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# Challenges in Music Education: Teachers' Competencies, Teaching Styles and ICT Integration

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**Annotation.** This article focuses on music education and explores the teaching challenges, difficulties, required competencies, education system and use of ICT integration, ways to develop learners' attitudes towards music and collaborative methods. Qualitative research methods were used in the study. The research showed that due to the changes in the educational model, music education has become complex, requiring teachers to use ICT and adapt their teaching style to enhance learners' experience and engagement.

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**Keywords:** *music education, competencies, teaching styles, ICT integration.*

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## Introduction

Music education in school practice is still perceived in a very traditional way, without taking into consideration the dynamics of societal development and the need for qualitatively new competencies (Lasauskienė et al., 2015; Ghozali, 2020; González-Pérez & Ramírez-Montoya, 2022). It is, therefore, important to monitor the changes in music education, and its challenges and to find ways to improve the teaching process. According to Peklaj (2015) and Costa et al. (2015), the teacher's competencies are one of the most important factors in ensuring education, because student's learning and teaching results depend on their use during the educational process. Recently, the attention to teachers' competencies, their education, and their development has

increased, especially, because the established modern educational paradigm which is focused on the development of learners' competencies has posed new challenges and expressions (Weisheng & Hui, 2022).

Music education demands a multifaceted competencies set that extends beyond musical expertise. The education of music teachers of the 21st century must focus on instructional design, team building, skill development in new information technologies, and new ways to foster creativity and innovation (Davidova, 2019). Rapid changes and developments in ICT affect all sectors, including positive impacts on the education sector, and it is important for teachers to use technology effectively and keep up with innovations to meet the needs of the new generation. In addition, it is very important to be able to adapt to technological advances and evolving teaching methodologies, as well as to have an infectious enthusiasm for music. Ultimately, these competencies collectively shape an environment where students not only develop their musical talents but also cultivate a lifelong appreciation for the art (Kirschner & Selwyn, 2009). The development of information communication technology (ICT) has changed the content of education in general, including the music curriculum (Zhang et al., 2020). In music, as in the other areas, technological progress gives an opportunity to search for new ways of expression. In music education, ICT opens new possibilities: music and sound could be recorded, created, composed, edited, and played with different instruments, sounds and music can be analysed; new information can be searched on the internet, etc. (Dorfman & Dammers, 2015; Minott, 2015). Thus, music teaching/learning has the potential to explore entirely new musical spaces and places. For example, with the online learning, the potential for both synchronous and asynchronous options enables and empowers teachers and learners in uniquely different ways (Cremata, 2021). ICT can be a great aid in a variety of musical activities. In addition to its role as a tool for networking and communication, it is used to improve the development of technical and musical skills and has the potential to improve communication, efficiency, efficacy, and healthy practice in music learning (Waddell & Williamon, 2019). In the opinion of Zhao et al. (2021) artificial intelligence (AI) added modern elements to the definition of music teachers' core competencies and professional training processes. Music teachers need extensive Information and Communication Technology competencies because the profession now requires digital resource utilization skills along with multimedia material creation and editing abilities and effective use of web-based communication tools (Calderón-Garrido et al., 2021). Building ICT competencies in music teachers requires continuous professional education. Opportunities where teachers undergo professional development, which includes various workshops, conferences, online coursework, and cooperation with other teachers. A study by Jing (2016) found out that music teachers who participated in the professional development programs reported increased confidence and competencies in using ICT in their teaching practice. In addition, the development of ICT competencies requires a willingness to adapt to new educational

