

Exploring the Pedagogical Content Knowledge and Challenges among Public Elementary Music Teachers in Tandag City, Philippines

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ABSTRACT

Pedagogical Content Knowledge (PCK) are essential for effective teaching, yet music education in the Philippines, particularly regarding intercultural traditions and career preparation remains underexplored (Manila, 2020; Borromeo, cited by Jacinto, 2019). This study examined the state of music education in the Division of Tandag City, focusing on the PCK of public elementary school teachers in Grades 4, 5, and 6. It investigated teachers' profiles, content knowledge, pedagogical knowledge, and challenges in delivering music education. Data were gathered from 55 MAPEH teachers across 27 elementary schools using a questionnaire. Results revealed that while most teachers had formal education, 94.5% lacked specialized music training. Content knowledge proficiency was found to be at the "beginning" stage, particularly in rhythm ($M = 1.35$), melody ($M = 1.05$), form ($M = 1.15$), and harmony ($M = 1.36$), with tempo ($M = 2.91$) being the most proficient area at the "approaching proficiency" stage. Pedagogical knowledge was moderate, with teachers showing confidence in song analysis ($M = 3.77$) and teaching songs ($M = 3.47$). Challenges included inadequate training, lack of resources, and negative attitudes toward music. Statistical analysis using ANOVA revealed that music-specific training significantly impacted content knowledge ($p = 0.005$) and pedagogical knowledge ($p = 0.014$). Pearson correlation analysis showed weak correlations between content and pedagogical knowledge, with timbre ($r = -0.275$, $p = 0.042$) and harmony ($r = -0.294$, $p = 0.029$) showing significant negative correlations with teaching effectiveness. The findings emphasized the need for targeted professional development programs to improve music education, with recommendations for enhancing teacher training, integrating music education into teacher preparation, and providing essential resources.

Keywords: Music Education, Pedagogical Content Knowledge, Teacher Training, Proficiency, Challenges, ANOVA, Pearson correlation, Tandag City-Philippines

INTRODUCTION

Pedagogical Content Knowledge are recognized as a cornerstone of effective teaching, essential for providing excellent instruction and creating meaningful learning experiences. PCK combines both pedagogical skills and subject matter expertise, crucial for promoting student success in various disciplines. While substantial research has focused on subjects like mathematics, science, and English, there has been less focus on understanding PCK within music education (Manila, 2020). This gap is particularly significant when considering the diverse contexts in which music education is practiced in the Philippines, including intercultural traditions, the inclusion of music as a subject in basic education, and the preparation of students for professional music careers (Borromeo, cited by Jacinto, 2019).

Western music, introduced by Spanish colonists in the 1500s, played a pivotal role in establishing music education in schools under church control (Del Valle, cited by Jacinto, 2019; Navarro, 2003). The Spanish colonization influenced not only the religious practices in the Philippines but also shaped the curriculum of early educational institutions, where music became an integral part of the religious and academic instruction (Salazar, 2008). Over time, the music education system evolved, undergoing substantial changes to its curriculum and organizational framework, reflecting the shifting educational and cultural landscape of the Philippines (Javier, 2012; Natividad, 2015). This evolution saw the expansion of music education beyond

religious settings into broader academic institutions, driven by various reforms and international influences (Del Valle, cited by Jacinto, 2019).

The implementation of the K–12 curriculum in 2011 represented a major reform in the Philippine education system, extending basic education to 13 years (Jacinto, 2019; Velasco, 2018). As part of this reform, music was made a mandatory subject from Grades 1 to 10, and a senior high school track in arts and design was introduced to prepare students for careers in music (Jacinto, 2019; Dela Cruz, 2020). The music curriculum follows a student-centered, performance-driven model that increases in complexity over the years, providing a strong foundation in music theory (Manlapig, 2017; Cordero, 2016). This approach aims to nurture creativity and musical skill while meeting the changing needs of students and aligning with the broader objectives of the K–12 education system (Velasco, 2018; Llamado, 2021).

Despite these advancements, comparative studies with neighboring Southeast Asian countries reveal that the Philippines lags behind in terms of the structure and components of its basic education curriculum (SEAMEO, 2012; Tan, 2014). This disparity impacts the social and economic contributions of music education graduates (Agustin, 2016; Llorente, 2018). The lack of a comprehensive and standardized approach to music education has limited the effectiveness of the curriculum in addressing the needs of the students and preparing them for professional careers in the arts (Llorente, 2018; Salazar & Alvarez, 2017).

