EduStream : Jurnal Pendidikan Dasar

Volume 10, Number 1, 2026 pp. 110-121
E-ISSN : 2614-4417
Open Access: https://journal.unesa.ac.id/index.php/jpd/index

Teacher competence in the use of music learning media in primary schools

Resa Respati[1]*, Anggit Merliana[1], Riefki Fiestawa[1], Rosarina Giyartini[1], Nindi Citra Setia Dewi[2]

[1]Primary School Teacher Education, Universitas Pendidikan Indonesia, Indonesia
[2] Faculty of Educational Psychology and Counselling, Universiti Malaya, Malaysia

*Corresponding author: respati@upi.edu

ARTICLE INFO

Article history:
Received 27 March 2026
Acccepted 7 May 2026
Published 15 May 2026

Keywords:
Music education;
Teacher competence;
Learning media;
Elementary school

DOI:
https://doi.org/10.26740/eds.v10n1.p110-121

ABSTRACT

Teacher competence is an important factor in optimizing the use of instructional media to create meaningful musical experiences for students, particularly among classroom teachers who do not have a formal educational background in music but are still responsible for teaching music. This study aims to analyze the influence of elementary school teachers' competence on the use of music learning media. This research employs an explanatory quantitative approach involving a sample of 271 elementary school teachers from five regions in West Java Province, namely Tasikmalaya, Ciamis, Banjar, Garut, and Pangandaran, selected through stratified random sampling. Data were collected using a Likert-scale questionnaire (reliability $\alpha = 0.648$ for teacher competence and $\alpha = 0.874$ for media use) and analyzed using simple linear regression. The results indicate a positive and significant effect of teacher competence on the use of music learning media, with a significance value of 0.000 (< 0.05) and a coefficient of determination (R^2) of 0.443. This finding shows that teacher competence explains 44.3% of the variation in the use of learning media. The higher the level of teacher competence, the more effective the use of instructional media becomes. This highlights the importance of developing primary school teachers' professional and pedagogical competencies to improve the quality of music learning.

INTRODUCTION

Music education in elementary schools plays an important role in shaping children's personality, character, and aesthetic development (Djumabayeva, 2024). Through music learning, students not only learn to sing or play musical instruments but also develop their social, emotional, and cognitive abilities (Sun & Wong, 2025). Music serves as a medium to cultivate sensitivity, cooperation, discipline, and the ability to appreciate art and national culture (Mammadova et al., 2024). Therefore, music education at the elementary level functions as a foundation for developing students' musical competence and character from an early age.

The implementation of music learning in elementary schools should not only focus on memorizing songs but also provide students with real musical experiences (Park & Kim, 2025). These experiences include listening, singing, moving to rhythm, and creating simple music (Gabriel, 1981; Swanwick, 2002). Through direct experiences, students can develop musical competencies that encompass the ability to listen, imitate, create, and express themselves through music (Minislamovna, 2025). Moreover, learning that provides space for creativity helps students

discover their musical identity and enhances their confidence in self-expression (Arguedas Quesada, 2011).

To create meaningful musical experiences for students, learning media play a crucial role in the process of music learning at the elementary level (Medica & Sukmayadi, 2021). Learning media function not only as tools to assist teachers in delivering material but also as a bridge between abstract musical concepts and students' real experiences (De Alba Eguiluz, 2016). Through appropriate learning media, students can directly explore musical elements such as pitch, rhythm, timbre, dynamics, and harmony, enabling them to not only understand music theory cognitively but also experience music auditorily and kinesthetically (Guan, 2023). The use of concrete media such as simple musical instruments, interactive digital devices, or sound-based applications helps students identify and manipulate sounds, observe changes in sound character, and create simple compositions appropriate to their developmental level (Greher, 2024).

