

중학교 초임 음악 교사의 의사결정 수준에 대한 경험적 연구

An Empirical Study of Teaching Decision-Making Levels from the Perspective of Novice Music Teachers in Junior High Schools

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Abstract This study explores the decision-making levels of novice middle school music teachers in Shandong Province and examines the influence of factors such as gender, educational qualifications, and school type. A survey of 100 teachers revealed that the overall decision-making level was moderate, with the preactive stage having the most significant impact. Gender did not significantly differ, but educational qualifications and school type did. The study proposes a framework to identify factors influencing teaching decisions, offering theoretical support and practical guidance for educational policy and teacher training aimed at enhancing the quality of middle school music education and aligning with international standards.

Key words: novice music teachers, teaching decision-making level, middle school, music education

초록 본 연구는 산둥성 중학교 초임 음악 교사들의 의사결정 수준을 탐구하고, 성별, 학력, 학교 유형과 같은 요인들의 영향을 분석하였다. 100명의 교사를 대상으로 한 설문조사 결과, 전체적인 의사결정 수준은 중간 정도로 나타났다. 사전적(preactive) 단계가 가장 큰 영향을 미치는 것으로 확인되었다. 성별에 따른 유의미한 차이는 발견되지 않았으나, 학력과 학교 유형은 유의미한 영향을 미쳤다. 본 연구는 교수 의사결정에 영향을 미치는 요인을 규명하기 위한 이론적 틀을 제안하며, 중학교 음악 교육의 질을 향상시키고 국제 기준에 부합하도록 지원하기 위한 교육 정책 및 교사 연수 프로그램에 대한 이론적 근거와 실질적 지침을 제공한다.

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I . Introduction

Teaching decision-making refers to the various decisions teachers make during the teaching process, including pre-lesson planning, classroom management, interaction, and post-lesson evaluation and reflection. These decisions have a direct impact on student learning (Lerner, Li, Valdesolo & Kassam, 2015). Westerman's (1991) categorized decision-making into preactive, interactive, and postactive stages, highlighting the role of teachers' knowledge, beliefs, skills, and classroom environment in the decision-making process. In the pre-active stage, teachers plan based on student understanding and educational goals; in the interactive stage, they manage classroom dynamics and respond to feedback; in the post-active stage, they evaluate and reflect on teaching effectiveness. Global educational reforms in music underscore the importance of music teachers' decisions (Johnson & Matthews, 2020). Music education enhances musical talent and cognitive and social skills, making it essential to understand the factors influencing teaching decisions to improve educational quality (Espejo Villar, Lázaro Herrero, & Álvarez-López, 2022). Middle school music teachers face preactive, interactive, and postactive decision-making stages, which impact student learning (Miranda, 2014; Westerman, 1991). Novice teachers encounter unique challenges in terms of curriculum design, classroom interaction, assessment, and reflection, which affect their professional growth (Shuler & Nissley, 2007). However, research on novice music teachers is limited. This study investigates how gender, educational qualifications, and school type influence novice middle school music teachers' decision-making levels to inform educational policy and enhance teacher training programs.

Research questions:

1. What is the overall level of teaching decision-making among novice music teachers?
2. Is there a difference in teaching decision-making levels between genders among novice music teachers?
3. Is there a difference in teaching decision-making levels among novice music teachers with different educational qualifications?
4. Is there a difference in teaching decision-making levels among novice music teachers in various school types?

II. Methodology

A cross-sectional survey was used to assess the decision-making levels of 100 novice music teachers in China, with a focus on demographics and related factors. The data were analysed via nonparametric statistical methods, which were structured around preactive, interactive, and postactive stages of decision-making.

1. Research design

This cross-sectional survey aims to understand the teaching decision-making levels of novice middle school music teachers with less than 3 years of experience. It also analyses differences in decision-making levels by gender, school type, and educational qualifications.

2. Sample

The sample size is typically 3-10 times the number of research items. Since a questionnaire with standard points generally contains more than 30 items, calculating a sample size between 90 and 300 is appropriate (Xue & Wong, 2024). To ensure the representativeness of the sample, this study selected novice music teachers from various regions, school types (both public and private), and educational backgrounds, adequately reflecting the diversity of the population. Within the author's capacity, 70 junior high schools were contacted using purposive sampling, yielding a total of 150 eligible novice music teachers from Shandong. After excluding invalid responses, 100 valid questionnaires were analyzed, resulting in a 66.67% response rate.

3. Sample selection criteria

Sample selection is based on criteria that include all teachers with less than 3 years of teaching experience and who teach grades 7 to 9. Owing to the limited number of samples, efforts will be made to ensure the representativeness of the sample for better generalization to the overall population. They all volunteered to participate in this study.