In music education, PCK plays a crucial role in effective teaching. Grieser and Hendricks (2018) define PCK as the combination of knowledge, skills, and attitudes that teachers need for success. PCK is developed through experiences such as teacher education, subject matter knowledge acquisition, and observation (Grossman, 1990; Gess-Newsome et al., cited by Grieser & Hendricks, 2018). Teachers' self-efficacy—shaped by their knowledge and mastery of difficult skills—significantly impacts their teaching effectiveness. Higher self-efficacy leads to greater persistence in challenging tasks, affecting teaching strategies and student outcomes (Pajares & Schunk, 2001).

Several barriers hinder the delivery of high-quality music education, including teacher competence, inadequate school facilities, and student workloads (Limjuco et al., 2019). Additionally, international studies highlight challenges such as a lack of formal music training among generalist teachers in countries like England and Ghana (Welch & Henley, 2018; Obeng & Osei-Senyah, 2018). In the Philippines, Manila (2020) identifies significant gaps in elementary teachers' knowledge of music and the challenges they face due to inadequate training and resources. The lack of musical instruments and insufficient teacher preparation are major obstacles in delivering effective music education.

The purpose of this study was to explore the current state of music education in Tandag City Division, focusing on the profiles, competency levels, and perceived pedagogical expertise of MAPEH instructors in Grades 4, 5, and 6 across 27 elementary schools. This research aimed to assess their teaching background, training, years of experience, and knowledge of music content and pedagogy to ultimately identify the strengths and deficiencies in the division's music education system.

Research Questions

To determine the pedagogical and content knowledge in music among public elementary school teachers, the following research questions were formulated:

1. What is the profile of the music teachers in terms of highest educational attainment, specialization in bachelors' degree, relevant trainings in music, and years in teaching?
2. What is the proficiency level of music teachers in relation to their understanding of content knowledge, specifically focusing on rhythm, melody, form, timbre, dynamics, texture, harmony, and tempo?
3. To what extent do music teachers perceive their pedagogical knowledge in terms of conducting preliminary activities, conducting song analysis, teaching a song, application of methods and strategies?
4. What are the primary challenges confronted by music teachers when delivering effective music education? Specifically considering; lack of knowledge of the subject, negative attitude of teachers towards the subject/ music is less prioritized, negative attitude of pupils towards the subject/music is less

- prioritized, insufficient classroom materials and textbooks, and inadequate musical instruments and equipment.
5. Is there a significant correlation between content knowledge and pedagogical knowledge of the respondents?
 6. Is there a significant difference in the pedagogical and content knowledge when teachers are grouped according to their profiles?
 7. Based on the findings, what intervention activity can be proposed?

Null Hypotheses

Ho1: There is no significant correlation between the content and the pedagogical knowledge of the respondents.

Ho2: There is no significant difference in the pedagogical and content knowledge when teachers are grouped according to their profiles?

Scope and Limitation

This study sought to examine music education in Tandag City Division in 2024 with a particular emphasis on the pedagogical and content knowledge (PCK) of elementary school teachers. Specifically, it assessed the proficiency levels, perceived pedagogical knowledge, and challenges faced by 55 MAPEH teachers across 27 elementary schools in the division. The research also examined teachers' educational background, relevant training, years of experience, and their understanding of music content and pedagogical practices.

LITERATURE REVIEW

Exploring Pedagogical and Content Knowledge (PCK) in music education is essential for understanding how elementary school teachers in Tandag City Division can effectively teach musical skills and knowledge to their students. Several studies highlight the importance of PCK in improving teaching practices, emphasizing that a strong understanding of both musical content and teaching methods can enhance student motivation and learning outcomes (Grossman, 1990; Shulman, 1986). PCK, which combines both pedagogical and content knowledge, is crucial for selecting and applying effective teaching strategies in music education. It has also been associated with increased self-efficacy beliefs among both teachers and students, leading to better teaching and learning results (Daga, 2021; Manlapig, 2017).

A study by Daga (2021) on high school MAPEH teachers in the Leyte Division revealed significant demographic trends, indicating that most of these educators were female, married, aged 26 to 35, with 0-5 years of teaching experience and holding a bachelor's degree. The research emphasized the need for professional training, particularly in developing skills across various MAPEH components. Teachers reported challenges such as a lack of instructional resources, contextualized materials, insufficient pedagogical understanding, and students' disinterest in certain curriculum activities. This highlights the necessity of targeted support and training to improve music education outcomes.

Welch (2015) posits that many primary school teachers believe that teaching music to children falls outside their areas of expertise. Although primary teachers enjoy music, they often perceive it as a 'specialist' subject requiring advanced competence on a musical instrument. This perception is underpinned by two main factors: (1) a lack of confidence in their own musicianship, often linked to the mistaken belief that innate musical ability is unevenly distributed, and (2) a lack of knowledge regarding how to integrate music effectively into their everyday teaching practices.

