

## Principle of Educational Management in Hybrid Learning

Xiong Jia<sup>(✉)</sup>, Yudi Fernando<sup>2</sup>

<sup>1</sup>Department Faculty of Education and Liberal Studies, City University Malaysia, Selangor, Malaysia

<sup>2</sup>Department.Faculty of Industrial Management,Universitiy Malaysia Pahang, Pahang, Malaysia  
147757134@qq.com

### Article Info

#### Article history:

Received Jan 16, 2024

Revised Jan 26, 2024

Accepted Feb 8, 2024

#### Keywords:

Hybrid Learning

Educational Management

Musical Instruments

Learning mechanisms

### ABSTRACT

Hybrid learning occasioned by the introduction of the traditional face to face instruction with online learning mechanisms, has developed as a prominent educational approach in response to the developing landscape of teaching and process of learning. The professional management of hybrid learning ecosystems is important for ensuring best students' engagement, the outcomes of learning, and the general success. The study investigates the principles of educational management of hybrid learning environments highlighting basic consideration and methods for the management. Based on the established principles of educational management, such as effective communication, support system, assessment and curriculum patterns, this study investigates how these principles apply in the realm of hybrid learning. In addition to that, the study explores the contribution of technology in helping management processes and improving student experiences in hybrid environments. Understanding and adopting the tenants of educational management in hybrid learning setups, educators can come up with dynamic, inclusive, and effective learning experiences that satisfies the diverse demands of the students and promote academic excellence.

*This is an open access article under the [CC BY-SA](#) license.*



### Corresponding Author:

Xiong Jia

Department: School of Music and Dance, Yi chun University, Yichun city, 336000, China

Email: 147757134@qq.com

## 1. INTRODUCTION

The concept of educational management in hybrid learning includes a different approach to organizing the dynamics of both traditional face to face instruction and online learning medium. Hybrid learning continues to attract more attention in educational activities, effective management is now very important to make sure that seamless integration of diverse teaching approaches and the achieving of a desired learning outcomes. This background offers a brief overview of the basic principles underscoring educational management in hybrid learning. Prioritizing the importance of strategic planning, innovative approaches, technological integration, and continuous support methods. Understanding and employing the laid down methods, management can navigate the technicalities of hybrid learning ecosystems and create a commitment that is engaging, and inclusive educational experience for students.

An active blended plan is used for the purpose of learning management in the field of music. The foundation for this plan is a hybrid learning architecture, which serves as the foundation for the active blended plan. The index of conformity is intended to serve as a representation of the plan of management for the musical education system within this framework. A vast quantity of convincing evidence can be found to support the National Education Plan. In the realm of music, the term "content" refers to a finished composition that makes a significant contribution to the guidelines for organising the students' learning experience. This contribution

can take the form of a lesson plan or an assignment. They are obligated to direct most of their attention towards the content associated with music. The educational management of the music content that is appropriate for the learner's level of education is arranged at each stage of the learning process. This occurs throughout the process. The way in which they put their training into practice ought to make appropriate use of the characteristics of the things that are being researched. They won't have any trouble putting it into practice, which is important because doing so will help them learn more about music in general.

The study seeks to investigate the principle of educational management in hybrid learning because the extant literature has not yet covered it. There is no sufficient research on the activities of educational management as regards hybrid learning. Thus, this study intends to broadly cover it. To achieve that, the following research objectives have been established:

1. To investigate the impact of hybrid learning on educational management.
2. To investigate the contributions of hybrid learning on educational management.

To this end, the following research questions were identified:

1. What is the impact of hybrid learning on educational management?
2. What are the contributions of hybrid learning on educational management?

The study aims to contribute to the field of educational management and hybrid learning through the investigation of the potential relationship that exists between them and the contribution this relationship may offer to the two variables.

