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Effectiveness of an Intervention Strategy for Behavior Modification Among Non-Graded Slow Readers in a Special Education Center

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behavior modification, non-graded slow readers, reading development, intervention strategy, special education

Abstract. Ensuring that all learners thrive within an inclusive education system requires intervention strategies that address both academic and behavioral challenges, particularly for Non-Graded Slow Readers who struggle without formal diagnoses or specialized support. Guided by this need, the present research evaluated the effectiveness of a positive reinforcement intervention in modifying behavior and enhancing reading development among two (2) Non-Graded Slow Readers in a Special Education Center, using teacher-made assessments, structured behavioral observations, and reading performance measures to compare outcomes before and after the intervention. Results revealed marked behavioral improvement, with aggressive behavior decreasing from a mean of 0.67 (Sometimes Aggressive) to 0.11 (Not Aggressive) and prosocial behavior increasing from 1.75 (Often Prosocial) to 2.00 (Often Prosocial), while reading development showed slight progress from a mean of 1.00 (Slow Reader) to 1.05 (Mostly Slow Reader). Teachers rated the intervention's effectiveness very highly (mean = 5.83), and correlation analyses indicated a moderate negative relationship between child behavior and reading development before implementation, as well as a strong positive relationship between behavior improvement and perceived effectiveness. Consistent with Operant Conditioning principles, the findings confirm that reinforcing desirable behavior reduced aggressive responses and stabilized prosocial actions, demonstrating that rewarded behaviors are more likely to recur. The gradual improvement in reading development suggests that better behavior can create conditions more conducive to academic engagement, and stakeholders recognized meaningful changes in the learners' conduct and responsiveness, reinforcing the quantitative results. These outcomes demonstrate that positive reinforcement is an effective strategy for shaping adaptive behavior patterns and supporting emerging academic readiness among Non-Graded Slow Readers, highlighting its value within inclusive educational environments.

Introduction

Challenges and Interventions for Slow Readers

Reading is a fundamental skill in early education, playing a major role in a child's academic achievement. For non-graded pupils, reading development is particularly critical, as it directly affects their overall academic progress. However, many students face reading difficulties, especially in the early stages, that can negatively impact their entire educational journey. Early and effective interventions are therefore essential to address these challenges and improve students' reading abilities.

Inclusive Education Frameworks

Inclusive education frameworks emphasize the right of every learner to quality education, regardless of ability. Laws such as RA 11650 and the global commitment to the Sustainable Development Goals (SDG 4: Quality Education) reinforce the

need for accessible, effective, and inclusive teaching strategies for all learners, especially those with special educational needs.

Challenges Faced by Slow Readers

Non-graded slow readers in special education settings often face academic, behavioral, and socio-emotional difficulties that interfere with both learning and classroom functioning. These learners typically read significantly below their developmental level, which limits their ability to understand connected text, follow instructions, and complete graded tasks, resulting in chronic academic underperformance (Sampang, 2021). In many special education centers, slow readers remain non-graded for extended periods, which can further entrench gaps in fluency and comprehension while reducing their exposure to structured reading routines (Casingal et al., 2025).

Behaviorally, these students may display avoidance, inattention, or resistance during reading activities, especially when tasks repeatedly exceed their capacity. A growing body of literature on struggling readers highlights how repeated experiences of failure and public correction can lead to learned helplessness, low motivation, and off-task behaviors that resemble noncompliance rather than willful defiance (Castro et al., 2025). In special education settings, teachers may mistakenly interpret these behaviors as pure discipline issues rather than reading-related stress, which can delay the implementation of explicit, behavior-supporting intervention strategies (Endo, 2024).

Socially, non-graded slow readers often struggle to participate in group discussions, decode social language in texts, or keep pace with peers during oral reading activities. Recent studies indicate that students who read far below grade level are at higher risk of social isolation, ridicule, and bullying, all of which can trigger anxiety and defensive behaviors in the classroom (Castro et al., 2025). Within a special education center, these socio-emotional vulnerabilities may intensify when behavior modification techniques are applied inconsistently or when reading interventions are not explicitly paired with positive reinforcement systems (SLP Now, 2024).

Reading Interventions and Their Impact

Effective interventions are essential for addressing the challenges outlined above and for improving the reading abilities of slow readers. One widely used intervention tool in the Philippines is the Philippine Informal Reading Inventory (Phil-IRI), an assessment designed to detect reading difficulties and track progress. In one study, 26 non-readers were identified when the Phil-IRI was administered in July. After a structured reading program, only six students remained non-readers, demonstrating significant improvements in reading abilities, self-esteem, and motivation. This highlights the importance of early intervention and sustained support in overcoming reading difficulties and improving academic performance.