Maryani and Martaningsih (2015) examined the relationship between teachers' PCK and students' learning motivation in Yogyakarta, Indonesia. The study found a significant positive relationship between teachers' PCK and student motivation ($p = 0.000$, $r = 0.907$), suggesting that teachers with stronger PCK foster higher learning motivation in their students. This finding supports the notion that teachers' understanding of PCK plays a pivotal role in student engagement and academic success.

Significant findings from Manila's (2020) study on music education among public elementary teachers in Mariveles, Bataan, revealed a lack of knowledge regarding elementary music content and pedagogy. Teachers faced various obstacles, including insufficient subject knowledge, negative student attitudes, inadequate facilities, and a scarcity of teaching materials. Moreover, instructors' content expertise in music varied significantly based on the number of relevant seminars and training they attended. This aligns with the findings of Wiggins and Wiggins (2008), who noted that in systems reliant on generalist teachers without specialized music training, there is a focus on boosting teachers' confidence in teaching music rather than enhancing their musical knowledge and skills.

Hartati et al. (2019) highlighted the importance of teachers possessing four competencies: pedagogical competence, personality competence, professional competence, and social competence. Among these, pedagogical and professional competencies are particularly critical to the implementation of quality learning. Teachers must have content knowledge, referring to their understanding of the subject matter, as well as pedagogical knowledge, which pertains to their understanding of the learning process related to that subject.

Obeng and Osei-Senayah's (2018) study on music and dance education in Ghana revealed that many elementary school instructors lacked expertise in music and dance, holding degrees in subjects unrelated to music. The study identified key obstacles such as a lack of teaching materials, negative attitudes among teachers, and insufficient access to textbooks, suggesting the need for targeted professional development and resources to improve music education.

The study by Ibbotson and See (2021) evaluated a Kodály-inspired collaborative training program for non-specialist teachers in primary schools. The study found that teachers' pedagogical skills, self-efficacy, and competence improved significantly, while students exhibited increased self-confidence and a more positive attitude toward learning. This highlights the importance of collaboration and professional development in enhancing music teaching effectiveness.

Allen (2011) explored whether classroom management was the primary challenge for music teachers. A survey conducted with 90 public school music teachers and 90 administrators revealed that while 63% of beginning teachers considered classroom management a significant issue, the majority did not view it as the main cause of their challenges. The study identified key concerns such as enrolment, motivation, resources, and student behaviour, as well as insufficient parental and administrative support for music education.

Despite the growing recognition of the importance of Pedagogical Content Knowledge (PCK) in music education, there remains a significant knowledge gap regarding its precise role and contribution to effective teaching and learning. This literature underscores the need for further research into PCK in music education, highlighting the importance of teacher training, resources, and confidence in improving the quality of music instruction.

METHODOLOGY

Research Design

The research design for this study is descriptive-evaluative, as it aimed to describe the current state of music education by examining teachers' profiles, content and pedagogical knowledge, and the challenges they face. Additionally, it evaluated the effectiveness and impact of these factors on teaching practices and student outcomes in the context of music education (Creswell, 2014; Robson & McCartan, 2016).

Participants and Sampling

In this study, the researchers employed purposive sampling to select participants from Grades 4, 5, and 6 teachers across 27 elementary schools in the Division. Purposive sampling was chosen for its ability to ensure diverse representation across different grade levels and schools, thereby increasing the likelihood of capturing a wide range of perspectives (Etikan, Musa, & Alkassim, 2016). This method allowed for the intentional selection of participants with relevant experience and expertise in music education, which enhanced the depth,

relevance, and richness of the data collected (Palinkas et al., 2015).

Data Collection Procedure

For this study, data were collected through face-to-face interactions, where the researcher administered a questionnaire to 55 participants. Hard copies of the questionnaire were distributed to the selected music teachers in the Division. This method was chosen to ensure direct engagement between the researcher and participants, enabling clarification of any ambiguities or misunderstandings in the questions.

The questionnaire, adapted from Manila (2020) with permission granted via email on January 2, 2024, was designed to gather information on several key aspects of the music teachers' profiles. The first section of the questionnaire focused on demographic information, including teachers' highest educational attainment, specialized training in music during their undergraduate studies, relevant music training, and years of experience in teaching music. The second section assessed teachers' content knowledge in music education, while the third section evaluated their pedagogical knowledge, covering topics such as preliminary activities, song analysis techniques, and various teaching methods and strategies. Finally, the study identified and addressed the challenges faced by music teachers in DepEd Tandag City in delivering effective music education, categorizing these challenges into five key areas: lack of subject-specific knowledge, negative attitudes toward music education among both teachers and students, and insufficient classroom materials, textbooks, and musical instruments.

