

Enhancing Self-Regulated Learning in a Borderline Student: Case-Based Evidence from a Self-Management Approach

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Abstract

Slow learners are often overlooked in educational systems, despite their increased vulnerability to academic underperformance, low motivation, and poor self-regulation. Homework performance, as an essential component of independent learning, is particularly problematic among this population due to cognitive limitations and unsupportive home environments. This study aimed to explore the psychological profile and academic challenges of an Indonesian adolescent with slow learner characteristics and to evaluate the effectiveness of a structured self-management intervention in improving his homework behavior. A single-case qualitative design was employed. Data were collected through psychological assessments (short-form intelligence test, projective drawings), behavioral observations, and interviews with the student, parent, and teacher. The intervention included five sessions focusing on self-monitoring, goal-setting, and parental psychoeducation over a three-week period. Pre- and post-intervention data were compared to evaluate changes in task behavior and self-efficacy. The student initially showed low homework completion (30–40%), avoidance behavior, and emotional frustration. Post-intervention results indicated significant improvement in task initiation, attention span, and completion rate (80–90%). The student demonstrated greater confidence and independence, while the parent and teacher reported increased engagement and self-regulation. The gains were sustained across subjects and home settings.

1. Introduction

Learning is a dynamic process that requires not only cognitive abilities but also emotional regulation, environmental support, and behavioral consistency. Among school-aged children, successful learning often hinges on the development of executive functions such as time management, attention control, and organizational skills (Fatzinger, 2025). However, a significant number of students fail to meet age-appropriate academic demands due to developmental limitations commonly referred to as “slow learner” characteristics, a population often underserved in both research and educational practice (Niazov et al., 2022; Wallach, 2010).

Slow learners are defined as students who demonstrate borderline intellectual functioning (IQ between 70–85) and consistently underperform in academic tasks despite not qualifying for special education (Shaw, 2008). These individuals often struggle with abstraction, problem-solving, and generalizing learned concepts. Although they may acquire academic skills, they require more time, repetition, and environmental adaptation than their typically developing peers (Foster, 1959). Concomitantly, slow learners are at elevated risk for academic disengagement, low self-efficacy, and socio-emotional maladjustment if their needs are not properly addressed (Tran et al., 2020).

One of the critical areas of concern in slow learners is homework performance, which represents the student’s ability to manage, organize, and complete academic tasks outside of the school setting (Pan et al., 2025). Homework behavior is highly influenced by various factors, including cognitive capacity, home environment, motivational dynamics, and parental involvement (Falch, 2022; Grodner & Rupp, 2013). Poor homework performance can compound learning difficulties, reduce academic achievement, and contribute to school dropout risks (Chen et al., 2024). Despite growing international attention to this issue, studies that

investigate how to improve homework performance among slow learners, particularly through structured psychological support remain limited in number.

In Indonesia, where socio-economic disparity remains a substantial barrier to quality education, children from lower-income families often lack access to academic resources and individualized support. Moreover, limited parental supervision and unstructured home environments may exacerbate the challenges faced by students with learning difficulties (Triani Nani & Amir, 2013). While inclusive education policies have been introduced nationally, empirical studies that examine school-based psychological interventions tailored to the needs of slow learners are still scarce in the Indonesian context (Rohman, 2022). This underscores a significant research gap, especially in developing evidence-based strategies that integrate both school and family components to support students' academic regulation.

This study explores the psychological characteristics and academic challenges of an Indonesian adolescent identified as a slow learner, with specific emphasis on his low homework performance. Utilizing a multi-method psychological assessment and a structured self-management intervention, this single-case design aims to demonstrate how cognitive, emotional, and environmental factors interact in shaping academic behavior. The study also evaluates the efficacy of a behaviorally based intervention incorporating self-monitoring, goal-setting, and parental psychoeducation to improve homework performance. By integrating theoretical and practical approaches, this research seeks to inform best practices for school psychologists, educators, and policymakers in supporting adolescents with learning difficulties in diverse educational contexts.