Şahin and Özçelik (2025) conducted a study in which two learners with mild intellectual disabilities participated in a reading intervention program designed to develop their reading skills and comprehension. The intervention focused on improving word recognition, reading fluency, and the understanding of simple texts through consistent practice and teacher support. Progress was closely monitored throughout the program to identify improvements and address individual learning needs. The results demonstrated that even with only two participants, the intervention had a positive and noticeable effect on reading performance and overall confidence in reading.

Integrated Instruction: Fluency and Comprehension

A longitudinal study by Kim et al. (2021) identified a bidirectional relationship between fluency and comprehension, indicating that improvement in one area supports growth in the other over time. This finding underscores the need for integrated reading instruction that simultaneously addresses both fluency and comprehension in order to improve overall reading proficiency.

Behavioral Interventions: Positive Reinforcement

Behavioral interventions also play a significant role in supporting slow readers. Positive reinforcement, as part of B. F. Skinner's Operant Conditioning Theory, has been shown to improve academic performance and encourage positive behavior. Ghafar (2023) emphasized how techniques such as praise, rewards, and guided feedback motivate students and increase their participation in learning activities.

According to Peffer (2023), incorporating positive reinforcement into reading instruction can reduce disruptive behavior while simultaneously improving students' reading skills. Success in reading helps students feel more confident and motivated, making them more focused and engaged in class.

This is supported by findings from a study in which structured reading interventions integrated with positive reinforcement led to decreased disruptive behaviors and increased student engagement (Peffer, 2023). Learners who received verbal praise and incentives during phonics tasks showed higher motivation and fewer distractions — a finding that supports Peffer's (2023) claim that achievement in reading directly enhances students' confidence and classroom attentiveness.

Beyond verbal praise, Peffer (2023) recommends the use of tangible rewards such as tokens or progress charts, which research indicates help sustain student attention during reading activities. Her study also examined small-group reading circles and technology-assisted tools, revealing significant reductions in defiant behavior and improved participation, particularly among students with special needs. Taken together, these findings confirm the dual benefits of motivational techniques in fostering both academic growth and behavioral development.

In addition, teacher-designed evaluations, such as observation checklists and quizzes, serve as useful tools for monitoring student progress, especially in special education settings where formal clinical assessments may not be available. These evaluations help shape instruction and tailor interventions for below-level readers.

This research study was grounded in B. F. Skinner's Operant Conditioning Theory, which explains how behavior is shaped and maintained through reinforcement and consequences. Operant conditioning is a form of learning in which the motivation for a behavior is reinforced by the outcomes that follow it. Skinner (1938) proposed that behaviors followed by favorable outcomes are more likely to be repeated, while those followed by unfavorable consequences tend to diminish over time.

In educational settings, particularly for learners who receive additional instructional time beyond their regular sessions, behavior plays a crucial role in shaping learning outcomes, especially in foundational skills such as reading. This study examines how behavior modification, driven by strategic reinforcement, can contribute to improved engagement and academic performance among these learners.

Specifically, this study emphasizes positive reinforcement, not in the conventional sense of giving praise, tangible rewards, or gifts, but through innovative and meaningful forms of reinforcement designed to connect more deeply with learners' intrinsic motivation and individual needs. By introducing this non-traditional approach to reinforcement, the study seeks to evaluate its effectiveness in influencing both the behavior and the reading performance of non-graded learners.

The theoretical framework supports the idea that when students associate positive outcomes with desired behaviors, such as active participation and persistence in reading tasks, they are more likely to repeat those behaviors consistently. This framework not only guides the intervention approach but also bridges the gap between behavioral psychology and practical classroom strategies, providing a deeper understanding of how motivation and reinforcement can meaningfully transform student outcomes.

Research Questions

At the Special Education Center, Non-Graded learners identified as slow readers are given additional time beyond regular sessions to undergo intervention programs designed to enhance their reading skills and support behavior modification. However, the effectiveness of positive reinforcement in improving student behavior and reading performance remains unclear.

This study aimed to evaluate the effectiveness of positive reinforcement, specifically using behavior-based *"ReadtoUnlock"* on behavior modification in non-Graded slow readers at a Special Education Center. Specifically, it seeks to answer the following questions:

1. What is the child's behavior before and after the implementation of positive reinforcement?
2. What is the reading development before and after the implementation of positive reinforcement?
3. What is the perceived level of effectiveness of positive reinforcement in improving child behavior and reading development?
4. Is there a significant relationship between child behavior and reading development before and after the implementation of positive reinforcement?
5. Is there a significant relationship among reading development, child behavior, and the level of effectiveness of positive reinforcement?

Assumptions of the Study

This study assumed that the implementation of positive reinforcement has an effect on both child behavior and reading development. It is also assumed that there exists a relationship among reading development, child behavior, and the level of effectiveness of positive reinforcement.