paradigms. Harper (2018) states that technology promotes the collaboration between teachers and learners during learning activities, and teachers who use technology leverage it to maximize their uses of strategies aimed at facilitating learning and promoting learners' exploration of content. Therefore, this change requires rethinking of the relationship with learners, working methods and tools, and encourages teachers to continuously learn and to improve. And the role of learners' changes from obedient executors and recipients of knowledge to researching, searching, interested, creating their own identity, and independent learning partners (Jaafar et al., 2021). This means that the traditional music education methods or music education, such as teacher-directed and student-obedient learning, are being replaced by a student-centered approach that emphasizes creativity, collaboration, and the use of technology (Weisheng & Hui, 2022). Music teachers need to be able to integrate ICT into their teaching practice to support these new paradigms. Music teachers lack empirical research, which they require to properly implement technology for their classroom instruction. The professional application of ICT proves challenging while views about ICT significance in educational processes remain conflicted. According to Klaus (2017), the combination of artificial intelligence, robotics and Internet of Things technologies changes both lifestyle and professional work dynamics. In his view the technological revolution represents a new historical period distinct from the third industrial revolution through its elimination of divisions between physical, digital and biological realms. According to Harari (2018), our society is presently undergoing a major change towards a system where automated operations combine with integrated networks and data management, which will affect society deeply. Brown et al. (2017) indicate that society, alongside people, currently experiences a fundamental shift toward various levels of automation while integrating and connecting data structures at profound levels. Music education needs to adapt quite naturally to the changes in the world, as constant development requires the ability to learn and adapt to change. In the process of music education, it is necessary to implement the renewal of educational content as well as new competences and principles.

These are essential factors to clarify the challenges of music education. The problem is relevant because traditionally music education has focused mainly on teacher leadership and musical mastery, such a study would allow for the identification of effective ways to apply modern ICT, highlight the problems of music education, and improve the professional development of music teachers. The research will explore the challenges and opportunities that music teachers face in applying ICT in their educational practice and how they can develop their ICT competencies to improve teaching and learning outcomes. It will also seek to identify effective strategies to improve music teachers' ICT competencies development and equip them with the necessary resources and training to succeed in the new educational paradigm.

*The aim of this research* is to explore and analyse the challenges affecting music education and the competencies of music teachers. The main research question of

this study is concerning the different difficulties that music teachers encounter. These include music teachers teaching style, competencies to be imparted, the advantages of integrating information communication technology (ICT) in the teaching process, students' motivation to learn music, approaches to teaching music, and the objectives of teaching music. Problem questions are: *What teaching styles and competencies do music teachers see as essential for effective teaching and positive learning experiences in the classroom in the information technology-enabled contemporary era? In what ways does this contribute to enhancing music education? Music teachers' perceptions of the effectiveness of their integration of ICT tools in the classroom and how in the future this ICT integration can enrich students' music education.* The novelty of this research lies in the impact of ICT on music education, which is still insufficiently researched. Musical technologies and teachers' competencies generate debate in music education because they open teaching possibilities and creativity yet create obstacles to their implementation. The research will analyse the aforementioned issues, as well as the educational expertise and technological approaches that teachers require in order to enhance music education for learners. The investigation will explore how ICT are transforming music teaching and learning from traditional teacher-directed pedagogies to learning-centred teaching structures, thus providing new perspectives on technological change in music teaching and learning. Research produces a fresh understanding of music education technologies alongside their influence on educational processes.

## Methods

Ethical standards were adhered to throughout the interviews (Aluwihare-Samaranayake, 2012). Research participants are informed about the purpose of the research and the possibility of using the results, as well as recording interviews only after obtaining consent. Confidentiality was also maintained to ensure the security of the information during the study. Participation in the study was voluntary, and the creation of a safe environment was one of the main principles to ensure trust and psychological comfort during, before and after the interviews. This study sought to build trust in the foundational relationship with music teachers, and the interpretive assumptions of the qualitative study assumed that the findings should not be taken as "one truth" but understood as a product of social construction. The experiences of the music teachers in this study are not an objective reflection of the reality of the research participants. When it was found that the research participants could be identified, the research did not use the recorded parts of the dialogue but used memos or other means for this purpose. During the interviews, the research participants were not informed that the data were obtained from other informants. The research participants were clearly informed about the aims of the study without specifying

exactly how the study was conducted. Only when asked about the progress of the study did the researcher reveal some information about further research plans so as not to influence the subjects' responses.

15 music teachers were interviewed and transcribed using telephone interviews with the help of qualitative research, the research data obtained was analysed and interpreted with the help of the open coding methodology of the concept. Qualitative data analysis began with data collection, writing (transcription), and structure. The data were coded as follows, categorised, described, and interpreted. By grouping information into systematised information categories and subcategories (Bitinas et al., 2008). Presented in tabular form. All data were systematised and justified by defining categories, assigning subcategories, and justifying the responses with statements from the respondents. In qualitative research, it is especially important to respect the research participants: every effort has been made to minimise disturbing them and to do justice to their expressed ideas (Creswell, 2014).