The teacher's role in utilizing learning media in elementary music education is crucial because teachers act as the main facilitators in creating meaningful learning experiences (Santos & Marconi, 2022). Teachers with strong pedagogical and professional competence can design, select, and utilize learning media appropriate to the objectives, materials, and characteristics of the students (Lestari, 2022). The proper use of media allows students to directly explore musical elements, making the learning process not only theoretical but also practical and enjoyable (Li & Sun, 2023). Additionally, teachers serve as facilitators who guide students in interpreting sounds, expressing themselves musically, and collaborating in musical activities (King, 2018). Thus, teachers' competence in designing and implementing music learning media becomes the key to fostering students' appreciation, creativity, and musical sensitivity in elementary schools (Ardi & Ekadayanti, 2024).

In Indonesia, the implementation of cultural arts and crafts education, including music, at the elementary level is generally carried out by classroom teachers rather than specialized music teachers (Ghozali, 2020). This is regulated in the Government Regulation of the Republic of Indonesia No. 57 of 2021 on National Education Standards, which states that classroom teachers are responsible for all subjects, including cultural arts. This condition often results in suboptimal music learning implementation because classroom teachers may lack sufficient musical competence to develop creative and meaningful instruction (Kusuma & Sudarman, 2024). This issue becomes more complex because most teacher education programs do not provide sufficient emphasis on strengthening music competence, so pedagogical readiness is not always accompanied by adequate mastery of musical content. As a result, this directly leads to limited mastery of instructional components, preventing the learning process from providing authentic musical experiences for students through an ideal learning process.

In practice, music learning in elementary schools often remains limited to imitation-based singing activities without a deeper understanding of musical elements (Park & Kim, 2025). Consequently, the learning process loses its exploratory and creative dimensions, which should be the essence of music education. An overly imitative approach also causes students to become passive and less engaged in the process of music creation, even though meaningful music learning requires active involvement in listening, feeling, creating, and interpreting (Respati, 2025). This aligns with the view that music learning should not merely focus on song reproduction but also on comprehensive musical experiences that develop students' artistic sensitivity, cooperation, and reflective ability toward the music they create or listen to (Johnson, 2009).

Studies on the competence of elementary school teachers in music education and the use of learning media have been widely conducted. For instance, (Kusnadi et al., 2023) emphasized that teacher competence is central to the success of music learning in elementary schools. To be effective, teachers must understand their essential role that music serves as a medium to cultivate human feelings, thoughts, and aesthetic sense. (Siswanti & Sularso, 2024) Found that music instruction in elementary schools is conducted by classroom teachers with fairly good pedagogical competence. However, teachers still lack professional competence in developing students' musical potential. (Mitrevski & Balać, 2024) stated that many teachers still lack adequate digital competence to optimally utilize innovative media. (Wenyan, 2023) highlighted the need for teacher training and the development of media more relevant to students' needs. (Alves, 2021) argued that a multimedia approach combining audiovisual elements with music helps students understand the relationship between music and other cultural expressions, promoting artistic expression. Overall, these studies indicate that although teachers demonstrate relatively strong pedagogical competence and learning media have been shown to support the effectiveness of music instruction, there are still weaknesses in teachers' professional competence in classroom music teaching.

Although numerous studies have examined elementary school teachers' competence and the use of music learning media, there remains a gap in research that explicitly links teacher competence with their ability to use music learning media at the primary school level. Most studies tend to focus separately on teachers' competence in teaching music and the use of learning media. This study offers novelty by integrating teacher competence and the use of music learning media within a comprehensive analytical model, thereby providing a more systematic explanation of the relationship between the two in the context of primary school music education. This is important because the challenges faced by teachers in teaching music differ significantly from those encountered by music specialist teachers.

This study is directed at examining the degree to which teacher competence plays a role in shaping the utilization of music learning media within elementary school settings. More precisely, the investigation seeks to measure how far the professional capabilities of teachers contribute to the effective implementation of music learning media in fostering meaningful musical encounters among students. It is anticipated that the outcomes of this research will provide a solid groundwork for advancing the overall quality of music instruction at the elementary level, particularly through targeted development of teacher competence.

