

Impact of Audio Visual Media on Elementary Teachers' Self Efficacy in Islamic Schools

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Abstract:

Teacher self-efficacy is a crucial factor in the success of music education in elementary schools. The use of multimedia technology, particularly audiovisual media, in singing instruction is considered a potential solution for enhancing teachers' confidence in their pedagogical competencies, especially in integrated Islamic curriculum-based schools. This study aims to examine the impact of integrating audiovisual media on improving teacher self-efficacy at SDIT (Sekolah Dasar Islam Terpadu) Nurul Islam Harapan Baru, Bekasi. This study employs a quantitative approach with a quasi-experimental one-group pretest-posttest design. This design was selected due to limited access to an adequate sample for a control group. The research sample consisted of 30 teachers selected using total sampling techniques. Data were collected through a validated self-efficacy questionnaire. The researchers performed data analysis using a paired sample t-test to determine the significant change in teacher self-efficacy scores before and after the intervention, assuming the data were normally distributed. This study is expected to provide an empirical basis for developing teacher training programs and designing school policies that involve the use of technology to enhance teachers' pedagogical skills, particularly in the context of Islamic education.

Keywords: audio visual media, elementary teachers, teacher self-efficacy, Islamic schools, singing instruction

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INTRODUCTION

Teachers serve as the primary movers, motivators, and facilitators within the educational environment. They are required not only to master the subject matter but also to devise innovative and creative learning strategies, such as those needed for the arts and crafts subject in elementary schools. This challenge is further compounded by the fact that the majority of classroom teachers in elementary schools lack an educational background in the arts (Carpenter Estrada et al., 2023; Johnson et al., 2024; Pavlou, 2024). Consequently, they often experience a lack of confidence and knowledge in teaching practical materials, particularly singing.

The teaching of singing, particularly mandatory national songs laden with character and nationalistic values, requires a basic understanding of musical techniques such as notation, rhythm, intonation, and articulation (Ilxomovna, 2025; Ma, 2024). However, field observations at SDIT Nurul Islam Harapan Baru reveal that this lack of competency translates directly into low teacher self-confidence. Instructors tend to avoid practical instruction and focus solely on theoretical aspects, thereby stripping away the essence of a holistic musical experience for students. A low Teacher's Sense of Efficacy (TSE) in this domain has the potential to diminish the overall quality of instruction (Arpaci et al., 2024; Hidayah et al., 2023; Perera & John, 2020).

Self-efficacy theory posits that an individual's belief in their capability to plan and execute tasks is a primary predictor of success (Bandura, 1997). In an educational context, teacher self-efficacy extends beyond mere self-confidence; it is a deeply held belief that they can effectively navigate pedagogical challenges, even in subjects outside their primary expertise. Teachers with high self-efficacy tend to be more resilient, innovative, and capable of fostering a positive learning environment (AWANG et al., 2023; F. Paller & Quirap, 2024; Hambali et al., 2023). This belief must be cultivated through mastery experiences (personal successes), vicarious learning (observation), and social support (Fleming, 2024; halilsoy, 2024; Westover, 2024). Therefore, enhancing teacher self-efficacy is a fundamental prerequisite that must be addressed prior to other educational improvements.

It is based on this condition that the implementation of technology in education presents a strategic solution. With its capacity to deliver auditory and visual content simultaneously, audiovisual media offers a robust learning support mechanism (Norfadila et al., 2024; Nuraini & Mas'odi, 2024). This media can not only function as a pedagogical model to assist teachers in applying correct vocal techniques but also serve as a tool to make learning more contextual and engaging for students.

According to Bandura, audiovisual media is not merely a teaching aid but a catalyst that can accelerate the fulfillment of the sources of self-efficacy. By observing effective models of singing instruction in demonstration videos, teachers can experience a vicarious experience, which helps reduce anxiety and foster the belief that "I can also do it." Subsequently, when teachers practice the modeled techniques directly with the guidance of the video, they gain a small mastery experience, which gradually builds their self-efficacy. In other words, audiovisual media possesses the capacity to function as a vehicle for transforming theoretical knowledge into an internalized, practical belief (Harosid, 2025).