## 2. LITERATURE REVIEW

### 2.1. Principle of Educational Management in Hybrid Learning

This course of study covers the subject matter of comprehensive musical education. This education can be segmented into a few different parts, such as the content part of music, which is composition, and the other part, which is musical literature, which includes activities such as reading, creating, moving, listening, playing, and singing. Both parts can be broken down further into even more subparts. Both components can be broken down even further into subcomponents that are even more specific. Each of these components has the potential to receive additional subcomponents that are added to them. At the elementary level, teachers are tasked with educating their students in music in accordance with a curriculum that has been established (Belt and Lowenthal, 2021), and they are expected to provide their students with the full experience.

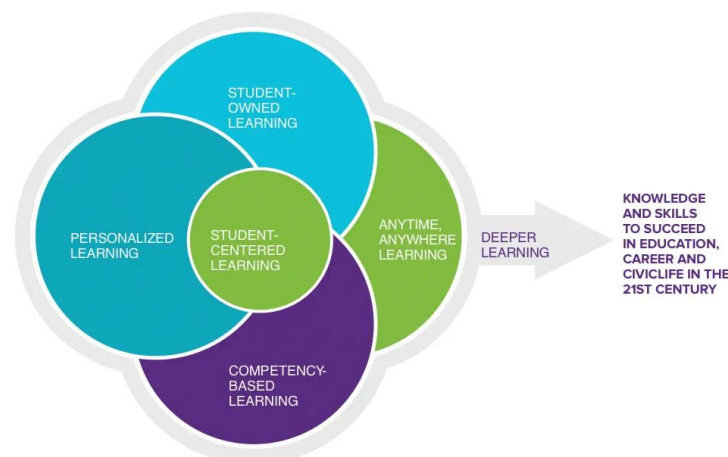


Figure 1: Competency based learning

Students are expected to engage in critical thinking and demonstrate a wide range of skill sets based on their knowledge of information, technology, and the media. This is one of the expectations placed on students by educators. The management model of learning and teaching must go through significant shifts in addition to being improved upon. It is of the utmost importance for a student to incorporate numerous types of technological equipment into their typical day-to-day activities. The implementation of these technologies has led to a transformation of the educational system and the opening of many new educational opportunities for the students enrolled in it. This has resulted in the opening of a great deal of new educational opportunities for the students who are enrolled in this system. In addition to this, they need to change the ways in which they

teach to accommodate not only the beliefs of their students but also the beliefs of the teachers concerning the educational experiences of the students.

This is necessary for there to be harmony between the two sets of beliefs. Both the hybrid learning framework that the actively blended learning management system is based on and the actively blended learning management system themselves are essential in the field of music. The researchers were able to reach this verdict once they realised the significance that was mentioned earlier in the sentence. Students can benefit from their development as musicians by receiving comprehensive content, up-to-date and interesting instruction, and interesting learning activities through a variety of instructional approaches in the field of music. These things benefit the students' development as musicians and can be provided by the various instructional approaches.

## 2.2. Chances and choices of students

Researchers in the field of music education use a variety of methodologies to investigate the long-term effects of receiving a music education; one of these methodologies is the analysis of the students' musical preferences. In this study, the researchers focused on primary aims in music education, such as how music plays an important role in school lifelong attitudes to music and involvement in music, discuss the strength in music education, during childhood lifelong engagement in impact of learning, and many more of these primary aims. One of the primary goals that the researchers wanted to accomplish was to investigate the significance of music in the development of lifelong attitudes towards music as well as involvement in music during school. This education can be obtained in a wide variety of settings, including churches, schools, and even in the homes of individuals themselves. They are required to discuss the aspects of making music outside of school, as well as learning on one's own and having supportive musical environments, in the surveys that are given to them.