2. Method

This study employed a qualitative single-subject case study design aimed at gaining in-depth insights into the psychological dynamics and behavioral patterns of an adolescent classified as a slow learner with poor homework performance. Case study methodology allows for a comprehensive understanding of contextual, cognitive, emotional, and behavioral variables affecting the subject (Hollweck, 2015). The intervention followed a pre-post design with descriptive evaluation, allowing comparison of behavioral changes before and after treatment implementation.

2.1. Participant and Case Description

The participant was a 13-year-old male student attending a public junior high school in Jambi, Indonesia. He was referred by the school counselor due to persistent academic underperformance, particularly in completing homework, and difficulty staying focused on school tasks. Psychological assessments revealed that the student had a borderline IQ (between 70–85), with evident limitations in abstraction, verbal reasoning, and planning skills. Despite receiving regular classroom instruction, the student struggled to meet academic expectations and often failed to submit homework assignments. He exhibited strong dependence on external prompting, limited task initiation, and a tendency to give up easily when faced with moderate academic demands.

Further exploration indicated that the participant came from a low-income family with limited parental supervision. The home environment lacked structured study routines, and his mother, who acted as the primary caregiver reported difficulties in managing her son's learning behaviors due to her own limited educational background and time constraints. These environmental and socio-cultural factors were considered integral to the subject's academic difficulties.

2.2. Assessment Tools and Data Collection

Data for this study were collected using a multi-method approach that combined psychometric testing, behavioral observations, interviews, and documentation. To assess general cognitive ability, a short form of the Wechsler-based intelligence test (Intelligenz Struktur Test, or IST) was administered. Emotional and personality dynamics were explored through the use of projective techniques, specifically the House-Tree-Person (HTP) and Draw-A-Person (DAP) tests. Behavioral observations were conducted in both school and home settings, focusing on the amount of time spent on tasks, the level of independence demonstrated, and any observable patterns of avoidance. Semi-structured interviews were carried out with the student, his mother, and his homeroom teacher to gather qualitative insights into his academic history, behavioral responses to homework, and emotional reactions. Additionally, a daily homework log was utilized to record the frequency and quality of homework completion before and after the intervention. This comprehensive approach allowed for a more holistic understanding of the student's academic and psychological profile.

2.3. Procedure

The study was carried out over a six-week period and structured into three sequential phases. During the assessment phase (Weeks 1–2), initial evaluations were conducted to identify the student's cognitive profile, academic difficulties, and family background. These assessments included interviews and behavioral observations, which informed a comprehensive case formulation and served as the basis for designing a tailored

intervention plan. The intervention phase (Weeks 3–5) involved the implementation of a structured self-management program comprising three core components. First, the student engaged in self-monitoring by using simple checklists to track daily homework behavior. Second, goal-setting and reinforcement strategies were introduced through collaborative goal formulation and the provision of verbal praise and token-based rewards for successful task completion. Third, the student's mother participated in two psychoeducational sessions aimed at enhancing her ability to provide structured learning support and consistent monitoring at home. The intervention was delivered in a school counseling setting by a licensed psychologist, with additional follow-up visits and regular communication with the classroom teacher to ensure continuity and consistency. In the evaluation phase (Week 6), post-intervention data were collected using the same tools as in the initial assessment to allow comparison of behavioral changes, self-efficacy, and task completion. Qualitative reflections were also gathered from the student, mother, and teacher to assess perceived progress and sustainability of the intervention outcomes.

All study procedures adhered to ethical standards established by the Indonesian Psychological Association and the American Psychological Association (APA, 2017), including obtaining informed consent from the student's parent prior to data collection and implementation.

2.4. Intervention Framework

The intervention was grounded in principles of self-management theory and social cognitive theory, particularly focusing on self-regulation components such as self-monitoring, goal setting, reinforcement, and feedback (Bandura, 1997; Zimmerman & Schunk, 2011a). The structure followed the "Self-Management Cycle" which includes: (1) identifying the target behavior, (2) tracking behavior through monitoring tools, (3) setting realistic and measurable goals, and (4) reinforcing progress through extrinsic and intrinsic rewards (McClelland et al., 2017). Each intervention session followed a consistent structure, which is described in the table below.

