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The Effect of Training Participation on Self-efficacy and Innovative Work Activities of Non-Music Specialist Teachers

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Abstract

To enhance elementary school teachers' skills in music, they are required to participate in various music-related training programs as part of their professional development. This study aims to analyse the relationship between these training programs and the self-efficacy and innovative work activities of music teachers in elementary schools. A quantitative, correlational research design was used, involving 51 elementary school teachers in the Sumedang Regency, West Java Province, Indonesia, of whom 19 were men and 32 were women. The results of the study show the following findings. First, while some teachers have actively sought out opportunities to improve their competencies in music education, most have had minimal participation. Second, teachers generally display confidence and capability in teaching music, the data highlights specific areas, such as supporting high-achieving and struggling students, where targeted professional development or resources could further enhance their effectiveness. Third, a majority of teachers actively engage in creative and collaborative practices to enhance music education. Practices such as song writing, creating learning media, organizing performances, and using technology are well-represented among respondents, underscoring their dedication to providing enriched learning experiences. The study also found a correlation coefficient of 0.052 between training participation and self-efficacy, indicating a very low correlation. Similarly, the correlation coefficient between innovative work activities and training participation was 0.054, also reflecting a very low correlation. Based on these findings, the study concluded that participation in training did not significantly enhance self-efficacy or innovative work activities among the respondents.

Keywords: Elementary School, Innovative Work Activities, Music Learning, Self-Efficacy, Teacher Competence.

Introduction

The success of teachers in delivering effective instruction is greatly influenced by their own competencies. However, in Indonesia, elementary school music teachers face various challenges in the teaching process. Many lack the specific competencies required for teaching music, as they are generalist teachers responsible for teaching all subject areas rather than specializing in music. One of the on-going challenges in elementary music education is the gap between the competencies of generalist teachers, who cover multiple subjects, and the specialized, in-depth knowledge needed for effective music instruction (1). This gap in competencies contrasts sharply with the idea that teaching is a profession requiring not only specific qualifications (content knowledge, cultural awareness, and professional skills) but also personal qualities and positive, professional attitudes (2–4). Teachers must have a positive attitude toward their profession and the competence necessary to help students, the primary focus of learning, achieve the established educational goals (5). Therefore, additional education and training are essential for elementary school music teachers in Indonesia after they graduate to deepen their musical competence. Some elementary school teachers have been identified as participants in music teaching training programs conducted by university community service teams. However, no research has yet evaluated the impact of these teachers' participation in music teaching training on their self-efficacy and innovative practices in the classroom. Exploring this topic is important, as self-efficacy refers to an individual's belief in their ability to perform a specific task (6, 7). A

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teacher's level of self-efficacy can significantly influence learning approaches, such as cooperative learning techniques, activity-based learning, and the adoption of new methods to address student needs (8–10). Self-efficacy also helps individuals manage distressing emotional states that might otherwise impede goal achievement (11, 12). Those with high self-efficacy are often more intrinsically motivated and exhibit the confidence needed to tackle intellectually and creatively demanding situations, which enables them to demonstrate innovative work behaviour (13-15). Training initiatives have been consistently shown to enhance self-efficacy and subsequently foster innovative work activities among teachers. A study demonstrates that professional development programs focused on activity-based learning uplift teacher self-efficacy and empower educators to adopt novel teaching strategies and create innovative classroom practices (16). Additionally, a research provide evidence that comprehensive training enhances various dimensions of teacher self-efficacy, including classroom management and instructional innovation, by expanding teachers' pedagogical skills and knowledge (17). Furthermore, a study highlighting the role of professional development in cultivating robust self-belief and resilience—critical components that encourage teachers to engage in innovative work activities (18). Together, these studies justify the assumption that training can significantly improve self-efficacy and innovative work behaviors, thereby contributing to more dynamic and effective educational practices. Previous research found that some prospective non-music specialist teachers report feeling highly anxious and lacking confidence in their ability to teach music (19). Similarly, other studies have consistently shown that teachers with little or no music background tend to feel less confident and more uncomfortable teaching music (20, 21). As a result, they are less likely to deliver high-quality music instruction and may inadvertently convey their discomfort and apprehension toward music to their students (22, 23). Such attitudes can impact the quality of learning, teaching methods and techniques, as well as student participation and success in learning (24). Meanwhile, although participants' self-efficacy in music ability and learning does not differ significantly by gender, it does show a significant difference based on their year of study at university (25). Research investigating the impact of training participation on non-music specialist teachers' professional growth suggests that targeted professional development significantly enhances both their self-efficacy and their capacity for innovative work. A study provides evidence that structured, Kodály-inspired training interventions improve the subject knowledge and confidence of non-specialist music teachers, directly contributing to higher self-efficacy (19). However, it is important to note that the reference primarily discusses partnerships and broader developmental outcomes rather than specific improvements in self-efficacy. A research highlight that systematic professional development can alleviate negative self-efficacy cycles typically observed in pre-service generalist teachers, thereby fostering a willingness to experiment with new pedagogical practices and innovative strategies in the classroom (26). Although their work emphasizes the challenges faced by pre-service teachers regarding music education, it supports the notion that professional development is crucial for fostering self-efficacy. Another study, on the other hand, focus on the use of specific tools in music education rather than directly addressing the broader implications for professional development, making their relevance less direct to the claims about confidence and innovative methods (27). Furthermore, a research report that iterative cycles of action research and professional learning contribute to developing adaptive mindsets among non-specialist teachers, encouraging them to navigate and overcome challenging teaching environments through creative instructional practices, confirming the importance of continuous professional development (28). Collectively, these studies underscore the critical role of continuous and focused training participation in both elevating self-efficacy and promoting innovative work activities among non-music specialist teachers. To date, no research has been identified that specifically examines the relationship between training programs, self-efficacy, and innovative work activities among elementary school music teachers. This study aims to address that gap by focusing explicitly on this issue. Based on the challenges observed in the educational environment, this study aims to determine