Data Analysis

In this study, a range of statistical methods were used to better understand the music teachers' profiles, their content knowledge, and how they approach teaching. Descriptive statistics helped to summarize important demographic details, such as the teachers' educational background, training, and years of experience. For example, frequencies and percentages were used to show the distribution of teachers' geographic profiles (Table 1), while means and standard deviations helped to assess their proficiency levels in content knowledge (Table 2) and pedagogical knowledge (Tables 3.1 to 3.5). These statistical tools provided a clearer picture of what the teachers knew and how they felt about various teaching activities. To explore the differences in proficiency and teaching methods across different teacher profiles, the study used Analysis of Variance (ANOVA). This approach helped pinpoint important factors, such as Training Relevant to Music, which significantly influenced both their music knowledge ($p = 0.005$) and teaching practices ($p = 0.014$) (Table 6). The study also used Pearson correlation analysis to examine how teachers' understanding of music concepts (such as rhythm, melody, harmony, and timbre) related to their teaching methods (such as conducting song analysis, teaching songs, and using various strategies).

Ethical Issues

This research meticulously adhered to ethical standards that prioritized the ethical treatment of all involved parties. As the researcher delved into understanding the intricacies of music education and assessing teachers' proficiency in delivering content effectively, it was imperative to ensure ethical conduct throughout the study. This commitment entailed obtaining informed consent from participating teachers, respecting their rights, and safeguarding their confidentiality at all stages of the research. Furthermore, the researcher navigated the inherent power dynamics within the educational setting to ensure that participants felt empowered to freely express their perspectives and experiences without fear of reprisal. Additionally, the research was conducted with sensitivity towards cultural differences and local contexts prevalent in the Division to acknowledge and respect the unique backgrounds and perspectives of the teachers.

RESULTS AND DISCUSSION

Demographics: Profile of Music Teachers

The table 1 below summarized the educational background and relevant training of teachers involved in music instruction. It categorized participants based on their degree qualifications, areas of specialization, highest

educational attainment, training related to music, and years of teaching experience. This data serves as a foundation for further discussions on the qualifications and preparedness of educators in delivering effective music education.

Table 1: Distribution of Respondents' Demographic and Professional Characteristics

Bachelor's Degree			
Category	F	Percentage (%)	Cumulative Percentage (%)
Bachelor in Elementary Education	50	90.9	90.9
Bachelor of Secondary Education	5	9.1	100
Total	55	100	100
Major/Specialization			
Category	F	Percentage (%)	Cumulative Percentage (%)
General Education	33	60	60
Music Arts Physical Education and Health (MAPEH)	2	3.6	63.6
Physical Education (PE)	0	0	63.6
Others	20	36.4	100
Total	55	100	100
Educational Attainment			
Category	F	Percentage (%)	Cumulative Percentage (%)
Bachelor's Degree	22	40	40
Master's (18 or more units)	29	52.7	92.7
Master's Degree Holder	3	5.5	98.2
Doctorate Degree (18 or more units)	1	1.8	100
Total	55	100	100
Training Relevant to Music			
Category	F	Percentage (%)	Cumulative Percentage (%)
No Training	52	94.5	94.5
16–24 Hours Training	2	3.6	98.2
36–40 Hours Training	1	1.8	100
Total	55	100	100
Years of Teaching			
Category	F	Percentage (%)	Cumulative Percentage (%)
Less than 3 Years	12	21.8	21.8
3–6 Years	9	16.4	38.2
7–10 Years	11	20	58.2

11–14 Years	5	9.1	67.3
15 Years Above	18	32.7	100
Total	55	100	100

Legend: Column 1: Variable measured (e.g., education, specialization, experience), Column 2: Frequency (number of responses per category), Column 3: Percentage (category frequency relative to total), Column 4: Cumulative percentage (running total of percentages)

Table 1 revealed that most respondents (90.9%) hold a bachelor's degree in elementary education, while 9.1% majored in secondary education. In terms of specialization, 60% are in general education, 3.6% in MAPEH, and 36.4% in other areas. Educational attainment shows 40% with a bachelor's degree, 52.7% with at least 18 master's units, 5.5% with a master's degree, and 1.8% with doctoral coursework. Regarding music training, 94.5% have none, 3.6% have 16–24 hours, and 1.8% have 36–40 hours. Teaching experience varies, with 32.7% having over 15 years, and 21.8% under 3 years. Research shows that teachers' educational backgrounds significantly influence instructional effectiveness (Daga, 2021; Veloso, 2019). While most respondents hold education degrees, the lack of music specialization may limit their ability to teach music effectively, aligning with Daga's (2021) findings. Professional training, such as seminars and workshops, enhances music teaching skills (Manila, 2020; Pestano & Ibarra, 2021). However, 21.8% of respondents have under three years of teaching experience, which may hinder effective music instruction. Moore et al. (2023) emphasize that inexperienced teachers often face challenges in music education, underscoring the need for targeted professional development.

