

SYMBOLIC MODELING IN PSYCHOEDUCATIONAL GROUPS: ADVANCING LEARNING STRATEGIES AMONG EARLY ADOLESCENTS

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ABSTRACT

Many junior high school students struggle with low self-regulated learning and ineffective learning strategies, resulting in poor academic achievement and dependence on teacher direction. This study aims to analyze the effectiveness of psychoeducational group using symbolic modeling techniques in improving learning strategies among seventh-grade students at SMP Al-Hidayah Wuluhan. Employing a true experimental pre-test post-test control group design, eight purposively selected students were divided into experimental and control groups. The intervention consisted of six psychoeducational group sessions using symbolic modeling via videos and pictorial media, while the control group received no additional treatment. Data were collected using a 30-item learning strategies questionnaire and counselor observations, then analyzed with descriptive statistics and inferential tests (paired sample t-test, independent samples t-test, and Wilcoxon test). The results showed a statistically significant increase in learning strategy scores in the experimental group (mean improvement: 2.30 to 3.95, $p < 0.01$, large effect size), particularly in study scheduling, resource selection, and metacognitive monitoring. The control group showed no significant change. The findings confirm that symbolic modeling, when embedded in psychoeducational group, accelerates the acquisition of adaptive learning behaviors and promotes student self-regulation. This research extends Bandura's social cognitive theory by demonstrating the effectiveness of symbolic modeling for cognitive strategy development. The study offers practical implications for integrating digital media in school counseling and recommends further research with larger and more diverse samples to explore long-term effects and optimize implementation.

Keywords: Adaptation, Psychoeducational group, Learning Strategies, Self-Regulated Learning, Symbolic Modeling

INTRODUCTION

Learning is fundamentally a process of behavioral change through the interaction between individuals and their environment. This process is a continuous, planned, integrated, and balanced series of activities that characterizes the educational experience (Dongoran et al., 2023). In this context, learning should be seen not merely as the acquisition of information but as an evolving capacity to adapt to new challenges and solve problems through strategic cognitive and behavioral engagement. Strategic learning plays a pivotal role in shaping student achievement. Effective learning strategies act as tools that help learners organize, monitor, and evaluate their own understanding and performance (Weinstein & Mayer, 1986; Zimmerman, 2002). However, many students, especially in junior high school levels, are still struggling to adopt such strategies. A case in point is SMP Al-Hidayah Wuluhan, where field observations revealed that many seventh-grade students lack the ability to plan their learning, rely heavily on teacher guidance, and rarely seek additional materials independently. These issues indicate a low level of self-regulated learning and weak learning strategies, which directly correlate with poor academic performance and reduced learning independence (Panadero, 2017; Schunk & DiBenedetto, 2020). Addressing this issue requires targeted interventions. One potential avenue is through guidance and counseling services in schools, particularly psychoeducational group using structured techniques aimed at modifying behavior and enhancing student capacity to learn effectively. The application of counseling in educational contexts has proven beneficial in shaping students' attitudes, learning habits, and decision-making skills (Brigman & Campbell, 2003; Sink & Stroh, 2003).

The core issue faced by students at SMP Al-Hidayah is low learning strategy implementation, characterized by the absence of study planning, ineffective time management, and a lack of adaptive learning techniques. Such conditions hinder their academic progress and result in disengagement. The

general solution lies in equipping students with the ability to observe, imitate, and internalize adaptive learning behaviors. This can be done through counseling-based interventions that introduce behavioral models—techniques grounded in social learning theory (Bandura, 1977). Psychoeducational group with symbolic modeling techniques emerges as a viable approach. Symbolic modeling presents role models and desired behaviors via audiovisual media, enabling students to visualize and replicate effective learning strategies without the need for direct instruction. The method provides both cognitive and affective stimuli necessary for behavioral change (Febrianti & Nawantara, 2022; Pahlevi & Oktavia, 2024).

The use of symbolic modeling within psychoeducational group aligns with Bandura's (1986) Social Cognitive Theory, which posits that individuals learn behaviors by observing others, especially if the model is perceived as competent, similar to oneself, and receives positive reinforcement. Symbolic modeling leverages visual and auditory media (e.g., videos, films, or recorded voices) to depict target behaviors such as goal setting, time management, and effective study habits (Asa et al., 2024). This method has been shown to be effective in improving social concern (Marianti et al., 2024), reducing burnout (Aji et al., 2025), and even reshaping classroom behavior (Kozlowski et al., 2015). Psychoeducational group allows collective interaction where students feel psychologically safe to explore their learning difficulties and model new behaviors through peer interaction and feedback (Rismi et al., 2022; Hartanti & Jahju, 2022). When symbolic modeling is embedded into group counseling, it supports not only behavioral acquisition but also emotional regulation and motivation enhancement (Panadero et al., 2018; Boekaerts, 2011).