whether the training programs attended by primary school teachers have a tangible impact on enhancing their self-efficacy and innovative work activities in music teaching. This issue is important to explore, considering indications that some teachers frequently participate in training programs with varying orientations, primarily aimed at improving their professional competence. To identify the research findings, we formulated two research questions as follows. Is there a significant relationship between participation in training programs and the self-efficacy of elementary school music teachers? Is there a significant relationship between participation in training programs and innovative work activities of elementary school music teachers?

Hypothesis

The hypotheses we developed examine the relationship between training participation, self-efficacy, and innovative work activities of elementary school music teachers. We developed four hypotheses, namely H_{01} with H_{11} as an alternative, and H_{02} with H_{12} as an alternative.

H_{01}: There is no significant relationship between training participation and self-efficacy of elementary school music teachers.

H_{11}: There is a significant relationship between training participation and self-efficacy of elementary school music teachers.

H_{02}: There is no significant relationship between training participation and innovative work activities of elementary school music teachers.

H_{12}: There is a significant relationship between training participation and innovative work activities of elementary school music teachers.

The hypothesis (H_{11})—that there is a significant relationship between training participation and self-efficacy of elementary school music teachers—finds strong support in the literature. Research in music education has consistently indicated that teachers' self-efficacy, defined as their belief in their ability to achieve desired educational outcomes, is not an innate trait but one that can be developed and enhanced through targeted professional development and training interventions (18, 29). Furthermore, a research demonstrated that structured training programs, which provided a diversity of methods and pragmatic tools, significantly improved teachers' perceptions of their competencies (30). This finding underscores that training participation is not merely a transfer of technical knowledge but also an essential mechanism for boosting self-efficacy and, consequently, teacher effectiveness. The hypothesis (**H_{12}**)—that there is a significant relationship between training participation and innovative work activities of elementary school music teachers—finds strong theoretical and empirical support from multiple strands of research. Professional development initiatives have been shown to equip teachers with novel pedagogical strategies and technologies that foster creative curriculum design and innovative teaching practices. For instance, studies have reported that when pre-service and in-service elementary music teachers participate in specialized training programs, they develop increased comfort and confidence in integrating innovative content and methodologies into their teaching practices (31, 32). This improvement in competence not only enhances their technical and creative capacity but also encourages them to experiment with project-based learning and digital media, indicating elevated innovative work activities (33, 34).

Methodology

Research Design

To fulfil the purpose of this study, a correlational research design was selected, as it is a quantitative method used to determine and measure the relationship between two or more variables (35). This aligns with the study's aim to assess the relationship between training participation, self-efficacy, and the innovative work activities of non-music specialist teachers in Indonesia. This research was conducted in two stages: first, describing the current conditions of teachers in terms of their participation in music content and pedagogical training, self-efficacy, and work innovation activities; second, analyzing the relationships within the data obtained from the first stage.