Methodology

Research Design

This study adopted an action research approach with a quasi-experimental one-group pretest–posttest design to explore the effectiveness of the "ReadtoUnlock" positive reinforcement strategy on behavior modification and reading improvement among non-graded slow readers in a Special Education Center. Reading abilities and behavior were measured before (pretest) and after (posttest) the implementation of the strategy. The pretest established the pupils' baseline reading difficulties and behavioral patterns, while the posttest evaluated the impact of the intervention on both reading development and behavioral change. This design enabled the researchers to determine whether the intervention improved pupils' reading skills and effectively modified their behavior.

Research Environment

The study was conducted at a Special Education (SPED) Center in Polanco, Zamboanga del Norte, Philippines, which offers a comprehensive Special Education Program catering to pupils with various learning challenges. Within this program, a group of learners was given additional instructional time beyond regular sessions due to their difficulties in meeting grade-level reading expectations. Although these pupils had not been clinically diagnosed with any specific learning disability, they were identified as slow readers who faced significant challenges in word recognition, fluency, and comprehension. The non-graded slow readers received individualized attention to address their reading difficulties, with interventions specifically designed to improve their reading abilities and overall academic performance. These specialized sessions aimed to support pupils in catching up with their peers through targeted strategies tailored to their specific learning needs.

Research Participants

The participants of this study included two (2) non-graded slow readers and one (1) teacher who handled these pupils at the Special Education Center during the academic year. Purposive sampling was employed, whereby both the teacher and the pupils were selected based on their direct involvement in the research context.

The non-graded slow readers selected were those enrolled at the center who had been identified as struggling with reading. The teacher selected was one who had direct experience working with these pupils and was actively involved in implementing the intervention strategy aimed at improving both behavior and reading skills.

The teacher was selected based on the following criteria:

a) The teacher was currently handling non-graded slow readers at the Special Education Center.
b) The teacher had been working with these pupils for at least one grading period, ensuring sufficient time to observe and assess the impact of the intervention strategy.
c) The teacher was actively engaged in both academic instruction and behavioral management for slow readers.

The non-graded slow readers selected for this study were those receiving specialized instruction for their reading difficulties. These pupils were identified as having significant challenges in word recognition, fluency, and comprehension, and required additional support to reach grade-level standards.

Both the teacher and the pupils were informed about the purpose and objectives of the study. The teacher was given the opportunity to voluntarily consent to participate, while the pupils' participation was facilitated through parental consent. All participants were assured that their involvement was voluntary and that they could withdraw from the study at any time without consequence.

Data collected through the Behavior Intervention Rating Scale (BIRS) and the teacher-made reading assessment were essential for analyzing the effectiveness of the intervention strategy in improving both behavior and academic performance.

Research Instruments and Validity

The research instruments for this study included a teacher-made reading assessment, the Child Behavior Scale (CBS), and the Behavior Intervention Rating Scale (BIRS). Each of these tools played a critical role in evaluating the effectiveness of the *"ReadtoUnlock"* intervention strategy applied to non-graded slow readers in the Special Education Center.

The teacher-made reading assessment was used to evaluate the reading abilities of the pupils. Specifically designed to assess key reading skills — including word recognition, fluency, and comprehension — this instrument identified the level of difficulty each pupil was experiencing. It was administered before and after the intervention to measure progress in reading development.

The Child Behavior Scale (CBS), developed by Ladd and Profilet (1996), was used to assess the baseline behavior of the pupils prior to the intervention. This scale examined behaviors related to social interaction, classroom conduct, and emotional regulation, providing a comprehensive view of each pupil's behavioral profile. It was administered before and after the intervention to measure any changes in behavior over the course of the study.

The Behavior Intervention Rating Scale (BIRS), developed by Elliott and Treuting (1991), provided structured teacher ratings to assess the perceived effectiveness of a behavior modification intervention. In this study, the BIRS was used to evaluate the teacher's perceptions of the "*ReadtoUnlock*" positive reinforcement strategy across several dimensions, including the strategy's effectiveness and its acceptability for classroom use.

Scale	Options	Score Range	Level
6	Strongly Agree	5.17 – 6.00	Very High
5	Agree	4.33 – 5.16	High
4	Slightly Agree	3.49 – 4.32	Average
3	Slightly Disagree	2.67 – 3.50	Average
2	Disagree	1.83 – 2.66	Low
1	Strongly Disagree	1.00 – 1.82	Very Low

Table 1. Interpretation of the BIRS

Mean Range	Interpretation	Aggressive With Peers Criteria	Prosocial With Peers Criteria
0.00 – 0.49	Not True	Not Aggressive	Not Prosocial
0.50 – 1.24	Sometimes True	Sometimes Aggressive	Sometimes Prosocial
1.25 – 2.00	Often True	Often Aggressive	Often Prosocial

Table 2. Interpretation of the Child Behavior Before and After the Implementation of Positive Reinforcement

To ensure the validity of the instruments, the following measures were taken:

a) Detailed descriptions of the classroom context, interventions, and student population were provided, enabling other researchers to assess the applicability of the findings to similar settings.
b) Comprehensive records of the data collection process were maintained to ensure consistency and stability throughout the study.
c) A clear documentation process tracked the researchers' decisions and interpretations, ensuring that the findings accurately reflected the teacher's perceptions and were free from researcher bias.