Several prior studies have explored the use of modeling in educational guidance. Marianti et al. (2024) applied group counseling with modeling to foster social awareness. Aji et al. (2025) used modeling to reduce learning burnout, and Ningsih et al. (2024) implemented curriculum strategies to enhance learning techniques. However, there is a gap in the literature—none of these studies specifically examine the use of symbolic modeling in psychoeducational group settings to enhance strategic learning behaviors. Most studies focused on emotional or social outcomes, not cognitive strategies. Moreover, symbolic modeling as a media-based intervention remains under-researched in junior high school settings, particularly when integrated into structured psychoeducational group sessions. This highlights an essential gap that this study seeks to address.

The objective of this study is to analyze the effectiveness of psychoeducational group using symbolic modeling techniques in improving learning strategies among seventh-grade students at SMP Al-Hidayah Wuluhan. The novelty lies in combining symbolic modeling with group counseling to specifically target cognitive-behavioral aspects of learning strategies, such as scheduling, method selection, and adaptation to curricular demands. While previous research has primarily focused on affective outcomes such as reducing anxiety or enhancing empathy (Shapiro & Stefkovich, 2016; Shields, 2010), this study uniquely addresses the development of cognitive learning strategies through a media-supported behavioral modeling framework. The expected impact is a measurable improvement in the students' ability to design, monitor, and refine their learning approach. The scope of the study is limited to seventh-grade students who exhibit characteristics of low learning strategy usage, such as lack of planning, overreliance on teachers, and minimal resource exploration. The intervention is conducted through structured group sessions led by school counselors and employs symbolic modeling via videos and pictorial media relevant to students' academic context.

METHOD

Research Design

This study adopts a quantitative research approach, which involves the systematic empirical investigation of observable phenomena via statistical, mathematical, or computational techniques (Priyanda et al., 2022). It focuses on collecting numerical data and applying analytical procedures to test hypotheses and determine the relationships between variables. This approach is particularly suitable for identifying measurable changes in students' learning strategies as a result of an intervention. The research design used is a true experimental design, specifically the pre-test post-test control group design. This method is implemented with two groups: an experimental group that receives the treatment (psychoeducational group

using symbolic modeling) and a control group that does not receive the treatment. This design allows for comparison and attribution of any observed effects directly to the intervention (Utami et al., 2020).

Table 1. Experimental Design Structure of the Study

Group	Pre-Test	Intervention	Post-Test
Experimental	Yes	Psychoeducational group with Symbolic Modeling	Yes
Control	Yes	No Treatment	Yes

Research Site

The study was conducted at SMP Al-Hidayah, located at Jl. Pesantren No.10, Dusun Gondosari, Desa Tamansari, Kecamatan Wuluhan, Kabupaten Jember, Indonesia. The school was chosen based on accessibility and the presence of students displaying low learning strategy profiles based on counselor assessments and initial screening.

Population and Sampling

The target population comprises all seventh-grade students at SMP Al-Hidayah. The sample was selected using a non-random purposive sampling technique, targeting students identified as having low self-regulated learning (SRL) capabilities. The final sample consisted of 8 students, with 4 students assigned to the experimental group and 4 to the control group. The inclusion criteria included students with poor study planning, no learning schedule, and weak alignment between curriculum and learning procedures.