In addition to this, we inquire as to whether they are surrounded by musical environments that are encouraging. It is also beneficial for the development of reasoning, in addition to being beneficial for the development of language skills. Students who begin their formal education at a young age and receive musical instruction will have a head start when it comes to the development of the parts of the brain that are associated with logic and language. These students have put in a substantial amount of effort to learn it so that they can significantly improve their performance on the assignments they have been given. The purpose of Chances and Choices in Music Education was to investigate the Long-Term Effects of Music Education, which successfully accomplished this goal. The text is beautifully written and contains a lot of information. The purpose of this study was to investigate how students are impacted by music education throughout their entire lives. The Pitts Group is responsible for ensuring that their responses are written per the six categories of musical influences: lifelong involvement in music, music outside the classroom, parent attitudes regarding music, classroom music, teacher attitudes regarding music, and music played in the home. It has been demonstrated that students who listen to music on a regular basis experience a reduction in the symptoms of anxiety and depression, in addition to an increase in their levels of positive self-esteem. Students can learn in various ways and excel in music classes when their teachers utilise some of the strategies, such as visual, kinesthetic, and auditory learning (Keri, et al. 2019).

In their study titled "choices and chances," the researchers demonstrated the influence that formative musical experiences have as well as the purpose they serve. They also evaluated the extent of music education in a variety of different types of music learning, which is important because it lays the groundwork for an interest and involvement in music learning that continues throughout one's life. It is anticipated that the students will have a manageable amount of difficulty encoding their music into their memories. Children may find it easier to remember certain information with the assistance of music, such as by using well-known melodies to aid in the memorization of facts or by incorporating music into their resource presentations. For example, children may find it easier to remember certain information by using well-known melodies to aid in the memorization of facts. For instance, children might find it simpler to remember specific information if they use well-known melodies as mnemonic devices to assist in the process of learning new facts.

The objective of the music programme at these schools is to encourage the students' spiritual growth through a variety of means; one of these means is instructing children how to be creative and active participants in the pursuit of beauty through the medium of music. Another objective of the music programme at these schools is to encourage the students' academic growth through a variety of means. It is necessary for music teachers to have a professional orientation because they play such an important role in the evaluation process, which is based on the requirement that they actively participate in pedagogical activities. In this article, it is analysed that the purpose of the music lesson is to comprehensively develop their students in the field of music, and that for them to do so, the students need to establish the foundation for their musical culture. This is because, for the students to comprehensively develop in the field of music, the music lesson's purpose is to comprehensively develop their students in the field of music. You will be able to comprehend, as a direct result

of reading this article, that the objective of the music lesson is to facilitate the all-around growth of the students in the subject of music, and that this growth is the intended result of the lesson.

### 2.3. Future opportunities of blended learning

The students' initial inclination was to go with the traditional learning procedure; however, there are few significant problems associated with using traditional approaches. The students' initial inclination was to go with the traditional learning procedure. The first thought that came into the minds of the students was to follow the standard approach to education. According to Watanabe and Goto (2019), blended learning is an innovative new fundamental method that can replace traditional learning methods. The decision to use blended learning as the method of education that will be implemented in the future deserves to be defended on a few different fronts and a list of these arguments can be provided. Blended learning is deserving of being defended as the mode of instruction that will be utilised in the future. According to Kim (2018), the conventional method of education entails physically going to an organisation to acquire knowledge about music. This is the case with the traditional approach. This is how things work with the more conventional approach to education. On the other hand, students who take part in blended learning opportunities are provided with the chance to learn on their own through the utilisation of the internet. In addition to this, it provides a setting for face-to-face interactions, which makes it possible for the students to get answers to their questions and is a strategy that will be helpful for them in the continued music education they receive.