Proficiency Level of Music Teachers in Content Knowledge

The content knowledge of teachers is a crucial factor in their ability to effectively deliver high-quality instruction to learners. A strong understanding of subject matter enables educators to engage students, foster critical thinking, and create enriching learning experiences.

Table 2: Proficiency Level of Music Teachers

Content Knowledge	Mean	Standard Deviation	Descriptors
Rhythm	1.35	1.00	Beginning
Melody	1.05	0.40	Beginning
Form	1.15	0.65	Beginning
Timbre	2.56	1.32	Developing
Dynamics	1.69	1.17	Beginning
Texture	1.04	0.27	Beginning
Harmony	1.36	0.78	Beginning
Tempo	2.91	1.66	Approaching Proficiency
Average	1.64	0.52	Beginning

Legend: The table presented the mean scores and standard deviations for various content knowledge areas, indicating the proficiency level of music teachers. The descriptors reflect the stage of proficiency as follows: "Beginning" (1.00 - 1.99), "Developing" (2.00 - 2.49), and "Approaching Proficiency" (2.50 - 3.00).

Table 2 showed that music teachers generally have low proficiency in musical content knowledge, with most areas rated at the "Beginning" level. The lowest scores were in Texture (M = 1.0364) and Melody (M = 1.0545), while only Timbre reached a "Developing" level (M = 2.5636), and Tempo was highest at "Approaching Proficiency" (M = 2.9091). The overall average of 1.639 confirms limited content knowledge. These results align with Manila (2020), who found that many public elementary music teachers in the Philippines lack essential content and pedagogical knowledge. Likewise, Welch (2015) and Shahazwan et al.

(2023) stress the need for targeted professional development to improve music instruction and student outcomes.

Perception of Music Teachers in Pedagogical Knowledge

The music teachers' pedagogical knowledge is focused on four key indicators: conducting preliminary activities, conducting song analysis, teaching a song, and applying methods and strategies in music education. Each indicator was measured on a scale to determine the proficiency levels.

Table 3: Perceptions' Level of Music Teachers to Conducting Preliminary Activities

Indicators	Mean	Std. Deviation	Descriptors
Rhythmic drills using stick notation	2.91	0.91	Moderate
Rhythmic drills using rhythmic patterns	3.27	1.06	Moderate
Melodic drills using Kodaly hand signals	2.98	0.95	Moderate
Melodic drills using ward hand signals	2.85	0.99	Moderate
Echo clapping of rhythmic patterns	3.27	1.01	Moderate
Average	3.06	0.84	Moderate

Legend: This table presented the mean scores, standard deviations, and descriptors of music teachers' perceptions of rhythmic and melodic drills in their teaching practice. Indicators: Specific rhythmic or melodic drills assessed.

Table 3 presents music teachers' perceptions of implementing preliminary activities in class. Overall, they rated their use of rhythmic and melodic drills as "Moderate," with rhythmic drills using patterns and echo clapping scoring highest ($M = 3.27$). Other activities, like stick notation and melodic drills using Kodály and Ward hand signals, also averaged around 3.0. The overall mean of 3.06 suggests moderate use, with room for improvement. These results align with Welch (2015), who emphasized the value of structured drills in developing musical skills, and Shulman (1986), who linked such activities to cognitive and physical development. Driscoll et al. (2020) also noted that confident teachers use these strategies more effectively. Despite moderate engagement, the findings underscore the need for ongoing professional development.

Table 4: Perceptions' Level of Music Teachers to Conducting Song Analysis

Indicators	Mean	Std. Deviation	Descriptors
Begin by asking pupils about the title of the song, as well as its time signature and key signature.	3.67	1.02	High
Guide pupils in counting the beats per measure as indicated by the time signature.	3.62	1.11	High
Help pupils identify the notes and rests used in the musical score.	3.82	1.09	High
Instruct pupils to recite the lyrics while following the rhythmic patterns of the song.	3.78	0.92	High
Engage pupils in activities such as clapping, tapping, and reciting the rhythmic patterns of the song.	3.98	1.06	High
Average	3.77	0.92	High

Legend: This table presented the mean scores, standard deviations, and descriptors of music teachers' perceptions regarding the implementation of song analysis activities. The indicators reflect various aspects of conducting song analysis with students.