4. Data collection instruments

A structured survey questionnaire was distributed electronically via QQ, WeChat, and email to increase response rates. The participants could complete the questionnaire at their convenience, ensuring confidentiality and anonymity. The data were analysed via SPSSAU for descriptive statistics and nonparametric analysis of factors such as gender, school type, educational qualifications, region, and preservice training at novice middle school music teachers' decision-making levels.

5. Questionnaire design

The Teaching Decision-Making Level Questionnaire, which is based on Westerman's (1991) theory and expert models (Xue & Wong., 2024), assesses decision-making across the preactive, interactive, and postactive stages.

1) Question development

Guided by research (e.g., Johnson & Mathews, 2020), an initial set of 42 questions was developed. However, Johnson & Mathew's study focused on the pre-active stage, this study's questionnaire focuses on the three stages of decision-making in music education.

2) Expert validation

In February 2024, three doctoral advisors reviewed the questionnaire for validity and clarity, refining it to 41 questions. The content validity index (CVI) was successfully met.

3) Pilot test

Administered to 79 novice music teachers from 17 schools, the pilot test validated the questionnaire's reliability and confirmed its suitability through successful exploratory factor analysis (EFA). The EFA included assessments of maximum variance rotation, factor rotation, and scree plot analysis, which collectively confirmed the presence of seven distinct factors.

This thorough process ensures that the questionnaire is robust for evaluating decision-making in secondary music education.

6. Data analysis

Owing to the ordinal nature and nonnormal distribution of the data, the study used parametric statistics for descriptive analysis and nonparametric statistics for group comparisons.

Descriptive statistics included the mean, median, mode, standard deviation, and range.

1) Nonparametric statistics

Mann–Whitney U test: This test compares two independent samples and is suitable for ordinal data (Field, 2024). Kruskal–Wallis test: This test compares three or more independent samples and is applicable to continuous or ordinal variables (Field, 2024).

7. Reliability and validity

Reliability in this study, indicating the consistency in measuring the intended attribute, was evaluated via Cronbach's alpha in the SPSSAU. The values for each subscale are as follows: teacher knowledge ($\alpha = 0.810$), beliefs ($\alpha = 0.801$), awareness of students ($\alpha = 0.826$), classroom environment ($\alpha = 0.842$), teaching skills ($\alpha = 0.807$), reflection ($\alpha = 0.819$), and evaluation ($\alpha = 0.815$). The overall Cronbach's alpha is 0.832. These high alpha values indicate strong internal consistency. Additionally, the corrected item–total correlation (*CITC*) values exceeded 0.4, confirming high reliability.

Validity was confirmed with a *KMO* value of 0.884 and a Bartlett's test *p-value* below 0.05, indicating the strong validity of our research instrument. The questionnaire passed exploratory factor analysis (EFA). EFA, encompassing total variance explained, scree plot analysis, and rotated factor loadings, was introduced. The results, summarized in the final evaluation, confirmed the questionnaire's reliability (0.832) and suitability for factor analysis (*KMO*: 0.884, Bartlett's test $p < 0.05$) and revealed the impact of common factors. Seven factors, explaining 82.067% > 50% of the variance, were extracted via scree plot analysis.

8. Ethical approval

The study adhered to principles of self-determination, anonymity, confidentiality, and informed consent. Permission was obtained from the school staff and students at the participating middle

schools. The participants were fully briefed on the study's purpose and procedures, assured of no risks or costs, and provided informed consent. The study followed the Declaration of Helsinki and was approved by the Institutional Review Board of University Pendidikan Sultan Idris.

III. Results

1. Demographic information

The sample included 56% females and 44% males, with 71% from public schools and 29% from private schools. Most teachers held a graduate degree (53%). In terms of region, more than half of the respondents preferred suburban areas (53%). Additionally, 63% had participated in preservice training, whereas 37% had not.

2. Research Question 1: What is the overall level of teaching decision-making among novice music teachers in middle schools?

According to Johnson & Matthews (2020) and Lloyd (2019), an average score above 3 indicates a moderate level. As shown in Table 1, the average decision-making level across these stages is 3.255, reflecting a moderately high level. The ranking of teaching decision-making levels across the three stages is preactive ($M = 3.400$) > interactive ($M = 3.397$) > postactive ($M = 2.968$).

<Table 1> Descriptive analysis of the three stages and overall level results

Descriptive Analysis						
Items	N of samples	Min	Max	Mean	Std. Deviation	Median
Overall	100	1.397	4.475	3.255	0.723	3.359
Preactive	100	1.000	4.933	3.400	0.970	3.533
Interactive	100	1.385	5.000	3.397	0.956	3.462
Postactive	100	1.000	5.000	2.968	1.001	3.000

Table 2 clearly shows that among the seven factors, teachers rated their awareness of students the highest ($M = 3.470$). However, reflection received the lowest score ($M = 2.966$), closely

followed by evaluation ($M = 2.969$).