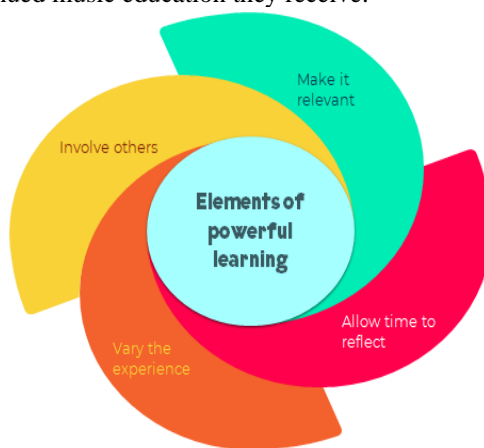


Figure 3. Elements of powerful learning

Students who take part in traditional learning have access to a more limited pool of resources, unlike students who participate in blended learning, who may have access to more information sources. Traditional learning and blended learning are both forms of education. According to Enbuska et al. (2018), students can take advantage of such resources' availability because they can access them from any location in the world. This presents a few opportunities for students. In addition, the multitude of e-learning tools and technological advancements that have become available over the previous several years have emerged as an essential component of the method used to learn music. Students who are interested in developing their musical capabilities now have access to a greater number of music instructors than they did in the past as a direct result of the proliferation of online music instruction. This method makes extensive use of the experimental learning process and incorporates individualised content in such a way that it assists in actively involving students in the educational processes.

Moreover, this method makes extensive use of the collaborative learning process. In addition, it extensively uses many kinds of educational resources (Crawford and Jenkins, 2018). One of the fundamental strategies is the implementation of a "one-size-fits-all" strategy, which is one of the fundamental strategies because it is one of the fundamental strategies that will give the students a significant amount of opportunity in the future. Blended learning makes it simpler for students to interact with one another and their instructors, which, in turn, makes it simpler for students to attend class daily. Blended learning can be implemented in a variety of educational settings. Students also report that it is simpler for them to participate in discussions with one another and their classmates. When it comes to the students' overall educational experiences, the motivational aspect of the learning process is an indispensable component that must not be overlooked. This is because the motivation factor makes it possible for the students to be more punctual towards the learning process. In the years to come, students will have a greater variety of options to choose from in terms of the educational pursuits that are open to them because of these various factors.

#### 2.4. Challenges of the hybrid learning process in music learning

The overall academic growth of students has been widely reflected in the rapid improvement of the online course offerings across all educational streams. This growth has been widespread. Students have benefited from the development of new online music educational programmes that have been made possible as a direct result of this tactic, which has had a significant impact on the field. On the other hand, there are some reservations regarding the viability of substituting hybrid learning for more traditional classroom-based instruction. These reservations centre on the question of whether or not hybrid learning is as effective. The administration of such massive programmes is notoriously challenging due to the high level of coordination that is required between the teachers and the students. According to Li et al. (2021), developing a teaching procedure that uses hybrid learning methods necessitates proper management skills because it requires gathering teachers from various sources. This necessitates the use of hybrid learning methods. To accomplish the twofold objective of attracting students' attention and equipping them with superior musical knowledge, it is necessary to employ a variety of learning strategies for music, in addition to the implementation of emerging technologies. Several organisations in the field of music have already identified a few challenges after conducting an in-depth investigation into the many different blended learning strategies currently in use.

#### 2.5. Collaboration between the music department and distance education

Blended learning is a method that requires interdepartmental coordination and collaboration between the music department and the education department that oversees providing distance learning. If this method is to be effective, it is imperative that these two departments work together. There will be times when it will present an experience that is challenging, but ultimately, it will present an experience that is rewarding. In addition to the factors that contribute to cooperation, the research that Vall and Widmer (2018) conducted found that it is beneficial because of the dialogue that takes place between occupational boundaries and disciplinary systems. Despite this, it is a very difficult undertaking because it requires more effective communication between various organisations and the cultures that they uphold through the management of Organisational priorities and motivations. This is a task that has the potential to be very difficult. According to Simonetta et al. (2019), online learning necessitates higher levels of collaboration to keep the students interested in the class. This is the case even if the students are taking the class independently. This is just one of the many reasons why more and more people are opting to get their education online these days. Despite this, there are still some professors who are hesitant to collaborate with other departments because they are concerned about the impact it will have on their ability to maintain their academic freedom and keep their jobs.