Respondent

We conducted a survey targeting primary school teachers who are members of teacher working groups across three development regions in Sumedang District, West Java province. The population in this study is elementary school teachers in Sumedang District who actively participate in teacher work groups. The sampling was carried out purposively, focusing on teachers

who are actively teaching music in elementary schools. A total of 51 respondents participated, willingly completing and returning the survey. The results can be described as follows.

Table 1: Demographic data of Respondents

Respondent Demographics	Frequency	Percentage
Gender		
Male	19	37.25
Female	32	62.75
Age		
21-25	3	5.88
26-30	16	31.37
31-35	11	21.57
36-40	12	23.53
41-45	3	5.88
51-55	4	7.84
56-60	2	3.92
Teacher Status		
Honorer	3	5.88
Contract Teacher	13	25.49
Civil Servants	35	68.63
Teacher Certification		
Not yet certified	19	37.25
Have passed certification	32	62.75
Teaching Places		
Class 1	4	7.84
Class 2	6	11.76
Grade 3	2	3.92
Grade 4	9	17.65
Grade 5	11	21.57
Grade 6	19	37.25

Table 1 describes the demographics of 51 primary school teacher respondents. The respondent demographics show that the majority were female (62.75%), with males comprising 37.25%. Most participants were aged between 26–30 years (31.37%), followed by those aged 36–40 (23.53%) and 31–35 (21.57%). In terms of employment status, the largest group were civil servants (68.63%), while others were contract teachers (25.49%) and honorers (5.88%). Regarding certification, 62.75% had passed teacher certification, whereas 37.25% had not yet been certified. The respondents taught various grade levels, with the highest proportion teaching Grade 6 (37.25%), followed by Grade 5 (21.57%) and Grade 4 (17.65%).

Instruments and Data Collection

The instrument used for data collection was a survey in the form of a Google Form. We developed 10 statements using a Likert scale to identify self-efficacy and six statements using a Guttman scale to identify the innovative work activities of primary school teachers. The instrument was tested for validity and reliability with 41 elementary school teachers. The results of the Pearson Correlation validity test showed that the instrument was classified as valid at the 0.01 level (2-tailed), with r-count values ranging from a minimum of 0.556 to a maximum of 0.835. Similarly, the Cronbach's Alpha reliability test confirmed that the instrument was reliable, with a reliability score of 0.726. After ensuring validity and reliability, the instruments were distributed to elementary school teachers across four regions in West Java Province. Table 2 presents the instrument designed to measure self-efficacy, while Table 3 highlights the instrument developed to identify innovative work activities of non-specialist music teachers in elementary schools.

Table 2: Self-efficacy in Music Teaching

Statement	Sub-Dimension	Explanation
Inspiring students to learn music	Motivational Efficacy	The teacher's ability to motivate students through music learning.
Explaining the basic concepts of music by practicing music	Instructional Efficacy	Skills in explaining music concepts through practical application.
Providing challenging music assignments for high-achieving students	Differentiated Instruction Efficacy	The ability to tailor challenging tasks for advanced learners.
Adapting music learning styles to interest students	Student-Centered Adaptability	Flexibility in adjusting teaching styles to student interests.
Helping students understand the value of music learning	Value Communication Efficacy	Communicating the relevance and importance of music education.
Assessing students' understanding of music	Assessment Efficacy	Proficiency in evaluating students' music comprehension.
Improving the understanding and skills of students who have difficulty learning music	Remedial Teaching Efficacy	Confidence in supporting struggling students.
Making music relevant to students	Curricular Relevance Efficacy	The ability to connect music content to real-life contexts.
Developing students' higher-order thinking skills in learning music	Cognitive Development Efficacy	Encouraging critical and creative thinking through music.
Practice-based and experiential music learning	Experiential Learning Efficacy	Confidence in applying hands-on and experience-based teaching.

Table 3: Innovative Work Activities in Music Teaching

Statement	Sub-Dimension	Explanation
Make your own songs for music teaching materials	Creative Content Development	The ability to compose original songs to enrich teaching materials.
Make your own musical accompaniment for music teaching materials	Musical Arrangement Innovation	Creating unique accompaniments tailored for classroom use.
Using technology to help with music learning	Technology Integration	Applying digital tools to enhance music teaching and learning.
Creating music learning media	Instructional Media Innovation	Designing engaging and effective media for music education.
Create a musical performance	Performance-Based Innovation	Producing musical showcases that support learning outcomes.
Collaborate on music compositions	Collaborative Creativity	Working with others to produce original music for educational purposes.