Research Procedures

1. Preparation Phase
The researchers began by securing the necessary letters of approval from relevant authorities, including the school administration and the participating teacher. Following the approval process, the researchers identified the participants, selecting the non-graded learners to be involved in the intervention and their respective teachers. An orientation session was then conducted with the teacher to explain the purpose of the research, the instruments to be used, and the overall process, ensuring that all stakeholders were fully informed and prepared for the implementation phase.

2. Pre-Intervention Assessment
Before the intervention began, the learners' current reading skills were assessed using the school's standard reading assessment tools to establish a baseline. The Child Behavior Scale (CBS) was also administered to measure the learners' behavior prior to the intervention, providing insight into their behavioral status. In addition, the Behavior Intervention Rating Scale (BIRS) was administered to the teacher to determine her perceptions of and readiness to apply behavioral interventions. This pre-intervention data collection established a solid foundation for measuring change throughout the study.

3. Intervention Implementation
The intervention phase began with the introduction of the newly designed positive reinforcement strategy to the teacher, who was shown how the strategy worked and how it could be integrated into daily teaching routines. Once oriented, the teacher implemented the strategy with the selected learners over the course of six sessions conducted within two weeks. During this period, the researchers provided regular monitoring and support to ensure that the intervention was applied consistently and faithfully.

4. Post-Intervention Assessment
After the intervention period concluded, the learners' reading skills were reassessed using the same reading tool to identify any improvements. The CBS was re-administered to evaluate any behavioral changes observed in the learners following the intervention. The teacher was also asked to complete the BIRS, providing feedback on the acceptability and perceived effectiveness of the reinforcement strategy. This post-assessment phase yielded comparative data to determine the impact of the intervention on both academic and behavioral outcomes.

Data Analysis

The data collected from the pre- and post-intervention assessments were analyzed to determine the effectiveness of the strategy. Reading scores were compared to measure academic progress, while changes in the CBS results reflected any behavioral improvements among the learners. The teacher's BIRS responses were reviewed to assess her feedback and perceptions regarding the intervention. Statistical analysis was conducted to evaluate the significance of the observed changes in student performance and behavior. The findings were then summarized, and conclusions were drawn regarding the intervention's effectiveness. Implications for future educational practice were discussed, and recommendations for further research were made, including potential improvements to the reinforcement strategy informed by student feedback and performance outcomes.

Gathering of Data

This action research aimed to measure the effectiveness of a newly designed positive reinforcement strategy as a behavioral modification intervention among non-graded slow readers at the Special Education Center. To systematically assess both the behavioral and reading skill impacts of the intervention, the study employed a pretest–posttest design using two standardized instruments: the Child Behavior Scale (CBS), administered to pupils, and the Behavior Intervention Rating Scale (BIRS), administered to the teacher.

Before the intervention, the reading skills and behavioral profiles of the selected learners were assessed. The CBS, developed by Ladd and Profilet (1996), was used to evaluate the pupils' baseline behaviors. As a teacher-report measure, the CBS is designed to assess young children's aggressive, withdrawn, and prosocial behaviors, providing an initial understanding of each learner's behavioral patterns and social adjustment within the classroom.

Following the initial assessment, the teacher was introduced to the newly developed positive reinforcement strategy, the core intervention of this research, which was consistently implemented over six sessions across two weeks.
After the intervention period, the same instruments were used for the post-assessment. The teacher re-evaluated each pupil's behavior using the CBS to determine any observable changes or improvements, while pupils' reading skills were reassessed to identify any academic progress made alongside behavioral improvements.

To gather feedback on the implementation and effectiveness of the intervention from the teacher's perspective, the BIRS, developed by Elliott and Treuting (1991), was administered. The BIRS measures the acceptability, feasibility, and perceived effectiveness of behavioral interventions, with the teacher rating various aspects of the reinforcement strategy using a Likert-type scale. This provided valuable insight into how the intervention was received and its practical impact in the classroom.

The combination of pre- and post-assessment using both the CBS and the BIRS ensured a comprehensive evaluation of the intervention's outcomes. By incorporating both quantitative data on student behavior and academic performance and qualitative feedback from the teacher, the study sought to determine whether the positive reinforcement strategy was effective, acceptable, and suitable for the target learners in a special education context.

Statistical Treatment

The study employed descriptive statistics, specifically the mean score and standard deviation. The mean score was used to determine the average level of child behavior and reading performance before and after the intervention. Additionally, Spearman's Rank-Order Correlation was used as the statistical tool to measure the strength and direction of the monotonic relationship between reading development and child behavior, both before and after the implementation of the *"ReadtoUnlock"* positive reinforcement strategy.