METHOD

This study uses a quantitative exploration approach with a cross-sectional korelasional survey design. The purpose of exploratory research is to clarify the causal relationship between the research variables using previously proposed hypotheses (Creswell & Creswell, 2017). Using this method, the study aims to identify and explain the effect of the teacher's independent competency on the dependent variable, which is the use of music education media in the classroom. 271 elementary school teachers from five different West Java Province regions Tasikmalaya, Ciamis, Banjar, Garut, and Pangandaran were the study's responders. To guarantee proportionate participation from each location, stratified random sampling depending on region was the method employed. A Likert-scale questionnaire with multiple items about teacher competency and the use of music learning materials in primary schools was used to gather data. The questionnaire was disseminated via Google Forms. Each item's Pearson Product Moment correlation was used to

assess the instrument's validity, while Cronbach's Alpha was used to assess its reliability. The results showed a coefficient of 0.648 for the teacher competency variable and 0.874 for

Simple linear regression and descriptive statistics were used to analyze the gathered data. An overview of the research data, including the mean, standard deviation, and lowest and maximum values for each variable, was produced using descriptive statistical analysis. To make sure the data satisfied the assumptions of regression analysis, precondition tests such as the residual normality test, homoscedasticity test, multicollinearity test, and linearity test were carried out before the regression analysis. The degree to which teacher competency affects the usage of music learning media in elementary schools was then investigated using simple linear regression as a hypothesis test. The analysis's findings reveal the direction, intensity, and degree of significance of the relationship between the variables. An empirical explanation of the relationship between teacher competence and the use of music learning media in elementary education is provided by the analysis's findings, which also reveal the direction and strength of the relationship between variables as well as its degree of significance as determined by the t-test and the coefficient of determination (R^2).

RESULTS

Descriptive Analysis of Teacher Competency Variables

Prior to hypothesis testing, a descriptive statistical examination was carried out to obtain a comprehensive picture of the Teacher Competence variable (X). The examination encompassed the computation of several statistical measures, including the mean, standard deviation, as well as the minimum and maximum values. These data points were subsequently utilized to observe the patterns and distribution tendencies within the teacher competence scores. A summary of the descriptive statistical outcomes for this variable is depicted in Table 1.

Table 1. Teacher Competency Description Table

	N	Minimum	Maximum	Mean	Std. Deviation
Teacher Competency	271	2	10	6,68	1,748
Valid N (listwise)	271				

There were 271 respondents who were elementary school teachers, according to Table 1's descriptive statistical analysis results. Teachers' varying levels of competency were indicated by the Teacher competency variable, which had a minimum value of 2 and a maximum value of 10. The average score of 6.68 indicates that teachers are generally quite competent. The moderate data spread indicated by the standard deviation value of 1,748 suggests that there aren't many significant variations in teachers' skill levels. While some teachers reported competency levels below the norm, overall, most teachers showed strong competence.

Additionally, the data were divided into three levels—high, medium, and low—to give a more accurate picture of instructor competency. The goal of this classification is to make the data easier to understand and provide a better organized summary. The teacher competence categorization table and graph are displayed as follows:

Table 2. Teacher Competency Categories

Category	Value	Frequency	Percentage	Cumulative Percentage
High	8 ≤ x	102	37,6	37,6
Medium	5 ≤ x < 8	129	47,6	85,2
Low	x < 5	40	14,8	100
Total		271	100	

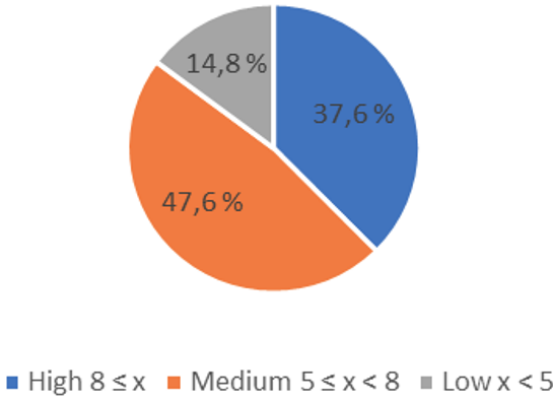

Figure 1. Teacher competency Categories

According to the research, of the 271 teachers who responded, the majority fell into the medium category (129 teachers, or 47.6%), followed by the high category (102 teachers, or 37.6%), and the low category (40 teachers, or 14.8%). These findings show that while a tiny percentage of primary school teachers still require improvement, most of them have medium to high levels of competence.