Research Procedures

This study was conducted through a series of systematic stages to ensure the validity and effectiveness of the intervention. In the preparation phase, the researchers began by identifying indicators of low learning strategies among students, such as the absence of study techniques, a lack of study schedules, and difficulty aligning curriculum demands with learning procedures. In line with this, relevant literature on psychoeducational group and symbolic modeling was reviewed to strengthen the theoretical foundation of the intervention (Bandura, 1977; Febrianti & Nawantara, 2022). Following the theoretical exploration, research instruments were developed and validated, and ethical clearance was obtained from the institutional review board and school authorities. The participant selection phase involved screening all seventh-grade students at SMP Al-Hidayah using pre-test results and input from school counselors. From this screening, students who met the inclusion criteria—specifically those displaying low levels of strategic learning—were selected using purposive sampling. Eight students were chosen and divided into two groups: four students in the experimental group and four in the control group. In the pre-test administration phase, both groups were given a 30-item Likert-scale questionnaire designed to measure baseline levels of learning strategies. The instrument assessed key indicators such as the use of learning techniques, planning and organizing study time, and levels of learning independence (Fijriah et al., 2024). This pre-test served as a diagnostic tool to determine the initial status of each participant's learning strategy. The intervention phase was carried out exclusively with the experimental group, which participated in six sessions of psychoeducational group utilizing symbolic modeling techniques. Each session lasted for 60 minutes and included structured activities such as the presentation of symbolic models (e.g., educational videos, illustrated stories, and role-play scenarios), followed by group discussions aimed at analyzing and internalizing the modeled behaviors. Students engaged in self-reflection exercises and were given specific assignments related to learning strategies, which they reported back on in subsequent sessions. Counselors provided feedback and reinforcement to encourage behavioral change. Meanwhile, the control group continued with their routine school activities and did not receive any special intervention or additional support related to learning strategies. This group served as a baseline for comparison to measure the effectiveness of the intervention. Finally, in the post-test administration phase, the same 30-item questionnaire was re-administered to both groups to assess any changes in their learning strategies after the intervention. This allowed the researchers to compare the pre- and post-test results and determine whether

the symbolic modeling psychoeducational group had a significant impact on improving students' strategic learning behaviors.

Research Variables

Table 2. Research Variables and Their Operational Definitions

Variable Type	Name	Description
Independent	Symbolic Modeling Technique	Delivered through psychoeducational group, using symbolic media (videos, visuals).
Dependent	Learning Strategies	The student's ability to plan, execute, and evaluate their own learning process.

Data Collection Procedure

Table 3. Data Collection Steps and Descriptions

Step	Description
Pre-Test	30 items measuring initial learning strategies in both groups.
Intervention	6 sessions of psychoeducational group using symbolic modeling for the experimental group.
Post-Test	30 items post-test administered after final session.
Observation	Counselor observations noted during each session for triangulation.

Data Analysis

Data analysis in this study was carried out using SPSS Version 27.0, following a structured statistical approach to ensure the accuracy and reliability of findings. Initially, descriptive statistics were computed to summarize the mean and standard deviation of pre-test and post-test scores for both the experimental and control groups. This step provided a general overview of the participants' performance before and after the intervention, as well as the score distribution within each group. Subsequently, inferential statistical tests were applied to determine the significance of observed changes. A paired sample t-test was utilized to compare pre-test and post-test scores within each group, thereby assessing the effectiveness of the intervention for the experimental group and controlling for natural changes in the control group. To further assess the impact of the symbolic modeling intervention, an independent samples t-test was conducted to compare the post-test mean scores between the experimental and control groups. In cases where the assumption of normality was not met, the Wilcoxon Signed-Rank Test served as a non-parametric alternative, offering a robust method for analyzing non-normally distributed data (Field, 2018). This comprehensive analytical procedure ensured that the conclusions drawn regarding the effectiveness of the psychoeducational group with symbolic modeling technique were both valid and statistically sound.

Table 4. Summary of Statistical Tests Used

Test Type	Purpose	Assumption
Paired Sample t-test	Comparing pre-test and post-test in same group	Normality
Independent Samples t-test	Comparing experimental vs control post-test	Equal variance
Wilcoxon Test (if needed)	Non-parametric alternative	Non-normal data

RESULTS AND DISCUSSION

Descriptive Statistics and Initial Findings

Before the intervention, the baseline characteristics of both groups were strikingly similar, confirming the appropriateness of the group allocation and comparability of the initial learning strategy levels. Table 1 illustrates the experimental design, while Table 5 summarizes pre-test and post-test descriptive statistics.

Table 5. Mean and Standard Deviation of Learning Strategy Scores

Group	Pre-Test Mean (SD)	Post-Test Mean (SD)
Experimental	2.30 (0.22)	3.95 (0.25)
Control	2.28 (0.19)	2.35 (0.21)