<Table 2> Descriptive analysis results for the 7 factors

Descriptive Analysis						
Items	N of samples	Min	Max	Mean	Std. Deviation	Median
Teacher knowledge	100	1.000	5.000	3.378	1.071	3.400
Beliefs	100	1.000	5.000	3.352	1.120	3.400
Awareness of students	100	1.000	5.000	3.470	1.101	3.600
Classroom environment	100	1.000	5.000	3.413	1.077	3.417
Teaching skills	100	1.286	5.000	3.383	1.011	3.571
Evaluation	100	1.000	5.000	2.969	1.191	3.125
Reflection	100	1.000	5.000	2.966	1.085	3.000

3. Research Question 2: Is there a significant difference in the teaching decision-making levels of novice music teachers in middle schools based on gender?

As shown in Table 3, gender differences were analysed via the Mann–Whitney U test. Overall, there was no significant difference in the degree of decision-making among novice music teachers of different genders ($p > 0.05$).

<Table 3> Nonparametric test for novice music teachers of different genders

	Gender Median (P_{25} , P_{75})		MannWhitney U	MannWhitney z	p
	Female ($n=132$)	Male ($n=108$)			
Overall	3.321(2.7,3.8)	3.452(2.9,3.9)	1127.500	-0.726	0.468
Preactive	3.533(3.0,4.1)	3.500(2.6,4.2)	1165.500	-0.462	0.644
Interactive	3.462(2.5,4.2)	3.500(2.8,4.4)	1081.000	-1.049	0.294
Postactive	2.962(2.2,3.7)	3.154(2.4,3.7)	1132.000	-0.695	0.487

* $p<0.05$ ** $p<0.01$

4. Research Question 3: Is there a significant difference in the teaching decision-making levels of novice music teachers in middle schools based on school types?

The results of the Mann–Whitney U test statistics revealed significant differences in the overall level of teaching decision-making among novice music teachers with different educational qualifications ($p < 0.05$), as indicated in Table 4. Among the different school types, there was no significant difference in preactive ($p > 0.05$) and significant differences were observed in overall, interactive, and post-active ($p < 0.05$) aspects. A detailed analysis is provided in Table 4.

<Table 4> Nonparametric test for novice music teachers at different school types

Nonparametric test

	School types Median (P_{25} , P_{75})		MannWhitney U	MannWhitney z	p
	Public (n=164)	Private (n=76)			
Overall	3.508(3.2,3.9)	2.959(2.4,3.1)	517.500	-3.889	0.000**
Preactive	3.533(2.6,4.3)	3.467(2.9,4.0)	1003.500	-0.198	0.843
Interactive	3.692(3.2,4.4)	2.615(2.0,3.3)	441.500	-4.469	0.000**
Postactive	3.231(2.5,3.8)	2.538(1.8,3.1)	642.500	-2.941	0.003**

* $p < 0.05$ ** $p < 0.01$

In Table 5, with respect to the interactive and postactive stages, school type significantly differed ($p < 0.05$) in terms of teaching skills, the classroom environment, evaluation, and reflection.

<Table 5> Nonparametric test for four factors among novice music teachers at different school types

Nonparametric test

	School types Median (P_{25} , P_{75})		MannWhitney U	MannWhitney z	p
	Public (n=164)	Private (n=76)			
Classroom environment	3.833(2.8,4.7)	2.667(1.8,3.3)	463.000	-4.310	0.000**
Teaching skills	3.857(3.1,4.3)	2.429(2.0,3.4)	503.000	-4.005	0.000**
Evaluation	3.375(2.3,4.1)	2.500(1.6,3.3)	689.500	-2.586	0.010**
Reflection	3.200(2.2,4.0)	2.600(1.8,3.2)	727.000	-2.302	0.021*

* $p < 0.05$ ** $p < 0.01$

Specifically, the classroom environment and school type were significantly differed ($p = 0.000 <$

0.01), with a median difference indicating that public schools ($M = 3.833$) had a significantly higher median than private schools did ($M = 2.667$). School type showed significant differences in teaching skills ($p = 0.000 < 0.01$), with a median difference indicating that public schools ($M = 3.857$) had a significantly higher median than did private schools ($M = 2.429$). For evaluation, school type was significantly different ($p = 0.000 < 0.01$), with a median difference indicating that public schools ($M = 3.375$) had a significantly higher median than private schools did ($M = 2.500$). For Reflection, school type was significantly different ($p = 0.001 < 0.01$), with a median difference indicating that public schools ($M = 3.200$) had a significantly higher median than private schools did ($M = 2.600$).

5. Research Question 4: Is there a significant difference in the teaching decision-making levels of novice music teachers in middle schools based on education qualifications?