Data Analysis

Based on the design and instruments used, the data obtained from the survey were analysed using descriptive statistical analysis. This analysis produced a mapping of the condition of elementary school teachers regarding their participation in content and pedagogic training, self-efficacy, and innovative work activities. Following the descriptive analysis of these three variables, a correlation analysis using Kendall's tau-b was conducted to determine whether there was a relationship between participation in content and pedagogic music training and the variables of self-efficacy and innovative work activities.

Results and Discussion

The research findings are divided into four explanatory parts. First, participation in content training and music pedagogics. Second, self-efficacy descriptive analysis. Third, descriptive analysis of innovative work activities. Fourth, the relationship between training participation and self-efficacy and innovative work activities.

Participation in Content Training and Musical Pedagogy

Respondents were asked the question, "How many times have you attended knowledge and skill improvement training in music content and pedagogy for elementary schools in the last five years (2019–2023)?" The rating scale for training participation was divided into five categories: 0 = Not Participatory, 1–2 = Less Participatory, 3–4 = Moderately Participatory, 5–6 = Participatory and 7–8 = Very Participatory. The respondents' answers are presented in Table 4.

Table 4 presents the frequency of participation by elementary school teachers in knowledge and skills improvement training related to music content and pedagogy over the past five years (2019–2023). The responses indicate varying levels of participation among the teachers. Out of the total participants surveyed, 24 teachers reported attending training only once, making this the most common response. This indicates that the majority of teachers had minimal exposure to professional development opportunities in music content and pedagogy. Following this, 10 teachers attended training twice, showing slightly more involvement but still falling under the "Less Participatory" category. Meanwhile, very few teachers reported higher levels of participation. Only two teachers attended training three times, and just 1 teacher each participated four, five, or six times, reflecting a very limited engagement at this frequency. Lastly, two teachers attended training eight times, placing them in the "Very Participatory" category and highlighting a small group of teachers deeply committed to improving their skills. This distribution suggests that while some teachers have actively sought out opportunities to improve their competencies in music education, most have had minimal participation. The data underscores the need for more accessible, frequent, and targeted training programs to enhance teachers' knowledge and pedagogy in music for elementary schools. Encouraging greater participation could lead to improved teaching practices and outcomes in music education, addressing the gap seen in this data where high participation remains the exception rather than the norm.

Table 4: Frequency Distribution of Questionnaire Responses

Question	Training Frequency	Number of Participants
How many times have you attended knowledge and skills improvement training in music content and pedagogy for elementary schools in the last five years (2019-2023)?	1	24
	2	10
	3	2
	4	1
	5	1
	6	1
	8	2

Valid N = 51

Table 5: Frequency Distribution of Self-Efficacy Questionnaire Responses

Statement	Min	Max	Sum	Mean	Std. Deviation
Inspiring students to learn music	1	5	197	3.86	.872
Explain the basic concepts of music by practicing music	2	5	191	3.75	.868
Providing challenging music assignments for high-achieving students	2	5	180	3.53	1.007
Adapting music learning styles to interest students	2	5	192	3.76	.907
Helping students understand the value of music learning	2	5	188	3.69	.812
Assessing students' understanding of music	2	5	194	3.80	.722

Improve the understanding and skills of students who have difficulty learning music	2	5	180	3.53	.857
Making music relevant to students	2	5	195	3.82	.713
Develop students' higher-order thinking skills in learning music	2	5	183	3.59	.829
Practice-based and experiential music learning	2	5	191	3.75	.744

Valid N = 51

Descriptive Analysis of Self-Efficacy

A self-efficacy questionnaire consisting of 10 statements was administered to 51 respondents. Table 5 presents the frequency distribution of the responses collected from this questionnaire.

