.
4	I think the time collection of this course both in each class course and semester are not enough.
5	The time collection of this course is enough for me to learn piano.

The Table 4.10 above shows participant's comments about the time collection of class. According to this table, it can be seen that three of the participants thought the time collection of the piano proficiency course was not enough. Moreover, two of them even suggested that taking this course for just one semester is too short. Two

of participant's thought the time collection of the piano proficiency course is just sufficient at present. As can be seen from Table 4.10, most participants believed that the time of this course needs to be increased.

To sum up, the researcher gathered participant's comments from six codes about background of piano playing, class model of group piano online lesson, communication of online class, technology, practice and the time collection of class, which are around the theme of limitations.

CONCLUSION

Based on the Research Question 1: What strategies for piano playing are used in piano proficiency online class? The researcher found something as follows after analyzing the data from interviews with teachers and gaining the findings. From the first category of the basic information of piano proficiency course, the researcher found that when online classes face troubles, teachers need to be better prepared before their classes. For example, Hall (2020) suggested that teachers need to give related materials to the students before the class as it can help them to reduce confusion when they self-learn. Keeler (2020) indicated that teachers can adjust the atmosphere and make the students active through the interactive games in the class. During the interaction, teachers can call out the student's name to confirm whether they could follow what is taught during the class. Teachers must treat all the students the same during the class and use the pro-forma as a guide to teach them.

Through analyzing the data of the second category of teaching methods, the researcher found that even a subject as abstract and practical as music is permeated by technology and software. Li (2020) mentioned that the diversification of instructional media has gradually become a trend of music teaching. In this regard, it is important to develop an online teaching platform specifically for music courses.

From the third category of the problems analyzed, we can see that the present problems are caused by external factors which include students without piano, network instability and teachers cannot hands-on teaching. Aboagye and Appiah (2021) reported that the network instability led to students' absence, which causes the students not able to be part of the teacher's teaching plan. Atmojo (2020) proposed that teachers used their personal time after class to try their best to help the students in their learning process which in order to achieve the desired results of the course, The researcher also found that the assessment used were the same as face-to-face class after analyzing the last category of continuous assessment.

Considering the discussions above, the strategies for piano playing are used in piano proficiency online class was described by teachers in the specific insights. Osman (2020) stated that teachers gave lessons through technology platforms and made full use of various resources to adapt the new class model. The strategies they used provided new opportunities space for to define curriculum plans, teaching approaches, tools and assessment criteria.

Based on the Research Question 2: What are the student's learning outcomes for piano playing in piano proficiency online class? After the researcher gathered the results of the analyzed data regarding the limitations for piano playing in piano proficiency online class, the findings indicated that most participants did not have a background of piano playing. It is for this reason that they looked forward to gaining knowledge and skills about piano in this course. During the online class, teachers used videos which were prepared before classes for the students to imitate when they are practicing by themselves and piano proficiency online classes applied to the group piano teaching model as well. However, the group piano teaching model makes the teacher's time limited for each student. Boxu (2020) proposed that the mini-class can promote the communication between teachers and students so as to achieve the aim of individual teaching. From this perspective, universities can limit the number of students for each class and divide students into multiple classes to carry out stratification and mini-class teaching.

Apart from that, the findings illustrated that most students volunteer to communicate and interact with their teachers and classmates, but are unable to keep up with their teachers' progress because of the impact of internet technology in online classes. For example, students can't use Google meet in China, and they have to sign up for a VPN to join the class. However, the instability of VPN has affected the learning outcomes because of the connection problem. This is also part of the reasons students cannot follow the steps of teaching

because of the network problem. Biasutti (2021) stated that it is important to develop different online teaching platforms. In fact, the technical problems that the participants faced can be improved in the way that universities offer different alternative online teaching platforms for students to have online classes.

Furthermore, the findings stated students meet problems when they self-practice due to the time collection of this course is not enough. Li (2024) mentioned that the adequate time collection of classes is essential. Regarding this problem, universities can adjust curriculum design to increase the time collection of classes, such as twice a week or take the course for two semesters, or travel a bit farther by setting up a variety of auxiliary courses on piano proficiency courses for students.

To sum up, it is suggested that universities can introduce mini-class models as much as possible. In order to ensure that all students can attend the class, a variety of online music teaching platforms should be provided for students rather than merely Google Meet. And last but not least increase the time collection of piano proficiency courses.

Based on the Research Question 3: What are the limitations for piano playing in piano proficiency online class? and according to the results of analyzed data about the student's learning outcomes for piano playing in piano proficiency online class, the findings stated that most students produced interest in piano playing and also inspired them to learn music. Students learned useful skills of piano playing from a piano proficiency course. This course guides them to study and understand other music lessons easier, and what they learned will be used in the future career.

However, there are some students who hold the opposite view since they think the materials of piano proficiency courses are not attractive enough. Grewal et. al (2024) proposed that the development of teaching materials should cater to the learning the needs of the subject. From this perspective of the piano proficiency course, the researcher suggests that curriculum design and teaching materials should be updated frequently to keep students curious and fresh about the piano proficiency course.

This research focused on piano proficiency course, and the findings provide recommendations of the phenomena proposed in the research questions. The purposes of this research were to settle or highlight the problems encountered during the current stage of piano proficiency online classes, and the researcher wishes to contribute useful information for further research to improve the teaching and learning of piano proficiency courses in music education program.

Futhermore, this research highlighted the implementation of online piano proficiency course in music education program. The development of online class has led to the necessity of the online class model, which made teachers and students encountered a different set of challenges and problems of the online piano proficiency course. In spite of those issues have not appeared in the face-to-face classes before, it has offered new experiences for both teachers and students in the piano proficiency course. In the meantime, it also provided new opportunities and soil to have reflection and development to improve the piano proficiency course in the future.

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