As shown in <Table 6>, significant differences were found in the teaching decision-making levels among teachers with different educational qualifications ($p < 0.01$). Scores across three stages—postgraduate degree and above, undergraduate degree, and associate’s degree—showed a consistent pattern where postgraduate degree and above scores were higher than undergraduate degree scores, which in turn were higher than associate’s degree scores. Specifically, significant differences were detected for the preactive and postactive stages ($p < 0.01$), whereas no significant difference was detected for the interactive stage.

<Table 6> Nonparametric test among novice music teachers with different educational qualifications

Nonparametric test

	Educational qualification Median (P_{25} , P_{75})			Kruskal-Wallis H	p
	Associate’s degree (n=58)	Undergraduate degree (n=127)	Postgraduate degree and above (n=55)		
Overall	2.848(2.2,3.5)	3.335(2.9,3.8)	3.767(3.2,4.0)	13.196	0.001**
Preactive	2.600(1.7,2.9)	3.533(3.0,4.3)	3.967(3.7,4.2)	24.920	0.000**
Interactive	3.615(2.8,4.2)	3.385(2.4,4.2)	3.615(3.0,4.5)	3.913	0.141
Postactive	2.385(1.5,3.3)	3.000(2.5,3.7)	3.500(2.6,3.8)	6.953	0.031*

* $p < 0.05$ ** $p < 0.01$

<Table 7> Nonparametric test for five factors among novice music teachers with different educational qualifications

Nonparametric test

	Educational qualification Median (P_{25} , P_{75})			Kruskal-Wallis H	p
	Associate's degree (n=58)	Undergraduate degree (n=127)	Postgraduate degree and above (n=55)		
Teacher knowledge	2.600(1.8,3.2)	3.400(2.8,4.0)	4.200(3.8,4.7)	26.821	0.000**
Beliefs	2.400(1.6,3.0)	3.800(2.8,4.4)	3.900(3.3,4.4)	20.218	0.000**
Awareness of students	2.400(2.0,3.0)	3.800(3.0,4.8)	3.800(3.5,4.0)	20.517	0.000**
Evaluation	2.375(1.3,3.6)	3.125(2.2,3.8)	3.438(2.3,4.3)	4.313	0.116
Reflection	2.200(1.4,3.2)	3.000(2.1,3.7)	3.600(2.7,4.0)	9.615	0.008**

* $p<0.05$ ** $p<0.01$

Further analysis of the five factors within the preactive and postactive stages revealed significant differences in the teaching decision-making levels across educational qualifications ($p < 0.01$) in <Table 7>. Specifically, with respect to teacher knowledge, beliefs, and reflection, teachers with a postgraduate degree and above presented significantly higher scores than did those with an undergraduate degree and an associate's degree.

1) Teacher knowledge

Educational qualifications significantly differed in terms of teacher knowledge ($p = 0.000 < 0.01$). Specifically, those with a postgraduate degree and above ($M = 4.200$) had a significantly higher median than both those with an associate's degree ($M = 2.600$) and those with an undergraduate degree ($M = 3.400$).

2) Beliefs

Educational qualifications exhibited a significant difference in beliefs ($p = 0.000 < 0.01$). The median for those with a postgraduate degree and above ($M = 3.900$) was significantly greater than that for those with an associate's degree ($M = 2.400$) and those with an Undergraduate degree ($M = 3.800$).

3) Awareness of students

Significant differences were found in the awareness of students across educational qualifications ($p = 0.000 < 0.01$). Postgraduate degree and above ($M = 3.800$) had a significantly greater median than both associate's degree ($M = 2.400$) and undergraduate degree ($M = 3.800$).

4) Evaluation

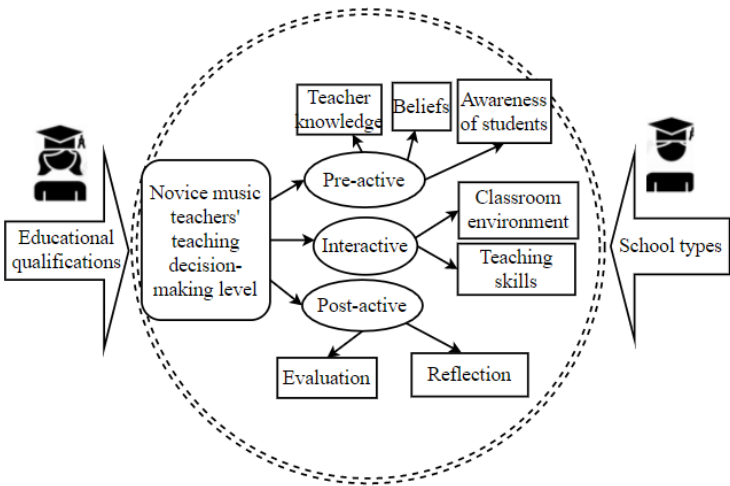
The differences in evaluation across educational qualifications were not significant ($p = 0.116$).