Table 5 shows the descriptive data as follows. The first statement evaluates teachers' ability to inspire students to learn music. With a mean of 3.86, it indicates a generally positive perception among the respondents about their role in inspiring students. The standard deviation of 0.872 shows a moderate level of agreement among the participants, suggesting some variance but not extreme disagreement. The minimum score of 1 highlights that at least one respondent felt unable to inspire students, while a maximum of 5 indicates that some respondents strongly agree with their ability to motivate students. Second statement focuses on explaining music concepts through practice. The mean score of 3.75 reflects a positive tendency, suggesting that most respondents feel confident about teaching music theory using practical methods. The minimum score of 2 indicates that no respondents completely disagreed, but some respondents feel moderately confident rather than fully confident. The standard deviation of 0.868 signals moderate agreement among respondents, with slight variations in their responses. Third, the mean score of 3.53 for this statement indicates a moderate confidence level among respondents in providing challenging assignments for high-achieving students. The relatively high standard deviation of 1.007 reveals more significant variation in responses compared to other statements. This suggests that some teachers excel in providing such assignments, while others feel less prepared or confident in this area. The minimum value of 2 confirms that no respondents strongly disagreed, but the responses still range widely. Fourth statement assesses teachers' ability to adapt teaching methods to suit students' interests. The mean score of 3.76 suggests that most respondents feel capable of engaging students by aligning music teaching styles with their interests. The standard deviation of 0.907 reflects some variability in responses, with certain teachers feeling more confident than others. The minimum score of 2 indicates that no respondents felt completely incapable of adapting learning styles, and the maximum value of 5 reveals strong confidence among some teachers. Fifth statement focuses on helping students recognize the importance of music education. With a mean score of 3.69, the data indicates a generally positive response, with most teachers agreeing that they help students see the value in music learning. The relatively low standard deviation of 0.812 reflects stronger agreement among participants compared to other statements. The minimum score of 2 confirms that no respondents expressed complete disagreement, while the maximum score of 5 suggests that some teachers excel in conveying music's value. Sixth, the teachers' ability to assess students' understanding of music is evaluated in this statement. The mean score of 3.80 indicates that most respondents feel confident in their assessment skills. The standard deviation of 0.722 is relatively low, reflecting strong agreement among respondents. This suggests that assessing students' music comprehension is an area of strength for most teachers. With no responses below a 2, it is evident that all respondents feel at least moderately capable of this task. Seventh statement addresses teachers' efforts to support students struggling with music learning. The mean score of 3.53 reflects a moderate confidence level, suggesting some variability in how teachers perceive their effectiveness in this area. The standard deviation of 0.857 shows a moderate spread of responses. While no respondents strongly disagreed (Min = 2), the data indicates that some teachers may require additional training or resources to better assist struggling students. Eighth statement assesses teachers' ability to connect music learning to students' lives. The mean score of 3.82 highlights a positive trend, with most respondents feeling confident about making music relevant to

their students. The relatively low standard deviation of 0.713 indicates strong agreement among respondents. This suggests that teachers generally excel in creating meaningful connections between music education and students' real-world experiences. Nineth statement evaluates teachers' role in fostering higher-order thinking skills through music education. The mean score of 3.59 indicates a moderate level of agreement, suggesting that while many teachers feel confident, others may find this area challenging. The standard deviation of 0.829 reflects some variability in responses. The minimum score of 2 highlights that no respondents completely disagreed, but a range of confidence levels still exists. The final statement focuses on practice-based and experiential learning in music education. The mean score of 3.75 indicates a generally positive response, with most teachers agreeing on the importance of hands-on learning. The standard deviation of 0.744 shows moderate agreement among respondents, with slight variation. No responses below two were recorded, indicating that all teachers value experiential learning to some extent. The data provides a comprehensive picture of teachers' perceptions of their roles and effectiveness in teaching music. The mean scores for all statements range between 3.53 and 3.86, suggesting a generally positive trend across all evaluated dimensions. Teachers appear confident in areas such as making music relevant to students, assessing students' understanding of music, and inspiring students to learn music. These areas show relatively higher mean scores and lower standard deviations, reflecting strong agreement among respondents. On the other hand, areas such as providing challenging music assignments for high-achieving students and improving the understanding and skills of struggling students have lower mean scores (3.53) and slightly higher standard deviations. This suggests more variability in teachers' confidence and effectiveness, indicating possible areas for improvement. The standard deviations for most statements range from 0.713 to 1.007, showing varying levels of agreement. Statements with lower standard deviations, such as assessing students' understanding of music, reflect stronger consensus, while those with higher deviations, such as providing challenging assignments, suggest greater diversity in responses. While teachers generally display confidence and capability in teaching music, the data highlights specific areas, such as supporting high-achieving and struggling students, where targeted professional development or resources could further enhance their effectiveness.

Descriptive Analysis of Innovative Work Activities

A questionnaire with six "Yes or No" questions was administered to 51 respondents. Table 6 presents the frequency distribution of their responses.