**Table 1**  
*The Information on Interviewees*

Number	Type of school	Gender	Teacher's teaching experience	Teacher's qualifications
01	Primary school	Female	5 years	Bachelor
02	Primary school	Female	4 years	Bachelor
03	Junior High school	Female	6 years	Bachelor
04	High School	Male	9 years	Bachelor
05	Junior High school	Male	5 years	Bachelor
06	Junior High school	Female	5 years	Master
07	Primary school	Female	7 years	Bachelor
08	High School	Female	3 years	Master
09	Primary school	Female	4 years	Bachelor
10	Junior High school	Male	7 years	Bachelor
11	Junior High school	Female	8 years	Bachelor
12	Primary school	Male	3 years	Bachelor
13	Primary school	Male	5 years	Bachelor
14	Primary school	Female	4 years	Bachelor
15	Junior High school	Female	6 years	Bachelor

### Results

Literature analysis has shown that music education is constantly evolving, with the new paradigms and approaches being adopted to meet the needs of modern learners. The role of music teachers, like other educators, has also been influenced by these changes. To obtain specific research data, qualitative research will be described next.

**Table 2***The Essential Competencies Required for a Music Teacher*

Category	Subcategory	Proving statements
Professional competencies	Ability to play a musical instrument	“< ...> Instrumental music is the most direct tool for learners to feel music, and it is also the basic”. “<...> Playing instrumental music in class can attract learners’ attention more <3>”.
	The ability to sing	“< ...> Singing is a must-have skill for music teachers, making the classroom atmosphere more fun”.
	Musicality	“< ...> A good sense of music can make students feel the music more accurately, while a teacher with an average sense of music is only superficial, analysing music by simply dividing paragraphs and understanding the creative background, and has not really entered the music <4>”.
Teaching competencies	Innovation in music classroom	“< ...> Music teachers should have the competency to innovate classrooms, and should not follow the script, but should add innovative ideas”.
	Organize music events	“< ...> To hold interesting music activities, whether in class or at school, music practice activities can greatly improve learners’ sense of participation in music”.
Competencies in educational psychology	Learner mental state	“< ...> Only by paying close attention to the psychological activities of the learners can the atmosphere of the music class be adjusted”. “<...> Learners’ psychological activities will affect the teaching effect and sometimes infect other learners in the class with positive or negative emotions”.
	Teacher mental state	“< ...> The psychological problems of the teachers themselves also need to be taken seriously. Unexpected problems may occur at any time in the classroom, and stable emotions are needed to solve the problems <10>”.

The interviews showed that the respondents believe that there are three types of skills and competencies that music teachers should have, which are music professional skills, teaching competency, and educational psychology. Musical instrument playing competency, singing competency and musicality represent the professional skills of music teachers. For musical instrument playing, whether it is piano, violin, clarinet, or Chinese traditional instruments, it is important to have the competency to play them in the classroom, while singing competency, like musical instrument playing, can bring a more direct musical environment to the learners in the classroom, and musicality

represents the music teachers' quality of music, and having a good musicality can make it easier for teachers to choose appropriate teaching materials and music materials. Having a good sense of music makes it easier for teachers to choose appropriate teaching videos and music materials. The capacity to teach in the classroom means that according to the different contents of the curriculum, the classroom can be given innovative teaching, and organising classroom activities also represents the music teacher's capacity, not to teach the same content in the same way, but to combine with some of the changes occurring in the classroom innovation, as well as in the classroom activities organised by the coordination of the capacity, so that each learner is more active in participating in and integrating into the activities. The study of educational psychology is mainly in the learners' psychology and teachers' own psychology; in the classroom, at any time unplanned things will happen. How to make learners encounter problems in the classroom so that they have the right to seek help from the teacher, so that the teacher understands the psychological changes in the learners, and then regulate the learners' emotions so that the classroom can continue to run smoothly, and teachers in the encounter of a variety of problems in a timely manner when you need to adjust their own psychological state is also part of the teacher's capacity. The teacher also needs to adjust his psychological state in time when encountering various problems; is also part of the teacher's capacity.