5) Reflection

Educational qualifications significantly affected reflection ($p = 0.008 < 0.01$). The median for those with a postgraduate degree and above ($M = 3.600$) was significantly greater than those with an associate's degree ($M = 2.200$) and those with an undergraduate degree ($M = 3.000$).

6. Research framework

On the basis of the findings of the study, a framework illustrating the influence of personal factors on teaching decision-making levels was developed, as depicted in [Figure 1].



[Figure 1] Framework of the study

IV. Discussion

1. Research question 1

The average teaching decision-making level was 3.393, indicating a moderate level, which is consistent with previous studies by Shuler and Nissley (2007) and Lloyd (2019), which also suggested similar decision-making levels among novice teachers in China. This aligns with global findings that novice teachers often face challenges in decision-making due to limited experience (Darling-Hammond, 2021).

Novice music teachers demonstrated the highest proficiency in the preactive stage ($M = 3.400$), followed by the interactive stage ($M = 3.397$). The lowest scores were observed in the postactive stage ($M = 2.968$), which is consistent with findings from Hou et al. (2023) and Clough et al. (2009). International studies, such as those by Çevik & Andre (2013) and Levin & Nolan (2014), also underscore that novice teachers excel in planning but face challenges in real-time classroom management and postclass reflection.

With respect to the factors influencing decision-making, teachers' awareness of students received the highest average score (3.470), indicating strong competence in understanding students' needs, characteristics, and learning styles. This finding is consistent with research by Garvis & Pendergast (2010) and Campbell, Thompson and Barrett (2021). However, reflection (2.966) and evaluation (2.969) practices were identified as areas needing improvement, echoing findings from Kennedy (2016) and Sanchez Adorno (2021). This highlights the global need for professional development focused on enhancing reflective practices (Darling-Hammond, 2021).

2. Research question 2

Overall, there was no significant difference in teaching decision-making levels between female and male novice music teachers. This result is consistent with those of previous studies (e.g., Johnson & Matthews, 2020) and aligns with international research suggesting that gender does not significantly influence teaching decision-making (Xue & Wong, 2024).

With respect to individual characteristics and professional development, the lack of significant gender differences suggests that factors other than gender, such as personal attributes and professional training, may play more critical roles. While some studies (Johnson & Matthews, 2020) support this finding, others (Xue & Wong, 2024) highlight the complexity of teaching

decision-making. Wadesango (2012) emphasized that teaching approaches and perceptions are more influenced by the significance of the issue rather than by gender. This aligns with global findings emphasizing the importance of professional development over gender-based differences (Darling-Hammond, 2021).

In terms of sample composition and gender balance, the cohort included 56 female and 44 male teachers. Despite no overall significant differences, male teachers scored slightly higher on average ($3.452 > 3.321$). This minor variation aligns with findings by Donovan, Güss and Naslund (2015), indicating that male teachers often exhibit higher self-efficacy, a trend observed in various international contexts (Lau, 2018).

Although this study did not find significant gender differences in decision-making levels, it is important to ensure that both male and female teachers have equal access to professional training opportunities to ensure equitable distribution of educational resources. Ensuring equitable distribution of educational resources can help mitigate potential disparities in professional growth opportunities. Furthermore, it is vital to recognize that while this study did not reveal significant differences in decision-making, the lack of such differences does not preclude the need for targeted support. As highlighted by Xue & Wong (2024), promoting gender equity within teaching professions is essential for maximizing the effectiveness of educational practices and fostering an inclusive culture that values contributions from all educators. Therefore, educational institutions should implement policies and programs that encourage equal participation in professional development for both male and female teachers, ensuring that all educators can develop their skills and enhance their teaching effectiveness.

3. Research question 3

The research findings indicate that novice music teachers in public schools generally exhibit higher decision-making levels than do those in private schools do, which aligns with the findings of previous studies (Hou et al., 2023) and reflects global trends where public schools benefit from more extensive resources and professional development opportunities (Espejo Villar, Lázaro Herrero & Álvarez-López, 2022).

Several factors contribute to this disparity. Public schools typically have access to superior educational resources, including qualified staff, advanced teaching equipment, and modern educational technologies, which support enriched classroom interactions and effective evaluation and reflection processes (Donovan, Güss & Naslund, 2015). In contrast, private schools may

face resource limitations that affect their ability to provide comparable educational experiences.

Government education policies play a pivotal role in enhancing educational practices in public schools, emphasizing effective teaching methods and evaluation strategies essential for improving teaching quality (Kelly, 2010). Compared with their counterparts in private schools, public school teachers also benefit from more structured training and possess stronger classroom management and interaction skills (Matthews & Koner, 2022).

Societal expectations drive public schools to prioritize quality educational services, including positive classroom interactions and effective evaluation mechanisms, whereas private schools may prioritize enrollment rates and student development over comprehensive teaching practices (Legette, 2013). This is consistent with global research highlighting the impact of resource allocation on teaching quality (Taylor & Tyler, 2012).