The urgency of this research is further amplified within the context of the digital era and Islamic educational values. Today's students are more stimulated by audiovisual content. Teachers who are technologically hesitant risk losing credibility and diminishing their interaction with students. On the other hand, within Islamic educational philosophy, a teacher (*murabbi*) is expected to be not only intellectually competent (*ta'lim*) but also capable of touching the heart (*tarbiyah*) and providing exemplary conduct (*uswah hasanah*) (Ibnudin & Akhmad Syatori, 2023; Succarie, 2024).

. By integrating Islamic values into *nasyid*, or religious songs, through audiovisual media, teachers can more effectively instruct singing techniques. This approach also aids them in instilling national and character values. Consequently, for teachers to remain relevant and effective in the modern era, mastery of this media has become both a cultural and pedagogical necessity.

Although numerous studies have demonstrated the effectiveness of audiovisual media on

student learning outcomes, a critical literature gap exists concerning its impact on the psychological aspects of teachers, particularly their self-efficacy. Foundational questions, such as how audiovisual media builds the confidence of non-specialist teachers to deliver music arts education, remain inadequately answered by empirical evidence. Furthermore, scarcely any research addresses this within the context of Indonesian Islamic elementary schools, where teachers face the dual challenge of being multi-subject classroom instructors and guardians of Islamic values. This study aims to address this specific gap by focusing on the impact of audiovisual media on teacher self-efficacy as the key variable, rather than solely on student outcomes.

Consequently, this study is designed to investigate the impact of integrating audiovisual media on teacher self-efficacy in singing instruction. The findings are expected not only to provide practical solutions for enhancing teacher competency but also to contribute to the scholarly body of knowledge in music education management by offering empirical evidence on professional development strategies for non-specialist music teachers through technological support. Ultimately, this research is intended to lead to the improvement of character and arts education quality at the primary level.

METHODS

This study employed a quasi-experimental one- group pretest-posttest design to evaluate the impact of audiovisual media integration on teacher self-efficacy. Participants consisted of 30 elementary school teachers from SDIT Nurul Islam Harapan Baru, Bekasi, selected through total sampling technique. All participants were classroom teachers responsible for teaching music arts without a formal specialization background. The instrument used was the Teacher's Sense of Efficacy Scale (TSES) (Tschannen-Moran & Hoy, 2001), a validated 24 item questionnaire measuring self-efficacy in student engagement, instructional strategies, and classroom management. Responses were measured using a 9 point Likert scale. The intervention involved teacher training on integrating audiovisual media into singing instruction over 6 weeks. Data analysis was conducted in two stages. First, descriptive statistics (mean, standard deviation) were used to describe sample characteristics and self-efficacy scores. Subsequently, a paired sample t-test was applied to compare pre-test and post-test scores, assuming normality was met; otherwise, the Wilcoxon signed-rank test was used. Analyses were performed using SPSS version 26 at a 0.05 significance level (Derrick, B., & White, 2017; George & Mallery, 2019; Ross & Willson, 2017). Prior to hypothesis testing, normality assumption evaluation was conducted as a prerequisite for parametric analysis. Given the sample size ($N=30$), data normality was tested by calculating the skewness to standard error (SE) ratio. Data were considered to meet the normality assumption if the ratio value fell within the range of -2 to +2 (George & Mallery, 2019).

RESULTS AND DISCUSSION RESULTS

Respondent Characteristics

The demographic and professional characteristics of the 30 teacher respondents are presented in Table 1. The majority of participants were female (76.7%), held a higher education degree (83.3%), and had 1-3 years of teaching experience (43.3%). A key finding relevant to this study is that 70% of respondents reported never having used audiovisual media in singing instruction prior to the intervention, while only 30% had prior experience using it. These characteristics indicate that the majority of participants entered the intervention with minimal exposure to and experience with educational technology. Consequently, any increase in self-efficacy following the intervention can be more clearly attributed to the impact of the integrated audiovisual media training.