Table 4 shows that music teachers highly engage students in song analysis, with all indicators rated as "High." The highest mean (3.98) was for activities like clapping, tapping, and reciting rhythmic patterns, reflecting an interactive teaching approach (Welch, 2015). Other activities, such as counting beats and identifying notes and rests, also scored high (3.62–3.82). The overall mean of 3.77 indicates strong confidence in conducting song analysis. These results align with Hallam (2019), who stresses rhythm and notation in understanding music theory. The use of hands-on methods supports Piaget's (1973) constructivist learning and Vygotsky's (1978) emphasis on active student engagement. High ratings suggest these strategies effectively enhance both theoretical and practical musical knowledge. In sum, the findings highlight a student-centered, theory-driven approach to enriching music education (Halliwell, 2020).

Table 5: Perceptions' Level of Music Teachers to Teaching a Song

Indicators	Mean	Std. Deviation	Descriptors
Show the music score of the song	3.27	1.15	Moderate
Use an instrument (either melodic or rhythmic) to assist and accompany pupils in singing	3.00	1.14	Moderate
Demonstrate how to sing the song by modelling	3.96	0.96	High
Guide pupils in singing the song in segments or phrases while simultaneously clapping and tapping the rhythmic pattern.	3.58	0.90	High
Lead pupils in singing the song in segments or phrases while maintaining a steady beat through clapping and tapping.	3.55	1.03	High
Average	3.47	0.86	High

Legend: This table presented the mean scores, standard deviations, and descriptors of music teachers' perceptions of various activities in teaching a song.

Table 5 shows a generally positive perception among music teachers toward teaching songs, with an overall mean of 3.47 ("High"). The highest score (3.97) was for demonstrating how to sing, emphasizing modelling as a key strategy (Welch, 2015). Segmental singing with rhythmic movement also scored well (3.58), supporting active learning (Hennessy et al., 2016). Showing the music score (3.27) and using instruments (3.00) were rated moderately, suggesting areas for growth. These findings reflect teacher confidence and a focus on interactive, student-centered methods that enhance musical understanding and performance (Guskey, 2000; Kane & Staiger, 2012).

Table 6: Perceptions' Level of Music Teachers to Application of Methods and Strategies in Teaching Music.

Indicators	Mean	Std. Deviation	Descriptors
Employ hand signals to teach melodic lessons.	3.3455	.88649	Moderate
Utilize a rhythm syllable system for teaching rhythmic topics.	3.1091	1.03051	Moderate
Integrate simple rhythm chants to instruct on rhythmic patterns.	3.2545	1.07528	Moderate
Encourage pupils to use percussion instruments and engage in improvisation.	3.0182	1.26916	Moderate
Guide pupils in interpreting the text of the song or other aspects of the music through bodily movements.	3.1273	1.07246	Moderate
Average	3.1709	.95794	Moderate

Legend: This table presented the mean scores, standard deviations, and descriptors of music teachers' perceptions of various teaching strategies in melodic and rhythmic instruction.

Table 6 revealed the analysis of music teachers' perceptions regarding the application of methods and strategies in teaching music indicated a predominantly moderate level of engagement, with an average mean score of 3.17. The use of hand signals to teach melodic lessons received a mean score of 3.35, suggesting a reasonable degree of confidence among teachers in employing this visual technique. However, the mean scores for other methods, such as utilizing a rhythm syllable system ($M = 3.11$) and integrating rhythm chants ($M = 3.25$), reflected a more cautious approach, indicating that these strategies may not have been fully implemented in their teaching practices. Furthermore, encouraging students to use percussion instruments and engage in improvisation garnered the lowest score at 3.02, highlighting a potential area for growth in fostering creativity and active participation among pupils. Overall, while teachers demonstrated awareness of various teaching methods, the moderate scores suggested a need for further professional development to enhance their implementation and effectiveness in music education (Welch, 2015; Driscoll et al., 2020).

Table 7: General Perceptions' Level of Music Teachers to Pedagogical Knowledge.

Indicators	Mean	Std. Deviation	Descriptors
Conducting Preliminary Activities	3.06	0.84	Moderate
Conducting Song Analysis	3.77	0.92	High
Teaching A Song	3.47	0.86	High
Application of Methods and Strategies in Teaching Music	3.17	0.96	Moderate
Average	3.37	0.90	Moderate

Legend: This table presented the mean scores, standard deviations, and descriptors of music teachers' perceptions regarding the implementation of various teaching activities and strategies in their music education practice.