Descriptive Variables of Learning Media Use

To gain a preliminary understanding of the Learning Media variable (Y) prior to hypothesis testing, a descriptive statistical examination was undertaken. Several key statistical parameters were computed throughout this process, encompassing the mean, standard deviation, along with the minimum and maximum values. The obtained figures were subsequently employed to capture the overall tendencies and score distribution patterns within the learning media variable. A comprehensive breakdown of the descriptive statistical outcomes is laid out in Table 3.

Table 3. Learning Media Usage Description Table

	N	Minimum	Maximum	Mean	Std. Deviation
Learning Media	271	3	15	9,39	2,894
Valid N (listwise)	271				

271 respondents provided valid data based on the descriptive analysis of the Learning Media variable. The average (mean) score was 9.39, with a minimum score of 3 and a maximum score of 15. Although the majority of respondents had scores that were near average, the standard deviation number of 2,894 shows that the score variation was rather different. Additionally, the data were divided into three levels high, medium, and low to give a more comprehensive view of learning media utilization. The goal of this classification is to make the data easier to understand

and provide a better organized summary. The teacher competence categorization table and graph are displayed as follows:

Table 4. Learning Media Categories

Category	Value	Frequency	Percentage	Cumulative Percentage
High	12 ≤ x	66	24,3	24,3
Medium	7≤ x < 12	149	55	79,3
Low	x < 7	56	20,7	100
Total		271	100	

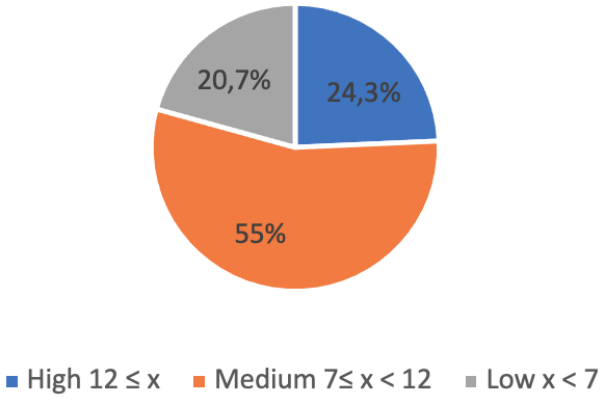

Figure 2. Learning Media Usage Categories

The results of the frequency distribution analysis of the Learning Media variable, it was found that out of 271 respondents, 66 teachers (24,3%) had a high level of learning media usage, 149 teachers (55%) were in the medium category, and 56 teachers (20,7%) were in the low category. These data indicate that most elementary school teachers fall into the medium category.

Prerequisite Test

a. Residual Normality

Table 5. Residual Normality

		Unstandardized Residual
N		271
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	2.15902429
Most Extreme Differences	Absolute	.103
	Positive	.040
	Negative	-.103
Test Statistic		.103
Asymp. Sig. (2-tailed)		.000[c]

Based on the residual normality test outcomes derived from the One-Sample Kolmogorov-Smirnov Test as displayed in the table, the obtained Asymp. Sig. (2-tailed) value stood at 0.000, falling below the predetermined significance threshold of $\alpha = 0.05$. This particular finding suggests that the residual data do not conform to a normal distribution pattern. Consequently, the normality assumption underlying regression analysis cannot be regarded as fully satisfied. Nevertheless, the

regression analysis may still be proceeded with, provided that the relationships among the variables demonstrate linearity and the remaining assumptions, including homoscedasticity and the absence of multicollinearity, are adequately fulfilled (Lumley et al., 2002).