Further analysis of the classroom environment, teaching skills, evaluation, and reflection revealed that novice music teachers in public schools excel across these dimensions, supported by stable incomes, abundant professional development opportunities, and systematic evaluation systems (Opdenakker & Van Damme, 2006). Public schools foster continuous improvement through community interaction and feedback, enhancing their decision-making capabilities (Brunello & Rocco, 2008).

While public schools perform better in the interactive and postactive stages, private schools have higher scores in the preactive stage, reflecting their focus on student awareness and development (Epple, Figlio & Romano, 2004). These findings underscore the strengths of different school types in various aspects of teaching decision-making, highlighting concerns about educational equity across schools (Lau, 2018; Xue et al., 2023).

Therefore, this study offers insights into decision-making among novice music teachers in different school settings, emphasizing the roles of resources, professional development, and educational policies.

4. Research question 4

These findings have significant implications for teacher training and professional development. There is a need for enhanced training programs that focus on reflective practices and interactive teaching strategies, which can help novice music teachers develop more effective decision-making skills.

Compared with those with undergraduate and associate degrees, those with postgraduate

degrees demonstrated significantly greater levels of decision-making proficiency. This aligns with existing research (Author 2 & Author 1, 2023), which also revealed that higher levels of education correlate with higher teaching decision-making levels. Specifically, compared with their counterparts with lower educational qualifications, teachers with postgraduate degrees scored higher in both the preactive and postactive stages of teaching decision-making. This aligns with global findings emphasizing the importance of professional training over gender-based differences (Darling-Hammond, 2021).

In the preactive stage, highly educated teachers exhibited exceptional performance in terms of teacher knowledge, beliefs, and awareness of students. This indicates their advantage in having a comprehensive understanding of educational theories and methods, which allows them to plan and prepare teaching content more effectively (Manning, Wong, Fleming & Garvis, 2019). Their deep disciplinary knowledge enables them to deliver richer educational experiences, adapting teaching methods to better meet students' personalized needs (McBryde, Ziviani & Cuskelly, 2004).

Moreover, in the postactive stage, teachers with postgraduate education excelled in terms of evaluation and reflection. They demonstrated a deeper ability to reflect on their teaching practices, systematically examining teaching processes and focusing on student learning outcomes (Johnson & Matthews, 2020). This reflective capability allows them to continuously improve teaching strategies and adjust course designs effectively, enhancing overall teaching quality (Taylor & Tyler, 2012).

These findings underscore the critical role of higher education in shaping teachers' professional knowledge and decision-making skills. Highly educated teachers are more likely to use advanced educational theories and methods, which contribute to creating a more inspiring and effective learning environment (Lee & Lee, 2020). Their systematic evaluation and reflection enhance teaching quality and promote student academic achievement, which is essential in the dynamic field of music education (Lloyd, 2019).

5. Research framework

This research framework integrates the independent variables (school type and educational qualifications) with the dependent variable (teaching decision-making level), providing a structured approach to understanding the factors influencing novice music teachers' decision-making processes. This framework not only guides future research but also aids in policy development, ensuring targeted interventions that address the specific needs of teachers on the

basis of their educational and professional contexts.

This framework is built upon several studies. For example, Brunello and Rocco (2008) reported that different types of schools have significant differences in terms of resource allocation and teaching environments, which in turn affect teachers' decision-making. Lee and Lee (2020) noted out that teachers' educational qualifications directly influence their teaching strategies and classroom management methods. Furthermore, Johnson and Matthews (2020) demonstrated that regional differences and preservice training play critical roles in teachers' teaching decisions. Their study revealed that regional economic conditions and training quality significantly impact teachers' professional confidence and decision-making efficiency.

Additionally, our framework considers methodological diversity and complexity. By employing mixed research methods, including surveys, in-depth interviews, and classroom observations, we can comprehensively and deeply capture novice music teachers' decision-making processes in actual teaching contexts. This approach not only enhances the reliability and validity of the data but also provides valuable practical guidance for policymakers and educators.

By integrating the findings of these studies, our framework further deepens the understanding of novice music teachers' decision-making processes and fills gaps in existing research. Future research can build on this framework to explore more interactions between variables and develop more refined and personalized interventions to promote the professional growth and teaching effectiveness of novice music teachers.

6. Implications

This study examined the teaching decision-making levels of novice middle school music teachers, revealing that educational qualifications and school types significantly influence decision-making, whereas gender differences were not significant. These findings are consistent with global research (Darling-Hammond, 2021; Jasper, 2003).

Professional training and support: To enhance the decision-making abilities of novice music teachers, prioritizing professional development is crucial. Specialized training programs focusing on evaluation, reflection, and classroom interaction should be provided. Encouraging cross-school collaboration and regular reflection through meetings and journaling can foster continuous improvement, aligning with international best practices (Espejo Villar, Lázaro Herrero & Álvarez-López, 2022).