Table 1. Intervention Session Structure

Step	Activity
Session 1	Psychoeducation on the importance of homework, building motivation, and introducing the self-monitoring checklist.
Session 2	Practicing self-recording and setting short-term academic goals.
Session 3	Evaluating performance, identifying obstacles, and reinforcing progress.
Session 4	Parental psychoeducation: Training the caregiver to support daily routines, praise positive behaviors, and provide minimal but consistent supervision.
Session 5	Consolidation, reflection on progress, and planning for sustainability.

The reinforcement system used in this case was token-based, where the student received visual stars on a progress board for completed tasks, which could be exchanged for agreed-upon privileges (e.g., extra playtime). This aligns with operant conditioning techniques and has been validated in prior behavioral studies (Watson et al., 2021).

2.5. Data Analysis

Data were analyzed using a qualitative descriptive approach and visual behavior tracking to capture changes in student behavior over time. Homework completion rates and task engagement were compared between baseline and post-intervention periods using checklists and daily logs, highlighting shifts in frequency, duration, and independence. Interview transcripts from the student, mother, and teacher were thematically coded to identify patterns related to motivation, emotional response, and environmental support. To enhance credibility, data from observations, logs, and interviews were triangulated to validate emerging themes. Visual graphs were also used to illustrate trends in homework completion across five weeks, showing progression and behavioral stabilization.

All procedures followed ethical standards on consent and confidentiality (APA, 2017). The integration of behavioral, perceptual, and contextual data enabled a comprehensive synthesis, forming the basis for interpreting the intervention's overall impact.

3. Results and Discussion

The psychological assessment confirmed that the participant met the profile of a "slow learner," with an estimated IQ score in the borderline range (75–80), indicating limitations in abstract reasoning and conceptual understanding. Projective drawings (HTP and DAP) revealed underlying feelings of insecurity, dependency, and low self-confidence, consistent with prior findings on emotional correlates of academic underachievement (Fong et al., 2023a). The participant demonstrated significant difficulty initiating tasks independently and often required verbal prompts and external scaffolding.

Baseline observations revealed that the student completed only 30–40% of assigned homework over two weeks, with minimal time-on-task behavior and frequent avoidance. Interviews with the mother and teacher confirmed inconsistent study habits and lack of reinforcement at home. His emotional response to homework was marked by frustration, helplessness, and occasional somatic complaints such as headaches and fatigue.

Following the implementation of the self-management intervention, notable improvements were observed. Homework completion increased to an average of 80–90% across three consecutive weeks. The student demonstrated greater task initiation, longer attention span (up to 25–30 minutes), and began using self-prompting strategies introduced during the intervention (e.g., checklists and self-verbalization). Qualitative feedback from the teacher indicated a more proactive attitude, and the mother reported greater independence in her son's homework habits. Furthermore, the student expressed higher confidence and a sense of accomplishment during the post-intervention interview.

Table 2. Homework Completion and Time-on-Task Behavior Before and After Intervention

Period	Homework Completion (%)	Avg. Time-on-Task (Minutes)
Week 1	36%	10 minutes
Week 2	39%	12 minutes
Week 3	72%	22 minutes
Week 4	87%	26 minutes
Week 5	89%	29 minutes

These behavioral changes were maintained across multiple academic subjects and settings, suggesting generalization of learned self-regulatory strategies. Importantly, the student began to anticipate reinforcement intrinsically, a key marker of internalized motivation (Fong et al., 2023b).

The findings of this study provide preliminary evidence for the effectiveness of behaviorally grounded, context-sensitive interventions in addressing homework noncompliance among adolescents with learning difficulties.

3.1. Intervention Effectiveness and Theoretical Implications

The observed improvement aligns with principles of self-regulated learning (SRL), particularly the importance of metacognitive awareness, motivation, and behavioral control (Zimmerman & Schunk, 2011b). Through self-monitoring and reinforcement, the student internalized goal-setting behaviors and developed greater task persistence, echoing the role of self-efficacy as a mediator of learning (Bandura, 1997; Cleary & Zimmerman, 2004).