Table 7 shows music teachers' overall pedagogical knowledge as moderate, with an average mean of 3.37. Teachers showed strong confidence in song analysis (3.77) and song teaching (3.47), but lower scores in preliminary activities (3.06) and teaching strategies (3.17) indicate gaps in foundational pedagogy. These gaps suggest challenges in student engagement and innovation. The findings support prior research (Maryani & Martaningsih, 2015; Ibbotson & See, 2021) showing teachers often feel unprepared in core music teaching areas. Hartati et al. (2019) stress the need for both content and pedagogical knowledge, while Daga (2021) highlights similar gaps among MAPEH teachers in Leyte. Collectively, the data point to a strong need for targeted professional development to improve overall teaching effectiveness and student outcomes in music education.

Primary Challenges Confronted by Music Teachers

This section outlined seven major challenges in music education, highlighting the need for training, resources, and support—echoing Jones and Lundeberg's (2020) emphasis on these factors for effective teaching.

Table 8: Primary Challenges Confronted by Music Teachers

Indicators	Mean	Std. Deviation	Descriptors
Lack of knowledge of the subject	3.40	0.76	Moderate
Negative attitude of teachers towards the subject/Music is less prioritized	2.75	0.91	Moderate
Negative attitude of pupils towards the subject/Music is less prioritized	3.04	1.09	Moderate

Insufficient classroom materials and textbooks	3.84	0.86	High
Inadequate musical instruments and equipment	4.15	0.96	High
Lack of teacher training	4.27	0.97	Very High
Lack of administrative support	3.58	0.88	High
Average	3.57	0.67	High

Legend: This table presented the mean scores, standard deviations, and descriptors for the challenges faced by music teachers in their teaching practices.

Table 8 highlights key challenges in music education, with an overall high mean score of 3.57, indicating significant concerns. The most critical issue was the lack of teacher training (mean = 4.27), stressing the urgent need for professional development. Other major challenges included limited instruments and equipment (mean = 4.15) and insufficient classroom materials (mean = 3.84), which hindered effective teaching. Moderate issues included negative attitudes from teachers and students and lack of administrative support, reflecting a systemic undervaluing of music education. These findings align with studies (Manila, 2020; Pestano & Ibarra, 2021; Welch & Henley, 2014) showing that poor subject knowledge, limited resources, and low prioritization weaken music instruction. Overall, the data underscore a pressing need for comprehensive training and resource investment to strengthen music education.

Correlation Between Content Knowledge and Pedagogical Knowledge

The following analysis explored how music teachers' proficiency in key musical elements correlated with their teaching effectiveness, offering insights into the impact of content knowledge on pedagogical practices.

Table 9: Analysis on the Relationship between content and pedagogical knowledge.

Content Knowledge		Conducting Song Analysis	Teaching a Song	Application of Methods and Strategies	Pedagogical Knowledge
Rhythm	Pearson Correlation	-.147	-.227	-.143	-.161
	Sig. (2-tailed)	.284	.095	.296	.241
Melody	Pearson Correlation	.154	.052	-.168	.005
	Sig. (2-tailed)	.263	.704	.221	.969
Form	Pearson Correlation	.056	-.033	-.041	-.027
	Sig. (2-tailed)	.685	.814	.768	.846
Timbre	Pearson Correlation	-.206	-.214	-.275*	-.246
	Sig. (2-tailed)	.132	.117	.042	.071
Dynamics	Pearson Correlation	.086	-.014	.071	.073
	Sig. (2-tailed)	.533	.919	.605	.597
Texture	Pearson Correlation	.154	.052	-.168	.005
	Sig. (2-tailed)	.263	.704	.221	.969
Harmony	Pearson Correlation	-.256	-.195	-.244	-.294*
	Sig. (2-tailed)	.059	.153	.073	.029
Tempo	Pearson Correlation	-.177	-.229	-.151	-.226
	Sig. (2-tailed)	.197	.092	.272	.096

Proficiency Level Knowledge	Pearson Correlation	-.162	-.253	-.243	-.246
	Sig. (2-tailed)	.236	.063	.074	.070

Legend: This table displayed the Pearson correlation coefficients between music teachers' content knowledge (rhythm, melody, form, timbre, dynamics, texture, harmony, tempo, and proficiency level knowledge) and their pedagogical knowledge, including conducting song analysis, teaching a song, and the application of methods and strategies.