It has been observed that in the case of various organisations, the professors prefer to collaborate with distant music educational departments to develop the various musical programming. This has been the case because of the following: This has come to pass as a direct consequence of the following factors: It is extremely difficult to determine who is responsible for what and who is accountable for it in this circumstance since the lines of responsibility and accountability are not entirely clear. According to Ramrez and Flores (2020), it was observed that distance education could not provide a greater understanding and appreciation towards the unique requirements of the discipline and standard academic achievements, which cannot develop transparency on this fact. Ramrez and Flores came to this conclusion because it was observed that distance education could not provide a greater understanding and appreciation towards the unique requirements. It was observed that distance education was unable to provide a greater understanding and appreciation towards the one-of-a-kind requirements of the, which led to Ramrez and Flores coming to this conclusion. Ramrez and Flores both reported that it was seen that this was the case, and both said that they saw it.

They stated that it was something that had been noticed. In addition, there is a distinct administrative structure that ensures certain members of the staff working in distance education are promoted to positions of higher authority than the positions held by the professors. These positions are higher up on the hierarchy than the positions held by the professors. These roles are situated at a more senior level within the Organisational hierarchy than the positions that are held by the professors (Kaewsrirai, 2022). The development of the online course will not affect the job security of the professors in any way; however, an authority position will no longer be required for the delivery of content in the capacity of a consultant. In this environment, it is not unusual to run into problems of this nature, and the teachers and students have been tasked with coming up with solutions to these problems.

#### 2.6. Pressures of gaining maximum profits

The realisation of the goal of teaching a very large number of students is the primary focus of the introduction of a music programme that will be presented in its entirety over the medium of the internet. This will be done to achieve the goal of teaching a very large number of students. The primary impact of this is to maintain the quality of education while at the same time preserving the status quo regarding the costs associated

with receiving an education. According to Huang et al. (2019), an increase in the number of students reflects in obtaining low overhead costs, which improves the financial wealth of online institutions. Individuals have a strong advocacy for this strategy, even though online music programmes provide financial motivations.

This is the case even though individuals have a strong advocacy for this strategy. According to Mohamed (2019), it is not typical to go online to receive instructions and gain benefits from a programme; however, going online has been the obligatory choice for students during this period. This is because going online has been the only option available to them. This is because they have no other choice but to conduct their business online. It is ironic that the application of technologies in online learning methods has been the primary motivating factor that can enhance the pursuit of educational quality, but these new programmes have been developed with less specificity than older ones.

Incorporating cutting-edge information technology into the process of teaching and learning has traditionally been seen as a venture fraught with danger because there are no high-minded objectives in the form of saving money, lowering operational expenses, and reducing the number of required part-time and full-time instructors. This has led to the perception that the venture is fraught with danger. In this extremely difficult situation, there are also problems that are observed that are related to the actual property. These issues are regarded as problematic by many people. The primary factor that has led to the current situation is that instructors at various universities continue to maintain full editorial authority over the material presented in the online classes made available by those institutions. In addition, the professors who will fill the openings for part-time teaching positions are chosen based on their ability to secure temporary contracts for the positions. Due to the lack of job security and adequate safeguards, such as unionisation of the professors, democratic administrative structures, online faculty to student ratios, and management transparency, there is a significant amount of pressure placed on the online institution to effectively manage costs. This pressure causes the institution to be under a significant amount of stress. This is a resounding endorsement of the high level of pedagogical expertise possessed by the individuals who are responsible for instructing classes over the internet.

## 2.7. Managing adjunct music teachers

It has been observed that in many cases, the lecturers were required to manage the delivery of lectures from a few different locations, which presented a significant challenge for them. This is something that has been observed. This was one of the reasons why people all over the world were affected by the problem. This is a valid point, and one that has been thoughtfully considered. To put it another way, for them to be successful, they needed to carry out these actions from several different locations. In addition, there are a variety of ways in which students can obtain the opportunity to earn a degree in music from an international institution while studying from any location in the world.

One example of this is the rise of online education, which has allowed students to complete their degrees online. One illustration of this phenomenon is the proliferation of online education, which has opened the door for students to finish their degrees entirely through online coursework. One example of this phenomenon is the rise of online education, which has made it possible for students to complete all the required coursework for their degrees by online resources, is one illustration of this phenomenon.