b. Homoscedasticity test

Table 6. Homoscedasticity test

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1,322	1	1,322	.729	.394[b]
	Residual	487,701	269	1,813		
	Total	489,024	270			

a. Dependent Variable: Abs_RES
b. Predictors: (Constant), Kompetensi_Guru

The homoscedasticity examination conducted through the ANOVA table yielded a Sig. value of 0.394, which surpasses the established significance threshold of 0.05 (Sig. > 0.05). This particular outcome provides sufficient grounds to conclude that no indication of heteroscedasticity is present within the regression model. Furthermore, this result demonstrates that the variance of the residuals remains uniform and consistent across all values of the independent variable. In light of these findings, the regression model is considered appropriate to advance toward the subsequent stage of analysis, given that the homoscedasticity assumption required in linear regression analysis has been adequately met.

c. Multicollinearity test

Table 7. Multicollinearity test

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2,037	.519		3,921	.000		
	Kompetensi_ Guru	1,102	.075	.666	14,634	.000	1,000	1,000

a. Dependent Variable: Media_Pembelajaran

The multicollinearity assessment revealed that both the Variance Inflation Factor (VIF) and Tolerance values registered at 1.000. Considering that the tolerance value exceeds the minimum threshold of 0.10 while the VIF value remains well below the maximum limit of 10, these figures collectively confirm the absence of multicollinearity within the regression model. This consequently implies that Teacher Competence, which serves as the independent variable in this study, does not exhibit a substantial linear association with other factors included in the model. Therefore, the regression model is deemed to have satisfactorily fulfilled the no-multicollinearity assumption, rendering it fully qualified to undergo further analytical examination.

d. Linearity Test

Table 8. Linearity Test

		Sum of Squares	df	Mean Square	F	Sig.
Between Groups	(Combined)	1024,176	8	128,022	27,129	.000
	Linearity	1001,965	1	1001,965	212,328	.000
	Deviation from Linearity	22,211	7	3,173	.672	.695
Within Groups		1236,363	262	4,719		
Total		2260,539	270			

The linearity examination demonstrated that the Sig. value recorded in the Linearity column reached 0.000 (< 0.05), whereas the Sig. value corresponding to Deviation from Linearity was obtained at 0.695 (> 0.05). The fact that the Sig. value for Deviation from Linearity surpasses the 0.05 threshold serves as compelling evidence that the association between the Teacher Competence variable and the Music Learning Media variable follows a linear pattern. In view of these results, it can be firmly established that the data have successfully satisfied the linearity assumption, thereby making it entirely appropriate to proceed with the application of simple linear regression analysis.

Hypothesis Testing

Table 9. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.666[a]	.443	.441	2.163
a. Predictors: (Constant), Kompetensi_Guru				

Regression analysis results indicate a Correlation Coefficient (R) of 0.666. This suggests a robust and favorable correlation between the variables "Learning Media" and "Teacher Competence." Furthermore, the independent variable "Teacher Competence" contributes 44.3% to the variance (increase or decrease) of the dependent variable "Learning Media," according to the R Square (Coefficient of Determination) value of 0.443. Other factors not included in this model have an impact on the remaining 55.7%. The significant impact of the variable is further supported by the Adjusted R Square value of 0,441, which is somewhat adjusted for the number of predictors.

Tabel 10. Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.037	.519		3.921	.000
	Kompetensi_Guru	1.102	.075	.666	14.634	.000
a. Dependent Variable: Media_Pembelajaran						

The following are the findings of the basic linear regression analysis between learning media (Y) and teacher competence (X): The projected value of learning media is 2,037 when teacher competence is zero, according to the constant value (a) of 2,037. In the meantime, the regression

coefficient (b) for the teacher competence variable is 1,102, meaning that learning media will rise by 1,102 units for every unit increase in teacher competence. The regression equation model that results is as follows:

$$Y=2,037+1,102X$$

The usage of learning media is positively and significantly impacted by teacher competency, according to the computed t-value of 14,634 with a significance level (Sig.) of 0,000 < 0,05. Therefore, it can be said that a teacher's usage of learning material is better the more competent they are.