Table 9 examined the link between music content knowledge and teaching practices, revealing mostly weak and non-significant correlations. *Rhythm* and *melody* showed minimal impact on teaching, aligning with studies that stress the need for pedagogical integration (Welch, 2015; Shahazwan et al., 2023). *Form*, *dynamics*, and *texture* also had negligible effects. *Timbre* ($r = -0.275$, $p = 0.042$) and *harmony* ($r = -0.294$, $p = 0.029$) showed significant negative correlations with teaching practices, suggesting that overemphasis on specific skills may hinder broader pedagogy (Daga, 2021; Driscoll et al., 2020). *Tempo* and overall proficiency also trended negatively. These findings suggest that musical skill alone isn't enough—effective teaching requires balanced professional development combining content and pedagogy.

Difference Between the Content and Pedagogical Knowledge to Teachers' Profiles

This section presented an analysis of the correlation between music teachers' content knowledge and their pedagogical practices. By examining how various elements of musical proficiency—such as rhythm, melody, and harmony—relate to teaching methods and shed light on potential factors influencing teaching effectiveness in the Division.

Table 10: Analysis on the Difference between the Content and Pedagogical Knowledges to Teachers' Profiles

Proficiency Knowledge	Sum Squares	df	Mean Square	F	Sig.
Bachelor's degree	.043	1	.043	.160	.691
Major/Specialization	.423	2	.211	.787	.461
Highest Educational Attainment	1.17	3	.388	1.50	.226
Training Relevant to Music	2.67	2	1.34	5.92	.005
Years of Teaching	1.87	4	.468	1.87	.131
Pedagogical Knowledge	Sum Squares	df	Mean Square	F	Sig.
Bachelor's degree	1.02	1	1.02	1.62	.209
Major/Specialization	.025	2	.013	.019	.981
Highest Educational Attainment	.918	3	.306	.465	.708
Training Relevant to Music	5.20	2	2.60	4.62	.014
Years of Teaching	2.21	4	.553	.857	.496

Legend: This table displays the results of an Analysis of Variance (ANOVA) comparing various factors (such as bachelor's degree, Major/Specialization, Highest Educational Attainment, Training Relevant to Music, and Years of Teaching) with proficiency and pedagogical knowledge among music teachers.

Table 10 analysed how factors like degree, specialization, education, training, and experience affect music teachers' Proficiency and Pedagogical Knowledge. Results showed that most factors had no significant impact, except for music-specific training, which significantly influenced both proficiency ($F = 5.918$, $p = 0.005$) and pedagogy ($F = 4.615$, $p = 0.014$). Degrees, specialization, and years of teaching showed minimal effects, suggesting that formal education and experience alone are insufficient without targeted training. These

findings support Ibbotson & See (2021), Daga (2021), and Shulman (1986), emphasizing that professional development in both content and pedagogy is essential for effective music teaching and improved student outcomes.

CONCLUSION

This study underscored the vital role of music-specific training in enhancing both proficiency and pedagogical knowledge among educators. While formal education and years of experience had limited impact, targeted professional development significantly improved teaching effectiveness. These findings support earlier research (Ibbotson & See, 2021; Daga, 2021) and Shulman's (1986) Pedagogical Content Knowledge framework, highlighting the need to integrate subject expertise with effective teaching methods. The study calls for continuous, specialized training to better equip music teachers and improve student learning outcomes.

RECOMMENDATIONS

Based on the findings that training relevant to music significantly impacts both content and pedagogical knowledge, the following refined recommendations are proposed for key stakeholders:

For DepEd National Officials:

Enhance professional development by expanding nationwide music workshops focused on improving content and pedagogical strategies for music education. Integrate Music Education into Teacher Preparation: Collaborate with the Commission on Higher Education (CHED) to advocate for the integration of comprehensive music education training into teacher education curricula. This training should encompass both theoretical foundations and practical applications.

For Schools Division Superintendents:

Organize regular in-service training and workshops specifically for music teachers, incorporating these into the division's annual budget and strategic plans. Monitor and Evaluate Training Impact: Establish systems to evaluate the effectiveness of music-related training, collecting feedback to continuously improve these programs.

For School Administrators:

Identify teachers in need of further training and facilitate their participation in local and national development programs. Provide incentives for teachers who demonstrate progress after training. Allocate Resources for Music Programs: Ensure that schools allocate adequate time and resources for music education. Engage local experts to provide additional mentorship for teachers.

For Teachers:

Actively pursue music training opportunities through DepEd and other institutions, continuously improving both content knowledge and teaching strategies. Collaborate with Peers: Form learning communities and share best practices to foster ongoing professional development within the school.

For Political Leaders:

Allocate sufficient local government funds for teacher training, particularly in arts and music, ensuring sustainable teacher development programs. Promote Music Education: Support and champion music education policies through grants or scholarships for teachers seeking advanced training.

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