This approach can be further reinforced by integrating digital tools and online platforms into

the professional development programs. These tools can facilitate ongoing learning and reflection, enabling teachers to access global resources and stay updated with the latest educational innovations (Shuler, 2007). By creating a supportive and technologically advanced training environment, novice music teachers can develop more effective decision-making skills.

Promoting gender equality: Ensuring equal access to professional training and development for both male and female teachers is essential to eliminate gender-based disparities. This goal is emphasized by global educational policies (Xue & Wong, 2024). Providing targeted support and mentorship programs that address the unique challenges faced by male and female teachers can further promote gender equality in the teaching profession.

Encouraging active student engagement: Adopting student-centered teaching methods can increase classroom participation and cater to diverse learning styles that are applicable in both public and private schools. This approach is recommended by international educational frameworks (Darling-Hammond, 2021). The incorporation of interactive and culturally responsive teaching strategies can create a more inclusive and engaging learning environment, fostering student engagement and academic success.

7. Global impact and future research directions

The implications of this study extend beyond local contexts, offering insights that can be adapted to various educational systems worldwide. The implementation of these strategies can foster a global community of educators who are better equipped to make informed teaching decisions, thus enhancing the overall quality of education.

Future research should include longitudinal studies to track decision-making changes over time and evaluate the impact of specific professional development programs. Ongoing research, including international collaborations, will help track the impact of these implementations and incorporate global best practices and innovations (Johnson & Matthews, 2020; Lee & Lee, 2020). This continued exploration will ensure that educational practices evolve to meet the changing needs of societies worldwide.

8. Conclusion

This study provides a comprehensive framework for understanding the factors influencing novice music teachers' decision-making processes, emphasizing the role of educational qualifications,

school types, regions, and preservice training. By prioritizing professional development, ensuring equitable resource distribution, and utilizing digital tools, educational systems can significantly enhance the decision-making abilities of novice music teachers. These measures, which are grounded in global research and best practices, aim to improve the overall quality of music education and promote educational equity. Future research should focus on longitudinal studies and international collaborations to continue refining these strategies and address the dynamic needs of education globally.

References

- Brunello, G., & Rocco, L. (2008). Educational standards in private and public schools. *The Economic Journal*, 118(533), 1866-1887.
- Campbell, M. R., Thompson, L. K., & Barrett, J. R. (2021). *Constructing a personal orientation to music teaching: Growth, inquiry, and agency*. Routledge.
- Çevik, Y. D., & Andre, T. (2013). Examining preservice teachers' classroom management decisions in three case-based teaching approaches. *International Journal of Education in Mathematics, Science and Technology*, 1(1), 25-42.
- Clough, M. P., Berg, C. A., & Olson, J. K. (2009). Promoting effective science teacher education and science teaching: A framework for teacher decision-making. *International Journal of Science and Mathematics Education*, 7, 821-847. <https://doi.link.springer.com/article/10.1007/s10763-008-9146-7>
- Darling-Hammond, L. (2021). Defining teaching quality around the world. *European Journal of Teacher Education*, 44(3), 295-308.
- Donovan, S. J., Güss, C. D., & Naslund, D. (2015). Improving dynamic decision making through training and self-reflection. *Judgment and Decision Making*, 10(4), 284-295.
- Epple, D., Figlio, D., & Romano, R. (2004). Competition between private and public schools: Testing stratification and pricing predictions. *Journal of Public Economics*, 88(7-8), 1215-1245.
- Espejo Villar, L. B., Lázaro Herrero, L., & Álvarez-López, G. (2022). UNESCO strategy and digital policies for teacher training: The deconstruction of innovation in Spain. *Journal of New Approaches in Educational Research*, 11, 15-30.
- Field, A. (2024). *Discovering statistics using IBM SPSS statistics*. London: SAGE Publications

Limited.