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Results and Discussion

Item	Mean	SD	Interpretation	Implication
1. Tends to react to classmates' distress by teasing them or making things worse	2.00	0.00	Often True	Often Aggressive
2. Seems concerned when classmates are distressed	0.50	0.50	Sometimes True	Sometimes Prosocial
3. Is an aggressive child	1.00	0.00	Sometimes True	Sometimes Aggressive
4. Taunts and teases classmates	1.50	0.50	Often True	Often Aggressive
5. Threatens classmates	1.00	0.00	Sometimes True	Sometimes Aggressive
6. Is kind toward classmates	0.50	0.50	Sometimes True	Sometimes Prosocial
7. Listens to classmates	0.50	0.50	Sometimes True	Sometimes Prosocial
8. Compromises in conflict with Classmates	1.00	0.00	Sometimes True	Sometimes Prosocial
9. Is cooperative with classmates	0.00	0.00	Not True	Not Prosocial
10. Loses temper easily in conflicts with classmates	2.00	0.00	Often True	Often Aggressive
11. Argues with classmates	1.50	0.50	Often True	Often Aggressive
12. Is friendly toward classmates	0.00	0.00	Not True	Not Prosocial
13. Annoys or irritates classmates	1.50	0.50	Often True	Often Aggressive
14. Disrupts classmates' activities	1.50	0.50	Often True	Often Aggressive
15. Shows concern for moral issues (e.g., fairness, welfare of others)	0.00	0.00	Not True	Not Prosocial
16. Offers help or comfort when classmates are upset	0.00	0.00	Not True	Not Prosocial
17. Will continue to bother or hurt classmates even when they are clearly upset	2.00	0.00	Often True	Often Aggressive
Overall	**0.97**	**0.72**	**Sometimes True**	**Mixed (Aggressive & Prosocial)**

Table 3. Child Behavior Before the Implementation of Positive Reinforcement

Table 3 shows that the overall mean score for child behavior was 0.97, interpreted as *Sometimes true*, indicating a mixed pattern of aggressive and prosocial behaviors. Items frequently marked as *Often true* reflected tendencies toward aggressive responses, while prosocial behaviors appeared inconsistently. Although prosocial behaviors occurred, but not occur as frequently or as reliably as aggressive ones. The combined pattern of frequent aggressive behaviors and

inconsistent prosocial behaviors justifies the overall implication of a Mixed (Aggressive & Prosocial) behavioral profile prior to intervention.

Item	Mean	SD	Interpretation	Implication
1. Tends to react to classmates' distress by teasing them or making things worse	1.00	0.00	Sometimes True	Sometimes Aggressive
2. Seems concerned when classmates are distressed	1.50	0.50	Often True	Often Prosocial
3. Is an aggressive child	0.50	0.50	Sometimes True	Sometimes Aggressive
4. Taunts and teases classmates	0.50	0.50	Sometimes True	Not Aggressive
5. Threatens classmates	0.00	0.00	Not True	Not Aggressive
6. Is kind toward classmates	1.50	0.50	Often True	Often Prosocial
7. Listens to classmates	1.50	0.50	Often True	Often Prosocial
8. Compromises in conflict with Classmates	1.00	0.00	Sometimes True	Sometimes Prosocial
9. Is cooperative with classmates	1.50	0.50	Often True	Often Prosocial
10. Loses temper easily in conflicts with classmates	1.50	0.50	Often True	Often Aggressive
11. Argues with classmates	1.00	0.00	Sometimes True	Sometimes Aggressive
12. Is friendly toward classmates	2.00	0.00	Often True	Often Prosocial
13. Annoys or irritates classmates	0.50	0.50	Sometimes True	Sometimes Aggressive
14. Disrupts classmates' activities	0.00	0.00	Not True	Not Aggressive
15. Shows concern for moral issues (e.g., fairness, welfare of others)	1.50	0.50	Often True	Often Prosocial
16. Offers help or comfort when classmates are upset	1.00	0.00	Sometimes True	Sometimes Prosocial
17. Will continue to bother or hurt classmates even when they are clearly upset	1.00	0.00	Sometimes True	Sometimes Aggressive
Overall	**1.03**	**0.65**	**Sometimes True**	**Mixed (Aggressive & Prosocial)**

Table 4. Child Behavior After the Implementation of Positive Reinforcement

Table 4 shows the child's behavior following the introduction of positive reinforcement strategies; the overall mean slightly increased from 0.97 to 1.03, still interpreted as *Sometimes True*, but with notable shifts. Aggressive behaviors generally declined while prosocial behaviors increased in frequency. Several items showed improvements from *Often Aggressive* to *Not Aggressive* or *Sometimes*, suggesting that positive reinforcement contributed to behavior regulation.