Table 1: Distribution of Respondents Based on Teacher Characteristics at SDIT

Respondent Characteristic	Frequency (n)	Percentage (%)
Gender		
Female	23	76,7
Male	7	23,3
Pendidikan		
Islamic Boarding School	2	6,7
Senior High School	3	10,0
Higher Education	25	83,3
Teaching Experience		
< 1 year	6	20,0
1 - 3 years	13	43,3
4 - 6 years	6	20,0
> 6 years	5	16,7
Use of Audiovisual Media		
Yes	9	30,0
No	21	70,0
Total	30	100,0

Descriptive Statistics of Teacher Self-Efficacy

Descriptive statistical analysis was performed on the pre-test and post-test scores of the Teachers' Sense of Efficacy Scale (TSES). As visualized in Figure 1, the analysis results show a substantial increase in the mean self-efficacy scores following the intervention, both for the total TSES score and for its three subscales. The mean total pre-test score was 121.03, which increased to 158.47 in the post- test.

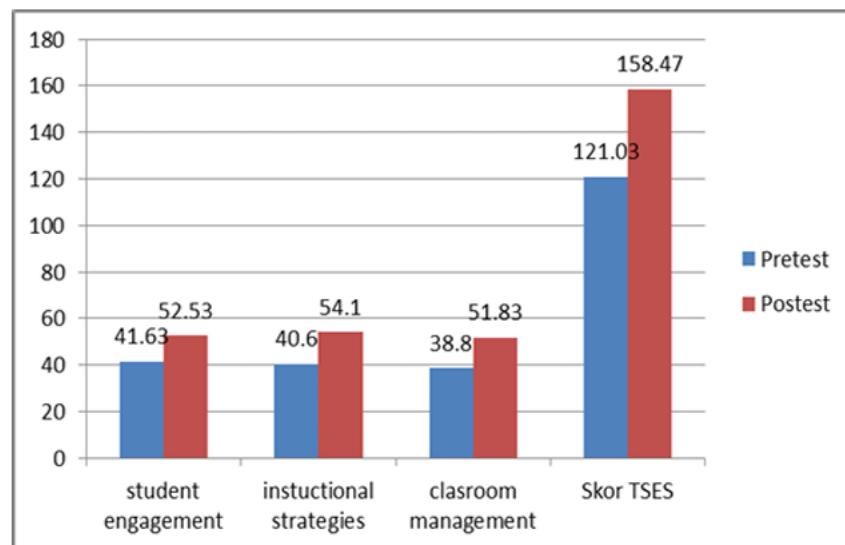


Figure 1: Comparison of Mean Pre-test and Post- test Scores Across the Three Subscales and Total TSES Score

More detailed data is presented in Table 2. For the BStudent Engagement component, the mean score increased by 10.9 points, from 41.63 to 52.53. For the instructional strategies component, the increase reached 13.5 points, from 40.6 to 54.1. The highest increase occurred in the Classroom Management component, with a gain of 13.03 points, from 38.8 to 51.83. Overall, the total TSES score rose by 37.47 points, from 121.03 in the pre- test to 158.47 in the post-test, indicating a positive change in teachers' perceptions of their capabilities.

Table 2. Comparison of Descriptive Statistics for Pre-test and Post-test Scores on TSES Subscales and Total Score

TSES Component	Mean Pre-Test	Mean Post-Test	Mean Difference
Student Engagement	41.63	52.53	+10.90
Instructional Strategies	40.60	54.10	+13.50
Classroom Management	38.80	51.83	+13.03
Total TSES Score	121.03	158.47	+37.47

Results of Normality Test

The prerequisite normality test was evaluated using the Skewness/Standard Error (SE) ratio for both pre-test and post-test data. This test is a critical prerequisite to ensure the validity of using the parametric paired sample t-test, which will be employed to analyze the impact of the audiovisual media. As shown in Table 3, the ratios for both scores fall within the acceptable range of -2 to +2 (pre-test: 1.20; post-test: 1.41). These results confirm that the data are normally distributed and thus meet the assumption for parametric testing.