Participants in these innovative approaches to learning at a distance have the potential to be given a few extremely interesting challenges, which is something that would be of great benefit to them. Additionally, there is the possibility that they will be presented with a variety of extremely interesting challenges. Problems of a comparable nature have been identified as occurring in administering cases involving supplemental music education. These issues have been identified as being present in the world. According to the findings of the investigation that was carried out by Bennett et al. (2020), the most significant problem that has been identified in this instance is a lack of communication that is taking place between the individuals who are participating in the distance blended learning method. This finding was reached based on the conclusions that were drawn from the findings of the investigation that was carried out. This was by far the most obvious and significant issue that was found during the investigation. When you instruct students through a limited working medium, you run the risk of causing communication problems with them, which, in turn, can reduce student motivation.

It is abundantly clear that the students are not participating actively in the educational experience, which presents a significant challenge for the institution in terms of its ability to keep the same number of students enrolled. Aside from that, it has been observed that the strategy of obtaining an education through online means is beset with several technical issues, which are frustrating for the students. This is because the students benefit more from having direct interaction with the instructor when compared to the benefits that they receive from the online learning method. Specifically, this is the case because students may be dissuaded from enrolling in online music classes due to the challenges associated with managing instructors. As a result of these challenges, students may be discouraged from enrolling in online music classes. This circumstance poses a significant threat to the success of the goals established for blended learning as a learning method

because of the way that blended learning is constructed. Consequently, it is of the utmost importance that this situation be avoided at any cost.

### 3. METHOD

The study adopted a narrative analysis in this study given the nature of the research. The study identified 101 relevant documents in the Scopus database. The filtration approach proposed by Scopus in their database was utilised with promising results. The refinement process began by the identification of 101 documents in the Scopus. Year of publication, Subject area, document types, language and keywords were all considered before arriving at 47 relevant articles that are eventually available to carry out the research. The 47 articles that were finally identified for the conduct of the research were later studied and analysed to establish a meaning from them. These articles were relevant to the study at hand and various insights were generated during the analysis that was carried out. Most of the papers discussed the significance of creative music in the development of a student. The method of creative music and the advancement of creative music. Other articles from the available articles were basically on hybrid learning and the process of using hybrid learning for achieving the best results. The components that make up hybrid learning were discussed by two of the articles.

### 4. RESULTS AND DISCUSSION

The study aims to investigate the principles of educational management in hybrid learning environments using the quantitative approach method. Thus, the findings from the study provide insights into the implementation of management practices in hybrid learning environments. The results are highlighted below:

#### 4.1. Technology integration

The data generated revealed that most of the educators reported using different digital tools and platforms to support instruction in hybrid learning environments. However, certain setbacks were traced, such as limited access to technology and inadequate training in technology integration.

#### 4.2. Pedagogical innovations

Findings showed that educators expressed a high level of interest in exploring innovative pedagogical methods that leverage the strengths of both face to face and online learning approaches. However, only a handful of report receiving formal training or support in pedagogical innovation for hybrid learning.

#### 4.3. Student engagement

The data generated highlighted that a handful of students reported feeling on average to highly engaged in hybrid learning activities. Factors contributing to student engagement included interactive online discussions, multimedia resources and collaborative projects. However, some students expressed their concerns about feelings of isolation and absence of personal interaction in online learning environments.

#### 4.4. Academic performance

The primary data analysis outlined mixed findings regarding the impact of hybrid learning on academic performance. While some educators reported improvements in student learning outcomes. Others expressed concerns about maintaining academic conditions and ensuring equitable access to resources and support. Suggestions for practice consist of providing ongoing professional development for educators, promoting student centred pedagogies, improving communication and collaboration, and addressing equity issues in access to technology and support services.

The results and analysis of this study threw more light on the complex dynamics of educational management in hybrid learning environments. Thus, infusing quantitative data, the research provides valuable insights and recommendations for educators, administrators, and policymakers to enhance the effectiveness and efficiency of hybrid learning models.