**Table 3**  
*The Music Teachers' Teaching Styles*

Category	Subcategory	Proving statements
As a leader	Intellectual teaching style	"<...> Use reason to control the classroom teaching process, focusing on the music theory part and the explanation of music history <1>".
As an empath	Emotional teaching style	"<...> In music classes, video animations and instrument demonstrations will mobilise learners to emotionally connect with teachers by hosting classroom music activities <2>". "<...> resonate emotionally with music <2>".
	Natural teaching style	"<...> The classroom focuses on communication and cooperation with learners". "<...> By hosting classroom music events <3>".
As a guide	Humorous teaching style	"<...> By hosting classroom music events <4>". "<...> Some humorous music stories increased learners' interaction with me in class <5>".
	Entertaining teaching	"<...> Under the premise that happy learning is student-centered, learners can learn music knowledge <6>". "<...> Learning is fun, and learners gain knowledge more easily through games and activities <2>".

From the interviews, the 15 music teachers were categorised into three different teaching styles: leader, empath, and guide. The leaders focused on intellectual teaching, using more ICT tools to teach the theoretical knowledge of music and some music history in the classroom. The empathic teachers were identified as those who taught in an emotional and natural way, using sound to help learners feel and understand music. The guide teachers employed a teaching style that focuses on humour and entertainment and incorporates games and activities in the classroom to engage learners and facilitate their learning. The interviews show that teachers today are aware of the current power relations and acknowledge that making students happy is a key component. This way, the focus is made on students' emotions' positive state in the classroom, thus increasing the possibility of a desirable impact on learning.

**Table 4**  
*The Challenges in Music Education*

Category	Subcategory	Proving statements
External challenges	Learners' parents	"<...> Parents have increasing requirements for teachers but do not pay attention to children if they have requirements for teachers <2>".
	Insufficient teaching equipment	"<...> With the use of ICT in music lessons, but the school's ICT equipment is not enough <3>".
	Schools attach importance to music education	"<...> The school does not pay as much attention to music as other subjects and does not pay as much attention to music teachers <5>".
	Learner competencies	"<...> Learners' competencies to master ICT knowledge is uneven, their knowledge reserves are uneven, and they cannot use ICT to work together <6>". "<...> Learners' music aesthetic competences are poor <4>".
	Teacher competencies	"<...> The music professional competencies of music teachers need continuous learning".
Internal challenges		"<...> Need to understand the psychological problems of learners, who are unable to adjust the classroom atmosphere according to the status of learners" <13>". "<...> It is also necessary to learn professional music software. Most of them self-study by looking for teaching videos on the Internet and have not studied systematically <7>".

During the interviews, music teachers identified the primary challenges they face that arise from external and internal factors (see Table 3). External challenges include issues related to learners' parents, insufficient teaching equipment, and insufficient

emphasis on music education in a school. Parents tend to hold elevated expectations from music teachers', although they lack consistent attention towards their learners' engagement in music. Schools face challenges with music instruction because they have restricted access to information and communications technology equipment. Furthermore, schools generally place less importance on music education compared to other subjects, which translates to less support for music teachers.

In terms of competency-related challenges, teachers noted difficulties with the competencies of the learner and the teacher. Learner competencies in mastering ICT knowledge are inconsistent, with varying levels of understanding, making it difficult to ensure that all learners can use ICT in music classes. In addition, students often lack strong musical aesthetic skills. Therefore, teachers need to constantly improve their professional competencies, aiming not only to develop musical abilities but also to better understand learners' psychological needs and adapt the classroom atmosphere accordingly. Many teachers also indicated that they had to learn professional music software on their own, often relying on online videos without formal training, highlighting the need for systematic learning activities in this area.