DISCUSSION

Descriptive analysis of the 271 surveyed teachers shows that the majority fall into the moderate category (47.6%), followed by high (37.6%) and low (14.8%). These findings indicate that, in general, elementary school teachers' competence in music education is fairly good, with most teachers at moderate to high levels, although a small proportion still requires further professional development. Teacher competence in elementary music education serves as a fundamental basis for nurturing students' musical potential (Nielsen & Karlsen, 2021). This competence not only encompasses professional knowledge of basic musical concepts such as rhythm, melody, and harmony, but also pedagogical skills, the ability to design and implement creative and engaging learning experiences (Siswanti & Sularso, 2024). Teachers are expected to motivate students and facilitate musical expression; however, many general classroom teachers without a music education background often face challenges in teaching musical content in depth, making teacher competence a key determinant of instructional success (Adjepong, 2024; Akuffo & Lamplighter, 2020; Siswanti & Sularso, 2024).

The variable of learning media usage shows that the majority of teachers fall into the moderate category (55%), followed by high (24.3%) and low (20.7%). This indicates that the use of music learning media in elementary school classrooms is at a moderate level, meaning that teachers have used media but not optimally; some use it intensively, while others use it only minimally. Learning media play a central role in elementary music education, functioning not merely as technical aids but as cognitive and social mediators that structure the acquisition of musical competence (González-Mayorga & Sanz, 2012). Appropriate selection and design of media can facilitate the processes of audiation and repetition necessary for developing rhythmic and melodic patterns in children (Campbell & Scott-Kassner, 2002). Pedagogically integrated media also provide opportunities for creative exploration and simple improvisation, fostering the development of early composition and musical thinking skills (Jellison, 2015) Moreover, the use of media in collaborative activities strengthens social interaction, contributing to students' affective and social development in line with sociocultural theories of learning as a mediated process (Vygotsky, 1978). Therefore, pedagogical decisions regarding media selection should be based on the alignment between learning objectives, students' stages of musical development, and the teacher's capacity to integrate media effectively.

The findings derived from the regression analysis reveal that teacher competence exerts a favorable and statistically meaningful influence on the utilization of music learning media, implying that an elevated level of teacher competence tends to be accompanied by a more frequent

and diverse application of media within music instruction settings. This finding reinforces the view that teacher competence is not only related to content mastery but also to pedagogical ability in managing students' musical experiences in a richer and more interactive manner (Yusoff et al., 2023). In the context of music education, the use of media such as audio, video, and digital applications enables students to develop musical sensitivity, creativity, and appreciation skills more optimally; therefore, teacher competence becomes a key factor in creating meaningful learning experiences (Rozman & Kovačič, 2008). This finding is also consistent with the perspective of (Elliott, 1995), who emphasizes the importance of active and contextual musical experiences, where instructional media serve as a means to enrich musical practice in the classroom. Thus, enhancing teacher competence, particularly in music pedagogy and technology integration, becomes a strategic prerequisite for optimizing the use of music learning media in elementary schools.

CONCLUSION

This study concludes that elementary school teacher competence significantly influences the practice of using music learning media ($R^2 = 0{,}443$; significance value = 0,000 (< 0,05), with the regression equation $Y = 2{,}037 + 1{,}102X$), indicating that teacher competence explains approximately 44,3% of the variation in the use of learning media. These findings have practical implications, suggesting that improving teacher competence is a key factor; therefore, It is recommended that classroom teachers proactively improve their professional competence and pedagogical competence through training and professional development programs. For future researchers, it is recommended to explore the remaining 55,7% of factors (beyond teacher competence) that may influence the use of learning media, such as the availability of facilities, principal support, or teachers' intrinsic motivation.

REFERENCES

Adjepong, B. (2024). Navigating Music Education in Ghana: A Guide to Composition, Performance and Listening for Primary School Teachers. In Dr. V. Mîndrescu (Ed.), *Progress in Language, Literature and Education Research Vol. 4* (pp. 29–37). B P International. https://doi.org/10.9734/bpi/pller/v4/7182C

Akuffo, G. T. M., & Lamplighter, B. (2020). The music education background of teachers in Ghanaian public primary. *Nairobi Journal of Humanities and Social Sciences*, *3*(4), 97–108.