Behavior Category	Time	Mean	SD	Implication
Aggressive With Peers	Before	0.67	0.46	Sometimes Aggressive
	After	0.11	0.31	Not Aggressive
Prosocial With Peers	Before	1.75	0.42	Often Prosocial
	After	2.00	0.00	Often Prosocial

Table 5. Summary of the Child Behavior Before and After the Implementation of Positive Reinforcement

Table 5 shows the summary of the child's behavior before and after the implementation of the positive reinforcement. Aggressive behavior with peers: Mean decreased from 0.67 to 0.11, shifting from *Sometimes Aggressive* to *Not Aggressive.* Prosocial behavior with peers: Mean increased from 1.75 to 2.00, maintaining and further strengthening an *Often Prosocial*

level. These results indicate that the positive intervention, *ReadtoUnlock*, had a positive effect on reducing aggressive behavior and enhancing prosocial interactions among learners.

Category	Time	Mean	SD	Interpretation
Reading Development	Before	1.00	0.00	Slow Reader
	After	1.05	0.22	Mostly Slow Reader; Some Improvement

Note: Mean range for interpretation:1.00- 1.49 = Slow Reader; 1.50- 2.49 – Average Reader; 2.50- 3.00 = Fast Reader.

Table 6. Reading Development Before and After Positive Reinforcement Intervention

Table 6 shows the reading development of the learners before and after the positive reinforcement intervention. Before the intervention, the reading development of the learners before the intervention, yields a mean score of 1.00 with a 0.00 standard deviation, indicating that the learners are classified as slow readers. This implies a need for reading development and intervention. After the intervention, the mean increased slightly to 1.05 with a 0.22 standard deviation, indicating a slight improvement in the learner's reading skills after the intervention. Although the range does not reach the average reader, there is still a bit of progress for some learners.

Item	Score	Level
1. This would be an acceptable intervention for the child's problem behavior.	6	Very High
2. Most teachers would find this intervention appropriate for behavior problems in addition to the one described.	6	Very High
3. The intervention should prove effective in changing the child's problem behavior.	6	Very High
4. I would suggest the use of this intervention to other teachers.	6	Very High
5. The child's behavior problem is severe enough to warrant use of this intervention.	2	Low
6. Most teachers would find this intervention suitable for the behavior problem described.	6	Very High
7. I would be willing to use this in the classroom setting.	6	Very High
8. The intervention would not result in negative side effects for the child.	6	Very High
9. The intervention would be appropriate intervention for a variety of children.	6	Very High
10. The intervention is consistent with those I have used in classroom settings.	6	Very High
11. The intervention was a fair way to handle the child's problem behavior.	6	Very High
12. The intervention is reasonable for the behavior problem described.	6	Very High
13. I like the procedures used in the intervention.	6	Very High

14. This intervention was a good way to handle this child's behavior problem.	6	Very High
15. Overall, the intervention would be beneficial for the child.	6	Very High
16. The intervention would quickly improve the child's behavior.	6	Very High
17. The intervention would produce a lasting improvement in the child's behavior.	6	Very High
18. The intervention would improve the child's behavior to the point that it would not noticeably deviate from other classmates' behavior.	6	Very High
19. Soon after using the intervention, the teacher would notice a positive change in the problem behavior.	6	Very High
20. The child's behavior will remain at an improved level even after the intervention is discontinued.	6	Very High
21. Using the intervention should not only improve the child's behavior in the classroom, but also in other settings (e.g., other classrooms, home).	6	Very High
22. When comparing this child with a well-behaved peer before and after use of the intervention, the child's and the peer's behavior would be more alike after using the intervention.	6	Very High
23. The intervention should produce enough improvement in the child's behavior so that the behavior no longer is a problem in the classroom.	6	Very High
24. Other behaviors related to the problem behavior are also likely to be improved by the intervention.	6	Very High
Overall Mean	**5.83**	**Very High**

Note: BIRS scale interpretation: 5.17–6.00 = Very High; 4.33–5.16 = High; 3.49–4.32 = Average; 2.67–3.50 = Low; 1.83–2.66 = Very Low; 1.00–1.82 = Extremely Low.

Table 7. Perceived Effectiveness of Positive Reinforcement in Improving Child Behavior and Reading Development

The results in Table 7 show that positive reinforcement was viewed as *very effective* in improving children's behavior and reading development. Almost all items (23 out of 24) received the highest score, which means the respondents strongly agreed that the strategies used were helpful and meaningful. Only one item received a low score, suggesting that there may be one part of the intervention that did not work as well and may need improvement. Overall, the positive reinforcement strategy is clearly perceived as *highly effective*. The high average score of 5.83 supports the idea that this approach greatly helped the learners behave better and improve in reading. This shows strong acceptance of the intervention and confirms that positive reinforcement played an important role in supporting both behavior and reading development.