**Table 5**  
*The Music Teachers' Opinions on the Advantages of ICT Tools in Teaching*

Category	Subcategory	Proving statements
To learners	Stimulate enthusiasm for learning	"< ...> Learners are more active and have efficient interactions and responses when teachers use ICT <7>".
	Broaden horizons	"< ...> Learners can use rich music resources to appreciate music from different cultures and countries <2>".
	Improve appreciation of music	"< ...> Watch different music styles, expose learners to more musical works, and improve <8>".
To music teacher	Improve lesson preparation efficiency	"< ...> It is easy to find relevant materials that meet the preparation course and stay up to date with the latest music knowledge <3>".
	More music teaching resources	"< ...> There is a lot of music knowledge on the Internet, and you can find music knowledge and music songs for relevant courses to enrich the classroom content <4>".
	More diversified music teaching methods	"< ...> I will use ICT to experience different music modes, ICT makes it easier for me to change music modes, so I will keep trying different teaching styles <3>".
	Richer classroom	"< ...> Using ICT to communicate and interact with learners in the classroom will not make the course content boring, and learners will actively participate in the teaching interaction <2>".

The music teachers interviewed are sure that the benefits of ICT in music lessons can be divided into benefits for learners and benefits for teachers. For learners, the use of ICT can make them have a more enthusiastic attitude to learning, and for learners nowadays, ICT happens in all corners of their lives, they are exposed to ICT all the time, they can broaden their horizons in the most familiar ways, so they can also learn to use ICT for self-learning to achieve higher music literacy. For teachers, the use of ICT improves the efficiency of teaching preparation, and the use of ICT tools allows them to find relevant materials, videos, and the latest music information in the classroom more quickly. It is also more convenient for music teachers to improve themselves, as they can search for better teaching methods, refer to good teaching cases, learn and integrate them into their own classrooms, as well as interact better with learners in the classroom, making it easier for learners to participate in various activities in the classroom and interact with the teacher.

**Table 6**  
*Promoting Learners' Motivation to Learn Music*

Category	Subcategory	Proving statements
Music event	Choir competition	"< ...> Regularly hold chorus competitions according to different festivals, which can improve learners' sense of participation". "<...>Learners participating in the chorus competition will find the background of the song spontaneously, which is more effective than the teacher's lecture in class". "< ...> In the singing competition held in the school, learners have improved their love for music and will take the initiative to learn music knowledge outside of the classroom <3>".
	Watching music movie	"< ...> Play music movies in class, improve music appreciation, and learn about different styles <9>".
Social media	Music software	"< ...> The most commonly used is listening to music software to let learners find their favourite music to share". "<...> The learner union is happy to share their favourite music and can communicate and share with classmates <4>".
	Video software	"< ...> Short video software is the most frequently used by learners, because it takes a long time to send music videos on video software, learners can see the latest music knowledge and songs faster <7>".
Transform teaching method	Fusion innovation	"< ...> If you use one teaching method for a long time, the learners will feel bored, and they will even know what you are going to talk about in the next step. Only by integrating different styles will learners have a sense of freshness and interest to continue listening to the teacher <5>".

Interviewees believe that organising music activities, social media, and changing the mode of teaching can make learners love music more and make learners encouraged to learn music actively, learners' motivation to learn music in various music contests obviously increases, and they will be more active in learning music knowledge, and playing music movies in the classroom will make learners love music more, and teachers will integrate music content into the classroom according to what is currently popular on social media, and learners will be more active in learning. Music as learning content: learners will also be more active in learning, teachers will also be based on the content of the current popular music into the classroom, innovative music learning methods. In extracurricular learning, especially in the popularity of social media, learners will take the initiative to use various social platforms to easily find the content they want to learn and are skilled in the use of a variety of music software, which is a more convenient way for learners to improve their independent learning and love of music.

**Table 7**  
*The Development of Collaborative Music Education Programmes: The Perspective of Teachers and Administrators*

Category	Subcategory	Proving statements
Exchange	Music shar- ing session	"< ...> Regular sharing and communication with music teachers will make me know more clearly that there are different solutions to the same problem, and teachers with more teaching experience will have more experience <8>".
High-quality class viewing	Observation class	"< ...> Listening to an excellent music teacher's class will make me understand the teaching style of other teachers and the teaching methods and music activities that can be used for reference <3>".
Hosting an art event	Music competition	"< ...> Arranging music activities will gather all depart- ments of learning together, and let the school spend more attention on music competition and add music education equipment <11>".