Alves, G. G. B. (2021). Trilhas sonoras em turmas de 1º ano do ensino fundamental: Ensino-aprendizagem de música com multimídias. *Orfeu*, *6*(2), 267–293. https://doi.org/10.5965/2525530406022021267

Ardi, R., & Ekadayanti, W. (2024). Pengembangan Bahan Ajar Berbasis Kecerdasan Bermain Musik untuk Siswa SD Kelas Rendah. *Arus Jurnal Sosial Dan Humaniora*, *4*(2), 884–894. https://doi.org/10.57250/ajsh.v4i2.576

Arguedas Quesada, C. (2011). La expresión corporal y el currículo escolar. *Revista Educación*, *28*(1), 111. https://doi.org/10.15517/revedu.v28i1.2823

Campbell, P., & Scott-Kassner, C. (2002). *Music in childhood: From preschool to the elementary grades*.

Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.

De Alba Eguiluz, B. (2016). Educación musical y medios de comunicación: Una atrayente confluencia. *Ensayos: Revista de La Facultad de Educación de Albacete*, *31*(2), 69–80.

Djumabayeva, M. (2024). Formation Of Students'personality In Music Lessons. *International Journal*, *4*(10), 238–242.

Elliott, D. J. (1995). *Music matters: A new philosophy of music education: Oxford University Press*.

Gabriel, C. (1981). *The Psychology of Musical Ability*. London; New York: Methuen.

Ghozali, I. (2020). Professional Competence of Teachers in Learning Music at Elementary Schools in Pontianak. *Harmonia: Journal of Arts Research and Education*, *20*(1), 84–94. https://doi.org/10.15294/harmonia.v20i1.24932

González-Mayorga, H., & Sanz, D. P. (2012). El aprendizaje del solfeo: Propuesta de un modelo instruccional en educación musical. *International Journal of Developmental and Educational Psychology*, *2*(1), 87–94.

Greher, G. R. (2024). The Role of Technology in Learning to Compose. In M. Kaschub (Ed.), *The Oxford Handbook of Music Composition Pedagogy* (1st edn, pp. 294–315). Oxford University Press. https://doi.org/10.1093/oxfordhb/9780197574874.013.14

Guan, W. (2023). Analysis of music education management mode in colleges and universities in China. *Frontiers in Educational Research*, *6*(5), 127–148.

Jellison, J. (2015). *Including everyone: Creating music classrooms where all children learn*. Oxford University Press.

Johnson, R. (2009). Critically Reflective Musicianship. In T. A. Regelski & J. T. Gates (Eds), *Music Education for Changing Times* (pp. 17–26). Springer Netherlands. https://doi.org/10.1007/978-90-481-2700-9_2

King, F. (2018). Music activities delivered by primary school generalist teachers in Victoria: Informing teaching practice. *Australian Journal of Teacher Education (Online)*, *43*(5), 48–59.

Kusnadi, U., Mulyana, A., & Rachmania, S. (2023). Guru Dan Pembelajaran Musik Di Sekolah Dasar: Sebuah Refleksi Dalam Tinjauan Pedagogis-Filosofis. *Naturalistic: Jurnal Kajian Dan Penelitian Pendidikan Dan Pembelajaran*, *7*(2), 1652–1659.

Kusuma, S. S., & Sudarman, Y. (2024). Kompetensi Pedagogik Guru Seni Budaya Non Bidang Ilmu Dalam Melaksanakan Pembelajaran Seni Musik Di Kelas Viii-2 Smp Negeri 21 Padang. *EDUKASI: Jurnal Ilmiah Ikatan Guru Indonesia*, *1*(1), 26–34.