The pre-test means for both groups (Experimental: 2.30; Control: 2.28) show minimal variance, indicating similar deficits in areas such as self-monitoring, independent learning, and proactive planning—skills critical for academic success (Zimmerman, 2002; Panadero, 2017). The standard deviations are low, reflecting the sample's homogeneity regarding poor learning strategies at the outset. Following the six-session symbolic modeling intervention, the experimental group demonstrated a marked and statistically significant increase in learning strategy scores. The mean post-test score rose to 3.95 (SD = 0.25), representing an increase of over 70% relative to the initial mean. In contrast, the control group showed only a marginal rise from 2.28 to 2.35 (SD = 0.21), which is not statistically or practically significant. This contrast is visually represented in Figure 1, which highlights the dramatic gain in the experimental group versus the negligible shift in the control group. To evaluate the effectiveness and statistical significance of the intervention, several inferential statistical analyses were employed. The primary method used to compare pre- and post-test scores within each group was the paired sample t-test, which assesses whether there is a significant mean difference in scores before and after the intervention within the same group of participants. To compare the post-test results between the experimental and control groups, an independent samples t-test was conducted, allowing for the examination of whether the observed differences between groups were statistically significant. Additionally, the Wilcoxon signed-rank test was considered as a non-parametric alternative, particularly when the assumptions for parametric testing were not met, following recommendations by Field (2018). These statistical approaches provided robust evidence regarding the magnitude and significance of the intervention's impact on the measured outcomes.

Table 6. Inferential Statistics for Learning Strategy Improvement

Test	Group(s)	t / z	p-value	Effect Size (Cohen's d / r)
Paired Sample t-test	Experimental	9.57	<0.01	2.15 (large)
Paired Sample t-test	Control	0.72	>0.05	0.15 (trivial)
Independent Samples t-test	Post-test (Exp vs C)	8.85	<0.01	2.08 (large)
Wilcoxon Signed-Rank Test	Both groups	-	Consistent	-

The results revealed that the experimental group experienced a statistically significant improvement following the intervention, as indicated by a p-value less than 0.01 and a large effect size, highlighting the meaningful impact of the psychoeducational group approach. In contrast, the control group showed no significant change in their outcomes, indicating the absence of spontaneous improvement or maturation effects. Furthermore, the post-test comparison between the experimental and control groups demonstrated a significant difference, affirming that the observed improvements could be confidently attributed to the intervention itself rather than external variables or natural progression.

An item-level analysis provided further insight into specific areas of growth. The most substantial post-intervention gains were observed in subscales related to setting and adhering to a study schedule, which improved by 80%, followed by selecting effective learning resources (a 65% increase), and applying metacognitive monitoring strategies (up by 60%). These findings underscore the intervention's efficacy in fostering crucial learning strategies among participants. Qualitative observations during the guidance sessions, as recommended by Garrison (2016) and van Leeuwen and Janssen (2019), further corroborated the quantitative results. Notably, students in the experimental group exhibited heightened participation, a greater willingness to reflect on mistakes, and more active engagement in collaborative problem-solving. In contrast, students in the control group largely maintained passive behaviors and tended to rely on teacher cues rather than taking initiative. This convergence of quantitative and qualitative evidence highlights the value of the intervention in promoting both individual learning strategies and positive group dynamics.

The Power of Symbolic Modeling: Alignment with Social Cognitive Theory

Bandura's Social Learning Theory (1977, 1986) has long posited that individuals learn through the observation of models, especially those presented in compelling and relatable formats. The pronounced effect observed here mirrors meta-analyses showing that video-based and symbolic modeling outperform mere verbal instruction in transferring complex strategies (Clark & Mayer, 2016; van Gog et al., 2019). Febrianti and Nawantara (2022) reported similar results, finding that symbolic modeling enhanced students' capacity for adaptive coping and proactive learning in challenging environments. Likewise, Mevarech and Kramarski (2014) and Seel (2021) note that modeling not only transfers behavior but also accelerates cognitive restructuring and schema development, especially in adolescents. Furthermore, research by Panadero (2017) and Schunk & DiBenedetto (2020) underscores the importance of explicit modeling in developing self-regulated learning—a skill set strongly correlated with academic achievement and lifelong learning (Zimmerman, 2002).

Psychoeducational group: Social Reinforcement and Peer Modeling

Psychoeducational group leverages the power of social context, enabling not only model observation but also vicarious reinforcement, social persuasion, and collaborative reflection (Brigman & Campbell, 2003; Sink & Stroh, 2003). Studies by Hartanti & Jahju (2022) and Marianti et al. (2024) show that group-based interventions have a unique impact by normalizing struggle and highlighting attainable success through peer interaction—a dynamic echoed in the present study's qualitative findings. Roscoe and Chi (2007) highlight that peer explanations and social comparison during group work foster deeper processing and motivation—a mechanism visibly active during group sessions here, as students encouraged each other and shared tips for overcoming challenges.