For teachers themselves, improving collaboration with other teachers, adminis-  
trators, and creating an integrated and comprehensive music education programme  
can be accomplished by using exchanges, observing classes, and hosting arts events.  
Teachers can learn from excellent and creative classroom content by visiting the class-  
rooms of other excellent music teachers, visualising the atmosphere of other teachers'  
classrooms, and better share their feelings and learning experiences with other music  
teachers. And organising high-quality lesson observation can make their own state of  
the class by more music teachers to evaluate, get more opinions to improve the quality  
of teaching and teaching mode of teachers themselves, and in the after school organi-  
sed a variety of art activities, can make teachers and school departments united, for

the school's after-school life to enrich the learning content, so that the teachers have exchanges and collaborations.

**Table 8**

*The Realisation of The Ultimate Goal of Music Education*

Category	Subcategory	Proving statements
To the learner	Esthetical education	"< ...> Esthetical education is an education that learners must receive, which can improve learners' character <2>".
	Music appreciation	"< ...> Learners need the competency to appreciate music, know how to appreciate music, express their feelings, and have different emotional experiences <3>".
	Improve life happiness	"< ...> Students should be able to use music to feel happiness in life and use music to drive away troubles when there is nowhere to express them <9>".
To the music teacher	Cultivate learners' interest in music	"< ...> Focus on cultivating interest, and then gradually let learners become interested in music and stimulate their own initiative to learn actively <4>".
	Improve the music education system	"< ...> Improving the music education system affects not only my learners, but also more learners, which is the most important". "<...> Because the times are changing, the music education system is also changing. This should be something that all music teachers should pay attention to and explore <10>".
	Music education environment	"< ...> A good music learning environment will make more people feel the charm of music and influence more people to learn music <12>".

In the interviews, music teachers presented their goals for music education, distinguishing between their personal goals and those they have for their learners. For their learners, the main goal activities have encouraged them to develop a passion for music and ultimately enrich their lives with greater happiness and joy through music. Regarding the teachers, their objectives are based on fostering this passion in learners, on the development of the system of musical preparations, and on influencing the learning environment. Teachers want music to be joy, not stress, for learners or find ways as they continue learning to improve how to teach music. They also wish schools and society to appreciate the value of music education, which they agree plays a useful role in the development of learners.

## Discussion

The research revealed various challenges in music education related to music teachers' teaching styles, essential competencies, benefits of ICT integration, learners' motivation to learn music, collaborative methods and ultimate goals of music education. The research involved 15 music teachers who were divided into three different teaching styles: leader, empath and guide. Leader-type teachers place particular emphasis on intellectual teaching and more often use ICT tools to convey theoretical knowledge and music history. Learners want their lessons to contain different technological materials and effective presentation techniques stemming beyond simple verbal statements (Semra, 2021). In educational environments, smart whiteboards facilitate direct communication between music teachers and students, thereby simplifying content navigation for all learners. According to Panigrahi et al. (2020), the utilization of augmented reality apps in educational curricula leads to improved emotional and cognitive involvement of learners and helps them grasp e-learning concepts. The study carried out by Taiwanese researchers demonstrated that interactive technology used in music education generates emotional stimulation along with selective task attention from learners (Sun & Hsieh, 2018). With the implementation of ICT by music teachers, the learning potential of students becomes more effectively stimulated.

Music teachers commonly enable students to use touchscreen devices for music recording and arrangement duties within the classroom environment. Music creation activities through tablet use in the classroom create learner engagement and enable skills development as well as independent learning growth. Teacher confidence and self-efficacy in using ICT are closely linked to their digital competency levels and application skills (Hatlevik, 2017). Although ICT, music technology, and online learning have been integrated into music education for several years, many teachers still lack the guidance or skills needed to manage these digital technologies effectively (Calderón-Garrido & Gustems-Carnicer, 2021). Music teachers have expressed a desire to improve their ICT skills and professional competencies through self-study, school, community involvement, and various learning exchange meetings. It is increasingly important for music teachers to understand how to integrate and engage with ICT through pedagogy and learning methodologies to improve their professional practice (Khan & Markauskaite, 2018).