Table 6: Results of Responses on Innovative Work Activities

Statement	Answer	Frequency	Percent
Make your own songs for music teaching materials	No	19	37.3
	Yes	32	62.7
Make your own musical accompaniment for music teaching materials	No	21	41.2
	Yes	30	58.8
Using technology to help with music learning	No	11	21.6
	Yes	40	78.4
Creating music learning media	No	14	27.5
	Yes	37	72.5
Create a musical performance	No	17	33.3
	Yes	34	66.7
Collaborate on music compositions	No	18	35.3
	Yes	33	64.7

Valid N = 51

The data provides insights into the activities and practices of respondents, specifically focusing on their involvement in creating and utilizing various music teaching resources, performance materials, and technology for music education. Each statement evaluates a specific dimension of

creative and instructional activities in music learning, with frequencies and percentages detailing the number of respondents who answered "Yes" or "No" to each activity. Below is a detailed breakdown and analysis of the data: The first statement assesses whether respondents create their own songs for use as teaching materials in music education. A significant majority (62.7%) reported that they compose their own songs, indicating a notable level of creativity and resourcefulness among the participants. However, 37.3% do not engage in this activity, suggesting that while many teachers innovate with personalized content, some may still rely on pre-existing materials or may lack confidence or skills in songwriting. The data reflects an overall positive trend toward creating original teaching materials, which can help align lessons to students' needs and cultural contexts. This statement evaluates whether respondents create their own musical accompaniment for teaching materials. While the majority (58.8%) indicated that they do, a sizable 41.2% reported that they do not engage in this activity. This result suggests that although many teachers have the skills or tools to produce musical accompaniments, a significant portion may face challenges such as time constraints, lack of training, or limited access to necessary instruments and software. Teachers who create original accompaniments often provide a richer and more tailored learning experience for their students, making this an area worth encouraging and developing further. The data highlights a strong trend toward the use of technology in music education. A large majority (78.4%) of respondents reported using technology to assist with music learning, indicating widespread adoption of digital tools, such as software, apps, and online resources. Only 21.6% stated that they do not use technology, which may reflect barriers like a lack of digital literacy, insufficient training, or limited access to technology. This finding underscores the growing role of technology in modern education, particularly in facilitating innovative and interactive music learning experiences. Teachers leveraging technology can enhance students' engagement and improve learning outcomes. The fourth statement evaluates respondents' engagement in creating music learning media. An impressive 72.5% of respondents indicated that they create media to aid music education, highlighting a strong inclination toward resource development. This may include creating visual aids, videos, presentations, or worksheets that support music teaching and learning. In contrast, 27.5% of respondents do not engage in this activity, suggesting that while many teachers actively innovate in creating learning tools, others may require additional resources, time, or skills to do so effectively. Developing such media can significantly enhance the learning experience and ensure concepts are conveyed in engaging and accessible ways. This statement explores whether respondents organize musical performances. A significant majority (66.7%) reported that they organize performances, reflecting a strong commitment to practical, experiential learning in music education. Musical performances provide students with opportunities to showcase their skills, build confidence, and apply their learning in real-world contexts. However, 33.3% of respondents do not organize performances, potentially due to challenges such as time limitations, logistical constraints, or lack of support. Encouraging and supporting teachers to organize such events can greatly enrich students' learning experiences. The final statement evaluates whether respondents collaborate on creating music compositions. A majority (64.7%) indicated that they engage in collaborative composition, highlighting the value of teamwork, creativity, and collective learning in music education. Collaborative composition activities encourage students and teachers alike to exchange ideas, foster creativity, and develop teamwork skills. On the other hand, 35.3% of respondents do not collaborate in composing music. This may be due to individual teaching styles, limited collaboration opportunities, or a preference for working independently. Promoting collaborative practices in music composition could enhance creativity and strengthen learning outcomes in group settings.

The Relationship between Training Participation, Self-Efficacy and Innovative Work Activities

The relationship between training participation, self-efficacy, and innovative work activities was analyzed using the Kendall's tau-b test. The results are presented in Table 7.

Table 7: Kendall's tau-b Analysis Results

		Self-efficacy	Innovative Work Activities
Training Participation	Correlation Coefficient	.052	.054
	Sig. (2-tailed)	.684	.689
	Valid N	51	51