Table 3. Results of Data Normality Test

Variable	Skewness	N	Description
TSES Pre-Test Score	1,20	30	Normally Distributed
TSES Post-Test Score	1,41	30	Normally Distributed

Based on the results in Table 3, the skewness/SE ratio for all variables falls within the accepted criteria range. Therefore, it can be concluded that the data are normally distributed. A paired sample t-test was subsequently applied to examine the significant difference between teacher self-efficacy scores before and after the intervention. This test was selected because it is appropriate for comparing the means of two measurements taken from the same sample (paired). The analysis was conducted using SPSS version 26 software at a 0.05 significance level.

Hypothesis Testing Results (Paired Sample T- Test)

A paired sample t-test was conducted to evaluate the impact of the audiovisual media integration intervention on the improvement of Teacher's Sense of Efficacy (TSES). The analysis results presented in Table 4 reveal a statistically significant increase in the total TSES score of 37.47 points, from 121.03 ($SD = \pm 12.981$) at pre-test to 158.47 ($SD = \pm 13.836$) at post-test. Further analysis indicates that this increase was statistically significant, $t(29) = 8.75$, $p < .001$. The magnitude of the difference was large (Cohen's $d = 1.59$), demonstrating that the intervention had a substantial practical impact on enhancing teachers' self-efficacy in teaching singing.

Table 4. Results of Paired Sample T-Test for Teacher's Sense of Efficacy Scale (TSES) Scores Before and After Intervention

Teachers' Sense of Efficacy Scale (TSES)	Mean	N	SD	95% CI	P Value
Pre-Intervention	121.03	30	12,981	-43,531 31,336	0,000
Post-Intervention	158.47	30	13,836		
Difference (Post-Pre)	+37,44				< 0,001

The obtained p-value ($< .001$) was well below the significance level α (0.05). This provides strong evidence that the integration of audiovisual media was significantly effective in enhancing the teacher's sense of efficacy among teachers at SDIT Nurul Islam Harapan Baru Bekasi.

DISCUSSION

This study aimed to evaluate the impact of integrating audiovisual media on the self-efficacy of Islamic elementary school teachers in delivering singing instruction. The findings provide strong empirical support for the effectiveness of this intervention.

Interpretation of Main Findings

The main finding of this study, as revealed in Table 3, confirms the significant effectiveness of integrating audiovisual media in improving the overall Teacher's Sense of Efficacy (TSES) ($p < 0.001$). An increase of 37.47 points reflects the substantial practical impact of this intervention, which is not only statistically significant but also pedagogically meaningful. The magnitude of this improvement indicates that audiovisual media serves as a transformative catalyst capable of altering teachers' beliefs about their capabilities, particularly in domains initially perceived as areas of weakness.

This translation maintains academic rigor while ensuring readability for an international scholarly audience, using standardized psychological and educational terminology throughout. The version emphasizes both statistical and practical significance and strengthens the theoretical impact by characterizing the intervention as "transformative." (Zee & Koomen, 2016)

This finding aligns with Bandura's self-efficacy theory, which posits that mastery experience (experiences of success) and vicarious experience (learning through observation) serve as foundational pillars in shaping Teacher's Sense of Efficacy (Bandura, 1977; Devellis, 1983). Audiovisual media functions as an observable, structured, and repeatable learning model for singing instruction. In this process, teachers internalize teaching strategies and techniques before practicing them, thereby reducing anxiety and fostering self-confidence (Çakır, R., & Şahin, 2023)

Furthermore, the practice phase during the six-week intervention enabled teachers to gain mastery experience through direct and repeated application. Students benefited from firsthand experiences of success after implementing the learned strategies. They exhibited positive responses and an enhanced ability to manage the classroom more effectively. This directly strengthened the teachers' beliefs in their pedagogical capabilities (Tschannen-Moran & Hoy, 2001).