Lestari, L. (2022). The Influence Of Learning Media And Teacher's Pedagogic Competence On Learning Effectiveness. *JKP | Jurnal Kepemimpinan Pendidikan*, *4*(2), 620–631. https://doi.org/10.22236/jkpuhamka.v4i2.8211

Li, Y., & Sun, R. (2023). Innovations of music and aesthetic education courses using intelligent technologies. *Education and Information Technologies*, *28*(10), 13665–13688. https://doi.org/10.1007/s10639-023-11624-9

Lumley, T., Diehr, P., Emerson, S., & Chen, L. (2002). The Importance of the Normality Assumption in Large Public Health Data Sets. *Annual Review of Public Health*, *23*(1), 151–169. https://doi.org/10.1146/annurev.publhealth.23.100901.140546

Mammadova, R., Amri, A., Akparov, Z., Alo, F., Sheikhzamanova, F., Abbasov, M., Amrahov, N., Hajiyev, E., & Alizade, S. (2024). Evaluation of genetic diversity using SSR markers and link with drought response of Azerbaijani durum wheat (Triticum durum Desf.) genotypes. *Genetic Resources and Crop Evolution*, *71*(5), 2203–2212.

Medica, R. S., & Sukmayadi, Y. (2021). Learning Model of E-Learning Basic Music Theory for Elementary Students: *Proceedings of the 3rd International Conference on Arts and Design Education (ICADE 2020)*. 3rd International Conference on Arts and Design Education (ICADE 2020). https://doi.org/10.2991/assehr.k.210203.058

Minislamovna, G. I. (2025). Formation of the creative personality of students of comprehensive schools in music lessons. *International Journal of Pedagogics*. https://api.semanticscholar.org/CorpusID:280596575

Mitrevski, A., & Balać, S. (2024). Teacher's attitudes on the application of digital tools in the teaching of music culture. *Godisnjak Pedagoskog Fakulteta u Vranju*, *15*(1), 73–90. https://doi.org/10.5937/gufv2401073M

Nielsen, S. G., & Karlsen, S. (2021). Grunnskolelærere i musikk og deres kompetanse: Hvordan er situasjonen i norsk kontekst? *Nordic Research in Music Education*, *2*(2), 100–125. https://doi.org/10.23865/nrme.v2.2840

Park, J.-Y., & Kim, E.-J. (2025). Current Status and Practical Strategies of Music Education in Lower Elementary Grades through 2022 Revised Integrated Curriculum 'Pleasant Life'. *The Korean Society of Music Education Technology*, *64*, 81–101. https://doi.org/10.30832/JMES.2025.64.81

Respati, R. (2025). *Desain Model Auditory Repetition Eksploration Creativity (Arec) Sebagai Stimulus Pengembangan*. Disertasi pada Universitas Pendidikan Indonesia.

Rozman, J. Č., & Kovačič, B. (2008). Use of learning media and technology by preparation and realization of music Lessons. *Informatologia*, *41*(3), 175–182. Scopus.

Santos, L. M. D., & Marconi, J. G. D. S. (2022, February 14). Aprendizagem Significativa Por Meio Da Música E Do Teatro Nos Anos Iniciais Do Ensino Fundamental. *Anais Do I Congresso Brasileiro On-Line de Ensino, Pesquisa e Extensão*. I Congresso Brasileiro On-line de Ensino, Pesquisa e Extensão. https://doi.org/10.51189/ENSIPEX/24

Siswanti, H., & Sularso, S. (2024). Analysis Of Teachers' Pedagogical Competence In Music Learning At Elementary School. *EduHumaniora | Jurnal Pendidikan Dasar Kampus Cibiru*, *16*(1), 57–68. https://doi.org/10.17509/eh.v16i1.60242

Sun, M., & Wong, H. Y. (2025). A Review of Children's Music Education. *International Journal of Academic Research in Business and Social Sciences*, *15*(1), Pages 735-768. https://doi.org/10.6007/IJARBSS/v15-i1/24422

Swanwick, K. (2002). *Teaching music musically*. Routledge.

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes* (Vol. 86). Harvard university press.

Wenyan, W. (2023). Exploration on the Innovative Path of Primary School Music Teaching under the Background of New Media. *Frontiers in Educational Research*, *6*(29).

Yusoff, S. M., Marzaini, A. F. M., Hassan, M. H., & Zakaria, N. (2023). Investigating the Roles of Pedagogical Content Knowledge in Music Education: A Systematic Literature Review. *Malaysian Journal of Music*, *12*(2), 95–114. Scopus. https://doi.org/10.37134//MJM.VOL12.2.6.2023