Based on Table 7, two findings were obtained. First, the correlation coefficient of 0.052 indicates a very weak positive relationship between training participation and self-efficacy. This suggests that participation in training for music content and pedagogy has little to no association with the self-efficacy levels of the respondents. The significance value (p = 0.684) is much higher than the standard threshold of 0.05, meaning that this correlation is not statistically significant. Thus, there is no evidence to suggest that training participation impacts self-efficacy in a meaningful way. This result reflects the absence of critical elements within the training program that are necessary to influence and boost teachers' beliefs in their capabilities. For example, a research highlights that among pre-service and in-service teachers, a negative cycle of self-efficacy can persist when training does not adequately compensate for deficits in prior musical learning or pedagogical experience (26). This implies that even though participation in training is expected to enhance self-efficacy, our non-significant result suggests that the training program under investigation may not have effectively addressed the factors that stimulate self-efficacy, or that other variables (e.g., pre-existing teacher beliefs, work environment, or additional support mechanisms) may play a more decisive role in shaping self-efficacy. Such findings emphasize the need for re-evaluating and refining training strategies to ensure they are robust, context-specific, and closely aligned with teachers professional needs so that they can have a measurable impact on self-efficacy. Second, the correlation coefficient of 0.054 also reflects a very weak positive relationship between training participation and innovative work activities. This suggests that participation in training has minimal influence on teachers' involvement in innovative work activities, such as creating teaching materials or organizing musical performances. The significance value (p = 0.689) is similarly well above 0.05, indicating that this correlation is not statistically significant. One potential explanation is that the content and design of the training programs not sufficiently emphasize or foster innovative practices, such as the creation of new teaching materials or the organization of musical performances. For instance, a study found that many teachers did not perceive training programs as particularly innovative, indicating that such initiatives may not inherently stimulate creative practices (36). Similarly, a research noted that while facilitating conditions, including access to adequate resources and supportive institutional environments, play a critical role in enhancing innovative behavior, training participation alone may be insufficient if these conditions are lacking (37). Furthermore, a study reinforced the notion that the mere act of participation in training does not guarantee the adoption of innovative practices unless the training is explicitly designed to bridge theory and practical application (38). Together, these perspectives suggest that the weak, statistically non-significant correlation observed may be indicative of a need to improve the quality and relevance of training programs to better target and enhance innovative work activities among teachers. Based on the findings in this research, the following can also be discussed. The data analysis on respondents' self-efficacy toward music learning provides a comprehensive overview of the quality of teacher instruction. Overall, the results of the questionnaire indicate that teachers are effective in various aspects, including their ability to inspire students, explain basic music concepts through practice, and adapt learning styles to engage students. The findings reveal that teachers' self-efficacy is at a good level, positively impacting teaching strategies such as cooperative learning techniques, activity-based learning, and the implementation of new methods to meet students' needs (8–10). Although there was variation in the assessment of challenging music assignments for high-achieving students, the data indicated that teachers were generally effective at evaluating student comprehension and developing music materials relevant to learning. The analysis

of self-efficacy among music educators reveals a significant correlation between teachers' perceived effectiveness and their instructional strategies. The data indicates that teachers exhibit a high level of self-efficacy, which positively influences their teaching methods, including cooperative learning and activity-based learning. This finding aligns with previous research that emphasizes the importance of self-efficacy in predicting teachers' commitment to their profession and their ability to adapt teaching methods to meet diverse student needs (39–41). Moreover, the effective teaching practices identified in the study, such as the ability to inspire students and explain music concepts through practical engagement, are consistent with the notion that self-efficacy enhances educators' motivation and effectiveness in the classroom (25, 42). This suggests that fostering self-efficacy among music educators could lead to improved educational outcomes for students, as teachers who believe in their capabilities are more likely to implement innovative teaching strategies that cater to various learning styles (43). Furthermore, the findings underscore the multifaceted nature of self-efficacy in music education, where personal, social, and cognitive dimensions intertwine to shape teaching effectiveness. Research indicates that social support from peers and mentors plays a crucial role in enhancing teachers' self-efficacy, thereby facilitating better instructional practices (43, 44). The interplay between self-efficacy and teaching strategies is further highlighted by studies showing that teachers with high self-efficacy are more likely to engage in reflective practices and continuous professional development, which are essential for adapting to the evolving educational landscape (45). Additionally, the positive impact of music education on students' self-esteem and psychological outcomes reinforces the importance of effective teaching practices, as teachers who feel competent are better equipped to foster a supportive learning environment that promotes student engagement and success (42). Thus, enhancing self-efficacy among music educators is not only beneficial for their professional growth but also critical for nurturing the next generation of musicians and fostering a love for music education. The findings on innovative work activities highlight a high level of teacher involvement in creative and innovative music learning practices. Most teachers reported creating their own songs and musical accompaniments, demonstrating significant creativity in developing music teaching materials. Additionally, the use of technology as a learning aid was found to be relatively high. This reflects the teachers' commendable efforts to adapt to technological advancements in music education. These findings reveal a notable engagement among teachers in creative practices, particularly in the development of original songs and musical accompaniments. This high level of creativity is essential for fostering an enriching learning environment, as it allows educators to tailor their teaching materials to better suit the needs and interests of their students. A research emphasizes the importance of innovative approaches in overcoming challenges within music education, such as resource limitations, which can hinder the effectiveness of teaching methodologies (46). Furthermore, the incorporation of technology as a learning aid has been reported to be significant, reflecting teachers' adaptability to modern educational demands. This is supported by the findings of a research, which discusses the role of innovative teaching methods in enhancing student motivation and engagement in music education (47). The integration of technology not only facilitates the creative process but also aligns with contemporary pedagogical trends that emphasize individualized learning experiences (48). Moreover, the emphasis on creativity in music education is further corroborated by studies highlighting the necessity for teachers to cultivate an environment conducive to creative expression. For instance, collaborative activities, where creative processes such as improvisation are engaged in by both teachers and students to enhance musical understanding and skill development, are advocated (49). Similarly, the significance of fostering musical creativity in classroom settings is underscored by research, suggesting that students are more likely to be inspired toward similar behaviours by teachers who actively engage in creative practices (50). This reciprocal relationship between teacher creativity and student engagement is crucial for developing a robust music education framework that prioritizes not only technical skills but also artistic expression and critical thinking (51). Thus, the findings