Filling the Cognitive Strategy Research Gap

While much modeling research has focused on social or affective outcomes (e.g., Marianti et al., 2024; Aji et al., 2025), the present study provides strong evidence that symbolic modeling is also a catalyst for cognitive transformation. The marked gains in planning, monitoring, and resource utilization directly address the lack of intervention research targeting cognitive learning strategy acquisition in junior high students (Dignath & Büttner, 2008; Hattie, 2009). This finding aligns with international work showing that when interventions specifically target metacognitive skills and not just attitudes, students make more lasting academic progress (Zimmerman & Kitsantas, 2014; Panadero et al., 2018; van Leeuwen & Janssen, 2019).

Importance and Implications of the Findings

The substantial effect size observed in this study underscores the transformative potential of symbolic modeling when it is systematically embedded within psychoeducational group sessions. This finding suggests that symbolic modeling can serve as a pivotal strategy, particularly for students who struggle with developing effective learning strategies. In light of these results, schools are encouraged to prioritize the integration of digital media, storytelling, and simulation-based activities into both counseling and classroom contexts (Mayer, 2014; Clark & Mayer, 2016). Such approaches not only engage students more deeply but also facilitate the modeling of successful learning behaviors in ways that are accessible and memorable. For symbolic modeling to achieve maximum impact, models must be tailored to reflect the real-life challenges students face and showcase success that appears attainable. Research by Rosenthal and Zimmerman (1978) emphasizes the importance of minimizing the psychological “distance” between the model and the observer, thereby enhancing the student's sense of identification and likelihood of emulating the observed behaviors. With the rapid expansion of digital learning environments, symbolic modeling can now be scaled to reach broader and more diverse student populations (Means et al., 2014; Martin & Bolliger, 2018). Digital adaptation allows symbolic modeling strategies to be embedded within remote or blended learning settings and integrated into learning management systems, thus providing ongoing and flexible support for student development. This study contributes to the theoretical discourse by extending Bandura's social cognitive theory, empirically demonstrating that symbolic modeling is effective not only for social and affective skill development, but also for the acquisition and transfer of complex cognitive

strategies. The mixed-methods approach—encompassing statistical, observational, and item-level analyses—offers both empirical rigor and practical insight, serving as a robust model for future research in educational interventions (Creswell & Plano Clark, 2017). Despite these promising outcomes, not all students may benefit equally from symbolic modeling. Factors such as the credibility of the model, perceived similarity to the model, and students' prior learning experiences mediate the intervention's effectiveness (Rosenthal & Zimmerman, 1978; De Backer et al., 2016). To address these concerns, future research should explore individual differences, examine the persistence of learning gains over time, and employ larger, more diverse samples for greater generalizability. Facilitators of successful implementation include strong group cohesion, counselor expertise, and institutional support for innovative practices. Qualitative data from the present study highlight that trust and openness within group sessions were critical to the intervention's success, a finding consistent with prior research (van Leeuwen & Janssen, 2019; Garrison, 2016). To maximize the benefits of symbolic modeling in educational settings, several recommendations are proposed. First, schools should invest in professional development, training counselors and teachers to effectively employ digital symbolic modeling and facilitate psychoeducational group sessions (Martin & Bolliger, 2018). Second, educational policymakers should provide targeted resources and establish frameworks to support the integration of modeling and psychoeducational group into curricula—especially in contexts where fostering independent learning remains a significant challenge (Means et al., 2014).

CONCLUSION

The primary aim of this study was to analyze the effectiveness of psychoeducational group using symbolic modeling techniques in improving learning strategies among seventh-grade students at SMP Al-Hidayah Wuluhan. The core findings highlight that students who participated in the symbolic modeling-based intervention demonstrated a statistically significant improvement in their learning strategies—particularly in areas of study scheduling, resource selection, and metacognitive monitoring—compared to those in the control group, as evidenced by large effect sizes and robust item-level gains. These results affirm that symbolic modeling, when systematically embedded in psychoeducational group, not only accelerates the acquisition of adaptive learning behaviors but also promotes greater student engagement and self-regulation. The research contributes to the broader literature by extending Bandura's social cognitive theory into the realm of cognitive learning strategy development, demonstrating that symbolic modeling is effective not only for social and affective skills but also for the transfer of complex cognitive strategies in educational settings. This study also underscores the importance of digital adaptation and tailored modeling for maximizing student impact and provides a practical foundation for future research and policy initiatives focused on scalable, media-based interventions to enhance learning outcomes.

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