The interviews showed that the respondents believe that there are three types of competencies that music teachers should have, which are: professional, teaching competencies, and educational psychology. The competency structure of music teachers in the 21st century is not a stack of one-way skills, but the scientific structural system is mainly composed of three aspects: personal competency, professional competency, and music education competency (Guo, 1999). Music education competency includes three aspects: the practical competency in teaching, the competency to innovate in

teaching, and the competency to grasp the psychological characteristics of learners, aspects of composition (Zhang, 2021). Jing (2015) emphasises that the competency structure of music teachers is different from that of teachers of other disciplines; in addition to having rich teaching experience educational knowledge, and educational skills also need to have rich musical knowledge. Wang (2016) points out that music teachers are skilled in the competency to apply professional theoretical knowledge, professional practice, and should have the competency to organise the classroom, the competency to express themselves verbally, and the competency to use modern teaching equipment skilfully. Davidova (2019) claims that teacher competency should be reflected in the emphasis on instructional design, cooperation among teams, music teachers' skill acquisition of new technologies, and the competency to develop creative and innovative approaches.

From the above-mentioned analyses of the competencies of the music teacher, it is clear that with the passage of time and the development of society, music teachers must continue to enrich themselves while teaching their learners and knowing how to continuously strengthen their own learning is the competency that they should have as a qualified music teacher. Teachers no longer aim to teach music knowledge and skills, but require learners to learn and explore actively, focusing on cultivating learners' innovative spirit and practical competency. The comprehensive competency of music teachers has been divided mainly into two aspects: professional competency and good teaching competency. Professional competency is piano competency, singing competency, dance competency, command competency, and choreography competency, teaching competency is creativity competency, language expression competency, organisational management competency, general information technology competency, and scientific research competency (Wang, 2019).

Different researchers have different results on the analysis of music teachers' competency in different dimensions. From the perspective of the connotation and definition of teaching competency, Dineke (2004) asserts that teaching competency is a comprehensive personal characteristic that supports the knowledge, skills, and attitudes needed to achieve effective teaching performance in a variety of teaching environments. The technical level includes professional skills, intellectual skills, and communication skills; the personality level is about personality and motivation (Zhong, 1998). The teaching competency includes planning ability, teaching skills, competency to evaluate learners, professional knowledge, and professional responsibility. Music teachers are different from other disciplines of education; they not only teaching experience, teaching knowledge, and educational skills, as well as musical knowledge.

By inductive analysis of these studies, it is not difficult to find that relevant research focuses on two major aspects: one is to explore what is the teaching competency of music teachers, "That music teacher should have creative teaching competencies, including teaching design competency, teaching language, classroom management and

organisation competency, modern teaching technology application competency, and educational evaluation and evaluation competency” (Zhou & Du, 2012, p. 48). The second is the discussion of how to improve the teaching competency of music teachers. “To improve the teaching competency of music teachers, it is necessary to improve the comprehensive quality of music teachers in colleges and universities; change the way of training teachers’ teaching competency, advocate cooperation and mutual assistance; improve self-learning and reflection competency; create a positive school teaching culture; make full use of modern educational technology, etc.” (Wang, 2011, p. 61). It can be said that the competency structure of music teachers is a dynamic and open system. With the development of music education and related disciplines, it is constantly adjusting and expanding itself. With the development of music education and related disciplines, it is constantly adjusting and expanding itself (Zhang, 2002). Now, with the development of science and technology, music education is changing from traditional music education to technology music education, and any country in the world should better use technology to communicate and learn from each other.

Interviewees believe that organizing music activities, social media, and changing the mode of teaching can make students love music more and encourage students to learn music more actively, students’ motivation to learn music in various music competitions increases and they will be more active in learning music knowledge; and playing music movies in the classroom will make students love music more, and teachers will integrate music content into the classroom according to what is currently popular on social media, and students will be more active in learning. Other music researchers think similarly (Lei, et al., 2021), for pedagogy, social media helps students to improve musical instrument playing techniques (e.g., posture, finger movements, and rhythm) and musical styles. Yalovsky et al. (2023) argue that distance learning has provided higher learning outcomes than traditional methods because technology engages students and promotes their motivation and engagement. Waddell & Williamon (2019) found that based on a sample of 338 music learners, attitudes toward technology use were generally positive, with the most commonly used devices in the classroom being smartphones and laptops, followed by tablets. It can be said that with the rise of social media, learners take the initiative to use various social media platforms to easily find the content they want to learn and use various music software, which is a convenient way for students to improve their independent learning and love for music.