collectively highlight the transformative potential of innovative practices in music education, advocating for a pedagogical shift that embraces creativity and technology as integral components of the learning experience. However, when examining the relationship between training participation and both self-efficacy and innovative work activities, the findings indicate no statistically significant relationship. The very low correlation coefficient and high p-value suggest that training participation does not significantly influence self-efficacy or innovative work activities among respondents. Therefore, based on the findings and analysis, $\mathbf{H_{01}}$ and $\mathbf{H_{02}}$ were accepted, while $\mathbf{H_{11}}$ and $\mathbf{H_{12}}$ were automatically rejected. The low correlations observed may be attributed to several contextual factors. First, it is possible that the training programs attended by the teachers are designed primarily for achieving training certificate rather than for truly enhancing pedagogical and content competence (52, 53). This certificate-oriented approach may lead teachers to focus on fulfilling formal requirements instead of engaging in the continuous improvement of their teaching practices, thereby limiting the potential benefits on self-efficacy and innovative work activities. Second, the current indicators used to measure self-efficacy and innovative work activities might be overly ambitious for elementary school teachers who often operate under constrained resource and contextual conditions. As a result, the high demands inherent in these measurement instruments might not capture the subtle, incremental improvements in teacher practice, which could otherwise influence their perceived efficacy and innovative output. This misalignment suggests a need for qualitative interviews to explore additional influencing factors—such as institutional support, teacher motivation, and local resource availability—that may have a more direct impact on fostering meaningful improvements in music learning practices (54).

Conclusion

Based on the findings in this research, it can be concluded that a majority of teachers actively engage in creative and collaborative practices to enhance music education. However, a notable minority of teachers (approximately 20-40%) do not participate in these activities, indicating areas where support, training, or resources are needed. Specifically, there are three aspects that need to be considered: (a) Creative Practices: Professional development opportunities focusing on songwriting, creating musical accompaniments, and media could help teachers develop skills and confidence; (b) Technology: Increasing access to technology and providing digital training can further encourage its use in music education; (c) Performance and Collaboration: Providing logistical support and resources for organizing musical performances and fostering collaborations can benefit both teachers and students. Addressing these gaps will enable music educators to strengthen their ability to inspire and engage students, creating a more dynamic and impactful music learning environment. Additionally, the weak relationship between training participation and self-efficacy, as well as innovative work activities, suggests that teachers may not view training as a primary means for self-development or improving teaching quality.

Abbreviations

Max: Maximum, Min: Minimum, Sig.: Significant, Std: Standard, Sum: Summary, Valid N: Valid Noun.

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Author Contributions

J Julia: Processing data, drafting manuscript, Sandie Gunara: Collecting data, Tedi Supriyadi: Collecting data, Egi Agustian: Making research instruments, Validation, Dustnazar Khimmataliev: Layouting, structuring, Ikrom Qodirov: Layouting, structuring, Dilafruz Ismoilova: Finishing, editing the manuscript, Nilufar Omonova: Finishing, editing the manuscript.

Conflict of Interest

The Authors declares that there is no conflict of interest.

Ethics Approval

Research ethics is approved by the Institute for Research and Community Service, Universitas Pendidikan Indonesia.

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