- Garvis, S., & Pendergast, D. (2010). Supporting novice teachers of the arts. *The International Journal of the Arts in Society: Annual Review*, 11(8), 1-22.
- Gee, J. P. (2022). Elementary general music teachers' preparation in classroom management. *Journal of Music Teacher Education*, 31(2), 55-67.
- Hou, Z., Xue, C., & Ma, R. (2023). Research of public and private junior high schools' music teachers' classroom teaching decision-making under China's music curriculum standards. In *SHS Web of Conferences* (Vol. 157, p. 01015). EDP Sciences.
- Jasper, M. (2003). *Beginning reflective practice*. UK. Cheltenham: Nelson Thornes.
- Johnson, D. C., & Matthews, W. K. (2017). Experienced general music teachers' teaching decision making. *International Journal of Music Education*, 35(2), 189-201.
- Johnson, D. C., & Matthews, W. K. (2020). Factors influencing pre-instructional decisions: An initial investigation of expert music teacher perceptions. *Visions of Research in Music Education*, 36(1), 3.
- Kelly, S. N. (2010). Public school supervising teachers' perceptions of skills and behaviors necessary in the development of effective music student teachers. *Bulletin of the Council for Research in Music Education*, (185), 21-32.
- Kennedy, M. (2016). Parsing the practice of teaching. *Journal of Teacher Education*, 67(1), 6-17.
- Lau, S. H. (2018). Measuring primary science teacher's self-efficacy beliefs in Batang Padang, Perak with "Primary science teachers' self-efficacy beliefs scale". Master's thesis, Universiti Pendidikan Sultan Idris.
- Lee, S. W., & Lee, E. A. (2020). Teacher qualification matters: The association between cumulative teacher qualification and students' educational attainment. *International Journal of Educational Development*, 77, 102218.
- Legette, R. M. (2013). Perceptions of early-career school music teachers regarding their preservice preparation. *Update: Applications of Research in Music Education*, 32(1), 12-17.
- Lerner, J. S., Li, Y., Valdesolo, P., & Kassam, K. S. (2015). Emotion and decision making. *Annual Review of Psychology*, 66, 799-823.
- Levin, J., & Nolan, J. F. (2014). *Principles of classroom management: A professional decision-making model*. Upper Saddle River, NJ: Pearson.
- Lloyd, C. A. (2019). Exploring the real-world decision-making of novice and experienced teachers. *Journal of Further and Higher Education*, 43(2), 166-182.

- Manning, M., Wong, G. T., Fleming, C. M., & Garvis, S. (2019). Is teacher qualification associated with the quality of the early childhood education and care environment? A meta-analytic review. *Review of Educational Research*, 89(3), 370-415.
- Matthews, W. K., & Koner, K. (2022). Beyond the headlines: Perspectives of charter school music teachers. *Arts Education Policy Review*, 123(2), 39-49.
- Matthews, W., & Johnson, D. C. (2017). Promoting technology-based collaboration among pre-service music teachers: An inter-university project. *International Journal of Teaching and Learning in Higher Education*, 29(3), 436-446.
- McBryde, C., Ziviani, J., & Cuskelly, M. (2004). School readiness and factors that influence decision making. *Occupational Therapy International*, 11(4), 193-208.
- Miranda, M. L. (2014). Decisions, decisions: The countless times instructional practice and reality meet. *General Music Today*, 28(1), 33-35.
- Norton, N., Ginsborg, J., & Greasley, A. (2019). Instrumental and vocal teachers in the United Kingdom: Demographic characteristics, educational pathways, and beliefs about qualification requirements. *Music Education Research*, 21(5), 560-581.
- Opdenakker, M. C., & Van Damme, J. (2006). Differences between secondary schools: A study about school context, group composition, school practice, and school effects with special attention to public and Catholic schools and types of schools. *School Effectiveness and School Improvement*, 17(1), 87-117.
- Parry, G., Vendrell-Herrero, F., & Bustinza, O. F. (2014). Using data in decision-making: Analysis from the music industry. *Strategic Change*, 23(3-4), 265-277.
- Pendergast, S. (2020). Understanding participation in secondary music classes: A literature review. *Update: Applications of Research in Music Education*, 39(1), 38-49.
- Potter Gee, J. (2023). A survey of K-12 music teachers' classroom management experiences in music teacher preparation programs. *Visions of Research in Music Education*, 42(1), 59-77.
- Robison, T., & Russell, J. A. (2021). Factors affecting rural music teachers' career decisions. *Contributions to Music Education*, 46, 155-168.
- Sanchez Adorno, S. (2021). Guiding and evaluating reflection: A music teacher's guide. *Music Teachers Journal*, 107(3), 54-62.
- Shuler, S., & Nissley, N. (2007). The decision-making processes of music teachers: A cross-cultural study of teachers in the United States and Canada. *International Journal of Music Education*, 25(2), 107-118.
- Taylor, E. S., & Tyler, J. H. (2012). The effect of evaluation on teacher performance.

American Economic Review, 102(7), 3628-3651.

Wadesango, N. (2012). Understanding the influence of gender on degree of teacher participation in decision-making in schools. *Journal of Social Sciences*, 32(3), 277-284.

Westerman, D. A. (1991). Expert and novice teacher decision making. *Journal of Teacher Education*, 42(4), 292-305.

Xue, C., Ma, R., & Hou, Z. (2023, March). A study of teaching decisions of Yangqin teachers based on educational requirements. In *Proceedings of the 2nd International Conference on Culture, Design and Social Development (CDSO 2022)* (pp. 154-160). Atlantis Press. https://doi.org/10.2991/978-2-38476-018-3_15

Xue, C., & Wong, C. (2024). Exploring influencing factors of interactive teaching decision-making level among novice junior high school music teachers. *Journal of Education and Educational Research*, 10(1), 45-47.