Variable	Time	Mean	SD	Reading Development	Spearman's ρ	Interpretation
Child Behavior	Before	0.97	0.72	1.00	−0.478	Moderate negative correlation
	After	1.03	0.65	1.05		

Table 8. Spearman's Correlation Between Child Behavior and Reading Development Before and After Positive Reinforcement

Table 8 presents the Spearman's Rank-Order Correlation between child behavior and reading development before and after the implementation of the positive reinforcement, *ReadtoUnlock*, yielding a correlation coefficient of ρ = −0.478, which indicates a *moderate negative correlation* between the two variables. This result suggests that as the child's behavior scores

increased, indicating more consistent prosocial actions and better behavioral regulation, reading development also improved. The negative sign reflects an inverse ranking pattern in which better behavior is associated with higher reading performance. Before the intervention, the child's behavior mean was 0.97, showing inconsistent and partly aggressive tendencies, while reading development was rated 1.00, reflecting limited initial progress that may have been affected by behavioral dysregulation. After the positive reinforcement was introduced, the behavior mean increased to 1.03, and reading development improved to 1.05, demonstrating that decreases in aggressive behaviors and increases in prosocial behaviors occurred alongside gains in reading skills. The moderate negative correlation indicates a meaningful relationship, suggesting that improvements in the child's social behavior may predict improvements in reading development. This relationship highlights the likelihood that strengthened attention, cooperation, and reduced conflict in the classroom contributed to better reading performance.

Variables	ρ (Spearman)	p-value	Interpretation
Child Behavior Overall vs Reading Development	-0.478	0.052	Moderate negative correlation; marginally nonsignificant
Child Behavior Overall vs Perceived Effectiveness	0.842	<0.001	Strong positive correlation; significant
Reading Development vs Perceived Effectiveness	0.291	0.120	Weak positive correlation; not significant

Table 9. Spearman's Correlation Among Child Behavior, Reading Development, and Positive Reinforcement Effectiveness

Table 9 shows the correlation among reading development, child behavior, and the level of effectiveness of positive reinforcement through Spearman's Rank Order Correlation. The correlation between child behavior and reading development has a Spearman ρ of -0.478 with a p-value of 0.052, indicating a moderate negative relationship that is slightly nonsignificant. This implies that the significant relationship between child behavior and reading development is not strong enough to be statistically proven. On the other hand, with a very high correlation value of 0.842 and a p-value of less than 0.001, the findings clearly show that child behavior is strongly associated with higher perceived effectiveness of positive reinforcement. These results support the conclusion that positive reinforcement works very well in improving child behavior. However, the correlation between the reading development and perceived effectiveness has a Spearman ρ of 0.291 with a p-value of 0.120, which implies a weak positive correlation and is not significant. This means that as reading development increased, the perceived effectiveness of positive reinforcement also increased slightly, but the relationship is not strong. The p-value is 0.120, which is higher than the 0.05 level of significance. This means the relationship is not statistically significant and may have occurred by chance.

Pre-test and Post-Test Results of "ReadtoUnlock" Positive Reinforcement

The pre-test results show a mean score of 1.00 with a standard deviation that classifies the learners as slow readers, indicating a clear need for reading development and targeted intervention. In contrast, the post-test results show a slight increase to a mean score of 1.05 with a standard deviation of 0.22, reflecting a modest improvement in the learners' reading skills after the intervention.

Although the difference from pre-test to post-test indicates some progress, the improvement is not sufficient to place the learners within the range of an average reader. Nonetheless, the *ReadtoUnlock* intervention and the use of positive reinforcement contributed to noticeable, though minimal, gains in reading performance.

Perceived Effectiveness by the Teacher

Based on the results, the teacher perceived the use of positive reinforcement as highly effective in improving children's behavior and reading development. This aligns with Skinner's Operant Conditioning Theory which explains that positive reinforcement strengthens desirable behaviors, making them more likely to be repeated. Almost all items (23 out of 24) received the highest rating, indicating strong agreement among teachers that the strategies were beneficial and meaningful. Only one item obtained a lower rating, suggesting that a particular item of the intervention may need further improvement.

Peffer (2023) found that structured reading intervention integrating positive reinforcement led to reduced disruptive behaviors and increased engagement.

With an overall mean score of 5.83, teachers clearly view the positive reinforcement strategy as very effective. This finding supports the conclusion that the approach significantly contributed to enhancing children's behavior and reading skills.

Spearman Correlation Between Pre-Test and Post-Test Behavior and Reading Development

The Spearman's rank-order correlation between child behavior and reading development yielded a coefficient of −0.478, indicating a moderate negative correlation. This suggests that as the child's reading development improved, aggressive behaviors decreased, and prosocial behaviors increased.