This finding also addresses how audiovisual media can be utilized by non-specialist teachers. The media provides reinforcement for developing understanding tailored to students' abilities. Furthermore, it bridges the gap between declarative knowledge (knowing what) about how to teach singing and procedural knowledge (knowing how) to implement it confidently in the classroom (Mayer, 2020). By providing a clear model and space for practice, this intervention

effectively transfers the cognitive load from the teacher (who no longer needs to develop strategies from scratch) to the media, thereby allowing them to focus on skill mastery and building self-efficacy (Sweller et al., 2019). Consequently, this dramatic increase in TSES scores can be viewed as empirical evidence of the successful cognitive load transfer process and the internalization of the learning model through media.

Causal Relationship and Impact Mechanism of Audiovisual Media

The results not only demonstrate a positive and significant relationship between the use of audiovisual media and the enhancement of teacher self-efficacy but also reveal the underlying mechanisms driving this relationship. The subcomponent analysis pattern of the TSES indicates that audiovisual media is most effective in providing teachers, particularly inexperienced ones, with an organized framework for creating creative learning experiences and managing often unpredictable classroom dynamics. Instructional Strategies showed the highest increase (13.5 points), followed by Classroom Management (13.03 points). This challenges the common assumption that technology merely functions as a teaching aid. In this context, it serves as a pedagogical partner that fundamentally transforms teachers' approaches.

This causal mechanism is explained through Bandura's (1997) theory on the sources of self-efficacy. First, the media functions as a powerful source of vicarious experience (observational learning). By presenting observable pedagogical models through a clear audiovisual framework, the media provides concrete examples of "how to teach." (Matsuda et al., 2023).

This reduces teachers' self-doubt in delivering abstract musical concepts in singing, such as articulation, intonation, and rhythm. Second, the media facilitates mastery experience by guiding teachers to create learning that is more effective, engaging, and easily understandable. Directly, audiovisual media enhances student understanding and engagement (student engagement).

This positive feedback from students—manifested as focused attention, active participation, and improved learning outcomes—constitutes an immediately observable achievement for teachers (Zee & Koomen, 2016). This achievement serves as reinforcement that tangibly strengthens their belief (self-efficacy) in their ability to achieve desired learning outcomes. In other words, the transformation of teachers' self-belief is not solely built by the media itself but is rather triggered by the actual success they experience in the classroom thanks to the support of the media. Çakır and Şahin (2023) concluded in their study that audio-visual video-based learning can significantly enhance teacher self-efficacy through structured success feedback mechanisms.

CONCLUSION

Overall, the findings of this study conclude that audiovisual learning media play a crucial and effective role in enhancing the teacher's sense of self-efficacy among elementary school teachers in Islamic educational settings when teaching singing. Its strength lies in its comprehensive impact on all aspects of teacher self-efficacy, ranging from instructional strategy planning and classroom management to student engagement. By providing both a model for instruction (vicarious experience) and a tool for engagement, this intervention addresses a critical need and empowers teachers to deliver practical music education with greater confidence and skill.

The lack of pedagogical content knowledge (PCK) in music and limited mastery experiences were identified as root causes of low teacher self-efficacy. Audiovisual media successfully addressed this knowledge gap by providing concrete and easily replicable pedagogical models while creating opportunities for teachers to gain mastery experiences through immediate positive feedback from students. This is particularly important for novice and non-specialist teachers who now possess a structured roadmap for teaching beyond their core competencies without feeling overwhelmed.

Therefore, this article not only demonstrates the effectiveness of a specific media tool but, more importantly, presents a contextual, practical, and affordable model for teacher professional development, especially for Islamic schools with limited resources. The success of this model lies

in its bottom-up approach—replacing complex theoretical training with actionable technology-based interventions that can be immediately implemented in classrooms, allowing teachers to experience tangible results that directly boost their confidence. Consequently, the integration of audiovisual media should be regarded as a core strategy in teacher professional development policies within Islamic elementary schools, rather than merely a supplementary component. Its structured implementation is poised to serve as a catalyst for broader improvements in music and character education quality, aligning with the holistic education mission embraced by Islamic schools.

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