The increase in time-on-task and reduction of avoidance behaviors reflect strengthened executive functioning, specifically task initiation and sustained attention, areas commonly underdeveloped in slow learners (Ahmad et al., 2015). Unlike purely academic remediation, the intervention targeted process over content, a strategy increasingly recommended in intervention science (McClelland et al., 2017).

3.2. Role of Environmental and Parental Support

Parental psychoeducation was a critical support factor. Providing the mother with behavior reinforcement strategies (e.g., praise and structured routines) helped to create a more supportive home learning environment, consistent with ecological models of child development (Bronfenbrenner, 1994; Xue, 2023). The success of this home-school collaboration mirrors prior findings that culturally responsive, brief parental interventions can produce measurable outcomes (Wyatt Kaminski et al., 2008)

3.3. Emotional and Motivational Shifts

The participant's increased verbal expressions of confidence and willingness to complete tasks independently reflected improvement in academic self-concept, a predictor of sustained engagement (Wigfield & Eccles, 2000). These changes, combined with reduced frustration and more positive coping, suggest an emerging mastery orientation. The use of positive reinforcement paired with self-monitoring may have initiated a shift from extrinsic to more intrinsic motivation, a process described by Deci & Ryan, (2000a).

3.4. Implications for Inclusive Education Practice

This case highlights the potential of low-cost, behaviorally-based interventions in supporting students with learning difficulties in under-resourced schools. Delivered by a school psychologist with limited materials and supported by family involvement, the framework is suitable for Tier 2 implementation within the MTSS model (Alter, 2020). While these practical results are encouraging, it is important to distinguish between empirical findings, such as observed gains in task initiation and completion, and speculative recommendations,

such as large-scale curricular integration or policy adoption. The latter remains suggestive and should be further examined in broader studies with larger samples.

3.5. Limitation

This study is limited by its single-subject design, which constrains the generalizability of the findings. Additionally, data collection relied heavily on qualitative methods and informal behavior tracking rather than standardized executive function scales. Long-term follow-up was not conducted, leaving sustainability of behavioral gains unmeasured. Future research should employ mixed-method designs, incorporate validated instruments, and examine scalability of similar interventions in diverse school populations.

4. Conclusion

This case study suggests the potential efficacy of a structured self-management intervention in improving academic behavior among adolescents with learning difficulties, particularly in the domain of homework performance. By integrating behavioral strategies such as self-monitoring, goal-setting, and parental psychoeducation, the intervention addressed not only the student's cognitive limitations but also his motivational and emotional barriers. The observed improvements both behavioral and affective reinforce the importance of holistic, individualized approaches for slow learners within inclusive educational settings. Practically, this study highlights the value of low-cost, culturally adaptable interventions that can be implemented by school psychologists and teachers with minimal resources. The role of family support particularly through psychoeducational involvement, emerges as a critical factor in sustaining academic gains and generalizing learning behaviors across settings. Despite its limitations as a single-case design, the study acknowledges the lack of a control group and absence of longitudinal follow-up, which limit the generalizability and sustainability assessment of outcomes. Nevertheless, the findings offer targeted implications for inclusive education policy and school-based intervention programs, particularly in under-resourced communities. Educational stakeholders should consider integrating self-management modules into support services for at-risk students in such settings. Future research should examine scalable behavioral interventions enhanced by specific digital tools, such as self-monitoring apps or gamified goal trackers, and explore combinations with peer or teacher mediation. These models may help optimize reach, consistency, and engagement in low-support contexts. In conclusion, empowering adolescents with tools to regulate behavior, reflect on progress, and receive consistent guidance from both family and school has the potential to improve their academic paths significantly. As demonstrated in this case, attending to the unmet needs of slow learners is not only feasible, but reflects an ethical commitment to translating research into inclusive, equitable practices.

Author Contributions

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