The research revealed the challenges faced by music education. According to Roaa et al. (2023), music education in general is quite complex. It is submitted that by taking these challenges into account, teachers will be able to improve the quality of music education more effectively.

## Conclusion

This research analyses the complex challenges facing music education and the factors that determine the complexity of the teaching and learning process for teachers and learners. The study takes into account the fact that contemporary music education is dynamic and constantly changing. Teachers require flexibility in new models of education by integrating new ICT and teaching techniques to handle the students. The flexibility in the learning and teaching of music is seen as the learners, educators, and classroom keep on adapting to the changes in needs, shared knowledge, and the use of ICT. Such change should orient the music learning experience in a positive way that is responsive and effective in the contemporary learning context. Thus, musical education is becoming more complex due to the shifting paradigms of education.

Based on the qualitative research data, the teaching styles of music teachers can be attributed to three main types: leadership, empathy, and guidance. The challenges they come across in music learning and teaching can be categorized under external and internal. Learners' external challenges concern issues to do with the parents and learners themselves, while internal challenges are due to a lack of competencies among learners and teachers. Technology application has been observed to have positive impacts towards learners and teachers in teaching and learning of music. They enhance learners' experience with music by expanding their interest and horizons on the music they learn. To the teachers, these tools present a number of interesting approaches to education to consider. Learners' interest in music and music education system and environment is what music teachers strive to advance. In order to do this, they prefer organization of exchange programmes, ability to deliver high quality lessons, observed through classroom activities as well as music competitions. The improvement of music education through professional learning requires the establishment of both positive learning environments and effective teacher communication and collaboration. The coordinated work between learners and teachers encourages students to develop superior and more meaningful music learning experiences within the changing educational system.

All these efforts aim at making music education in the changing education paradigms more fruitful for students. Nonetheless, it is important to note that this study has several limitations that should be taken into consideration. The identified challenges and strategies are context-specific; therefore, following further research to understand how the generalisability of approaches applied in the study can be achieved is suitable.

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# Muzikinio ugdymo iššūkiai: mokytojų kompetencijos, mokymo stiliai ir IKT integracija

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## Santrauka

Šiame straipsnyje atskleidžiamos muzikos mokytojų esminės kompetencijos, mokymo stiliai, IKT priemonių integravimo nauda, bendradarbiavimo metodai, padedantys ugdyti mokinių meilę muzikai. Kokybinio tyrimo duomenys atskleidė, kad muzikos mokytojų mokymo stilius galima suskirstyti į lyderystės, empatijos ir vadovavimo. Šie skirtingi mokymo stiliai parodo įvairią sąveiką su mokiniais, kuri gali turėti įtakos muzikos pamokų efektyvumui ir mokinių muzikos mokymosi motyvacijai. Mokydami muzikos mokytojai susiduria su dviem iššūkiais – išoriniais ir vidiniais. Tyrimas taip pat parodė, kad IKT priemonių naudojimas muzikiniame ugdyme teigiamai veikia mokinių muzikinę patirtį, sudomina muzika, plečia mokinių erudiciją ir suteikia naujų strategijų mokytojams. Šios priemonės stiprina pedagoginę sąveiką, skatina aktyvų dalyvavimą, didina pamokos efektyvumą ir motyvaciją. Muzikos mokytojams svarbiausias tikslas – skatinti mokinių susidomėjimą muzika ir prisidėti prie visos muzikinio ugdymo sistemos tobulinimo. Norėdami šio tikslo pasiekti, mokytojai dažnai vykdo įvairias veiklas, tokias kaip mainų programos, pamokų stebėjimas, renginių bei meno festivalių organizavimas. Vadinas, šiuolaikinis muzikinis ugdymas yra dinamiškas, nuolat kintantis ir tampa vis sudėtingesnis dėl besikeičiančių ugdymo paradigmu.

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**Esminiai žodžiai:** *muzikinis ugdymas, kompetencijos, mokymo stiliai, IKT integracija.*

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