### 5. DISCUSSION AND FUTURE RESEARCH DIRECTIONS

The concerns regarding the services provided by the university and the responses to the behaviors of the students are the aspects of the online music learning method that present the most difficulty. These are the aspects that present the greatest challenge. These are the aspects that present the greatest amount of difficulty to deal with. The conduct of business over the internet, which may or may not involve the delivery of physical materials, is the most pressing concern in this context because it is the most direct and immediate threat to the enterprise's success. There are a few factors to consider, such as the amount of time available, the accessibility of testing opportunities, and so on. Keeping an eye out for students who engage in academic misconduct and providing appropriate responses to those students is another significant challenge that teachers face. Due to the prevalence of such factors throughout the entirety of the process of online music learning, opportunities for blended learning should be approached with a healthy amount of skepticism (Bennett et al. 2020). Blended learning strategies give students the opportunity to study remotely, which may give them the impression that they are on their own in the classroom. This is in addition to all the other problems that are associated with

these strategies. It is impossible to receive the same amount of encouragement through online learning methods as in a conventional classroom setting. Conventional classrooms are designed to foster a sense of community. The incapacity to take an active role in discussion with the instructors is to blame for the problems that have surfaced in the context of the study of music that have not yet been resolved.

On the other hand, Further research is required to explore long term outcomes and challenges emerging in the evolving landscape of hybrid learning.

## ACKNOWLEDGEMENTS

Thank you to Professor Yudi for his careful guidance and sincere suggestions on the paper, and thank you to my colleague Dr. Liu Genping for his assistance; I also want to thank my family for their support and friends who have helped me.

## REFERENCES

- [1]. Belt, E.S. and Lowenthal, P.R., 2021. Video use in online and blended courses: A quantitative synthesis. *Distance Education*, 42(3), pp.410-440.
- [2]. Belt, E.S. & Lowenthal, P.R., 2021. Video use in online and blended courses: A quantitative synthesis. *Distance Education*, 42(3), pp.410-440.
- [3]. Bennett, D., Knight, E. & Rowley, J., 2020. The role of hybrid learning spaces in enhancing higher education students' employability. *British Journal of Educational Technology*, 51(4), pp.1188-1202.
- [4]. Bennett, D., Knight, E., & Rowley, J. (2020). The role of hybrid learning spaces in enhancing higher education students' employability. *British Journal of Educational Technology*, 51(4), 1188-1202.
- [5]. Crawford, R. and Jenkins, L.E., 2018. Making pedagogy tangible: Developing skills and knowledge using a team teaching and blended learning approach. *Australian Journal of Teacher Education (Online)*, 43(1), pp.127-142.
- [6]. Cheng, L., & Hu, L. (2022). Challenges and Optimization Paths of Guzheng Professional Education in Colleges under Big Data Era. *Journal of Environmental and Public Health*, 2022.
- [7]. Dietrich, N., Kentheswaran, K., Ahmadi, A., Teychené, J., Bessière, Y., Alfenore, S., Laborie, S., Bastoul, D., Loubière, K., & Guigui, C. (2020). Attempts, successes, and failures of distance learning in the time of COVID-19. *Journal of Chemical Education*, 97(9), 2448-2457.
- [8]. Enbuska, J., Tuisku, V. & Hietanen, L., 2018. The community of inquiry as a framework in student teachers' music education. *The European Journal of Social & Behavioural Sciences*.
- [9]. Gamage, K. A., Wijesuriya, D. I., Ekanayake, S. Y., Rennie, A. E., Lambert, C. G., & Gunawardhana, N. (2020). Online delivery of teaching and laboratory practices: Continuity of university programmes during COVID-19 pandemic. *Education Sciences*, 10(10), 291.
- [10]. Huang, H., Guo, S., Gui, G., Yang, Z., Zhang, J., Sari, H. & Adachi, F., 2019. Deep learning for physical layer 5G wireless techniques: Opportunities, challenges and solutions. *IEEE Wireless Communications*, 27(1), pp.214-222.
- [11]. Jeffery, K. A., & Bauer, C. F. (2020). Students' responses to emergency remote online teaching reveal critical factors for all teaching. *Journal of Chemical Education*, 97(9), 2472-2485.
- [12]. Kaewsrirai, K., 2022. Active blended learning management in music subject based on the hybrid learning framework for primary 4 students at Ban Nong Du School, Thawat Buri District, Roi Et Province. *Linguistics and Culture Review*, 6, pp.229-239.
- [13]. Keržič, D., Tomažević, N., Aristovnik, A. and Umek, L., 2019. Exploring critical factors of the perceived usefulness of blended learning for higher education students. *PloS one*, 14(11), p.e0223767.
- [14]. Kim, O.J., 2018. The effects of music lessons applying the blended learning-based STEAM education on the musical knowledge and STEAM literacy of pre-service kindergarten teachers. *Journal of the Korea Convergence Society*, 9(2), pp.217-227.
- [15]. Li, Q., Li, Z. and Han, J., 2021. A hybrid learning pedagogy for surmounting the challenges of the COVID-19 pandemic in performing arts education. *Education and Information Technologies*, 26(6), pp.7635-7655.
- [16]. Lowenthal, P. R., & Moore, R. L. (2020). Exploring student perceptions of Flipgrid in online courses. *Online Learning*, 24(4), 28-41.
- [17]. Mohamed, M.H., Khafagy, M.H. and Ibrahim, M.H., 2019, February. Recommender systems challenges and solutions survey. In 2019 International Conference on Innovative Trends in Computer Engineering (ITCE) (pp. 149-155). IEEE.
- [18]. Müller, C., & Mildenerberger, T. (2021). Facilitating flexible learning by replacing classroom time with an online learning environment: A systematic review of blended learning in higher education. *Educational Research Review*, 34, 100394
- [19]. Nuere, S., & De Miguel, L. (2021). The digital/technological connection with COVID-19: An unprecedented challenge in university teaching. *Technology, Knowledge and Learning*, 26(4), 931-943.
- [20]. Putri, D. S., & Adha, M. M. (2020). The problems of implementing blended learning class in civic education students, *University of Lampung. Universal Journal of Educational Research*, 8(3D), 106-114.
- [21]. Ramírez, J. and Flores, M.J., 2020. Machine learning for music genre: multifaceted review and experimentation with audioset. *Journal of Intelligent Information Systems*, 55(3), pp.469-499.
- [22]. Simonetta, F., Ntalampiras, S. and Avanzini, F., 2019, January. Multimodal music information processing and retrieval: Survey and future challenges. In 2019 International Workshop on Multilayer Music Representation and Processing (MMRP n.) (pp. 10-18). IEEE.
- [23]. Uludag, A. K., & Satir, U. K. (2023). Seeking alternatives in music education: The effects of mobile technologies on students' achievement in basic music theory. *International Journal of Music Education*, 02557614231196972.
- [24]. Vall, A. and Widmer, G., 2018, September. Machine learning approaches to hybrid music recommender systems. In Joint European Conference on Machine Learning and Knowledge Discovery in Databases (pp. 639-642). Springer, Cham.
- [25]. Watanabe, K. and Goto, M., 2019. Query-by-Blending: A Music Exploration System Blending Latent Vector Representations of Lyric Word, Song Audio, and Artist. In ISMIR (pp. 144-151).
- [26]. Xiong, H. (2022). An investigation of the influence of selected factors on pitch identification among instrumental students in the Chinese university setting: Instruments, strategies, and practice University of Otago.



**BIOGRAPHIES OF AUTHORS**

Xiong Jia

Female, Lecturer, Phd, Han Nationality, Chinese Nationality; Born in October 1981  
I Graduated With a Bachelor's Degree From Jiangxi Normal University In June 2003,  
I Graduated With a Master's Degree From Nanchang Hangkong University in June 2017  
From May 2021 to 2024, I studied for a doctorate in Malaysia's City University.  
Since August 2005, I have been working as a full-time teacher in the School of Music and Dance of China Yichun University.

Main Research Area: Chinese instrumental music (Guzheng, dulcimer) performance and teaching