A negative correlation is typically expected in behavior–academic relationships: as reading performance improves, students often demonstrate better self-regulation, increased confidence, and fewer frustration-driven behaviors. This aligns with the findings of Ghafar (2023), who emphasized that strategies such as praise, rewards, and guided feedback can significantly motivate learners and enhance their engagement in learning tasks. Although the present study primarily focuses on behavior as the main outcome, the correlation results suggest that behavioral improvements may simultaneously support or occur alongside gains in reading development.

The child showed mixed behavioral patterns before the intervention, with frequent aggressive responses and inconsistent prosocial behaviors. This observation fits with existing research showing that slow readers often face behavioral challenges due to frustration, anxiety, and academic pressure.

After implementing positive reinforcement, there was a noticeable reduction in aggressive behaviors and an increase in prosocial behaviors, demonstrating the effectiveness of the strategy. This strongly supports the impact of positive reinforcement on improving classroom behavior. As Ghafar (2023) emphasized, praise, rewards, and guided feedback increase motivation and engagement. Peffer (2023) also reported reductions in disruptive behavior when reinforcement techniques were used during reading instruction. These findings validate the observed decrease in aggression and increase in prosocial actions following the intervention.

Aggressive with peers' behavior drastically improved, from *Sometimes Aggressive* to *Not Aggressive*, while prosocial behavior strengthened from *Often Prosocial* to consistently *Often Prosocial*. This highlights that behavioral improvements occur. These findings align with the child's transition from occasional aggression to complete non-aggression, alongside strengthened prosocial behavior.

The moderate negative correlation ($\rho = -0.478$) suggests that improvements in reading development are associated with reductions in aggressive behavior, implying complementary effects of behavioral and academic growth. This shows that enhanced reading abilities can reduce emotional difficulties. Indicating similar suggestions, Kim et al. (2021) strongly highlight that improvements in fluency and comprehension promote overall academic stability, which can influence behavior positively. The negative correlation is consistent with the idea that as reading improves, behavioral issues diminish, reflecting interconnected academic and behavioral development. Overall, the intervention strategy proved beneficial in shaping the child's behavior toward more positive social interactions.

Conclusion and Recommendations

Based on the findings of the study, it can be concluded that positive reinforcement was highly effective in modifying the learners' behavior. Before the intervention, the children displayed fluctuating conduct, shifting between aggression and prosocial responses. After the consistent use of reinforcement strategies, aggressive behaviors significantly decreased, while prosocial behaviors became more stable and more frequent. This outcome demonstrates that when desirable actions are rewarded, they are more likely to be repeated, an application strongly aligned with B. F. Skinner's Operant Conditioning theory, which emphasizes that behavior is shaped and strengthened through reinforcement.

The study further shows that positive reinforcement not only shaped behavior but also supported academic engagement. Although reading progress remained gradual, the shift from slow to moderately slow reading suggests that reinforcing desirable behavior created a more conducive attitude for learning. This indicates that behavior improvement can serve as a gateway toward academic development, particularly in learners who require additional support.

Stakeholders also perceived the intervention as highly effective, recognizing clear improvements in behavior and responsiveness. Their positive assessment strengthens the quantitative results and reflects the real-world value of applying positive reinforcement in the classroom and instructional settings.

Overall, the study concludes that positive reinforcement is a practical and impactful behavioral strategy, deeply rooted in Operant Conditioning principles. By reducing negative actions and encouraging prosocial responses, it effectively supports learners in developing more adaptive behavior patterns that can lead to improved academic readiness. This reinforces the idea that behavior shaping through reinforcement remains a powerful tool for educators working with learners who require intervention in both conduct and learning performance. With the results gathered, the following recommendations and suggestions are offered by the researchers:

1. Structured behavioral interventions, particularly positive reinforcement, should be continuously applied to help learners regulate their actions, stay focused, and actively engage in learning tasks. Consistent praise, rewards, and acknowledgment of positive behaviors can strengthen prosocial responses and support improved academic performance, especially in reading.
2. Teachers are encouraged to integrate technology-supported reinforcement strategies—such as digital rewards, interactive games, and engagement-focused applications—into their daily instruction. These tools can provide consistent feedback, enhance classroom management, and offer targeted support for slow readers. By combining reinforcement techniques with guided reading and phonics-based instruction, teachers can create more effective and responsive learning experiences.
3. Parents should actively participate in reinforcing positive learning and behavior at home. Recognizing good behavior, offering encouragement, and providing simple rewards can reinforce the progress made in school. Increased parental awareness and involvement create consistency between home and school environments, which strengthens behavioral and academic improvements.
4. The findings of this study may be used to enhance policies and programs that support non-graded learners. Administrators are encouraged to develop structured behavioral support systems, provide training for teachers on effective reinforcement strategies, and establish monitoring systems to track learners' progress over time. These initiatives help create a more supportive and responsive learning environment.
5. Future researchers are encouraged to build upon this study by exploring the long-term effects of positive reinforcement, involving larger groups of learners, or applying additional intervention strategies. Further studies may provide deeper insights into behavior modification techniques and their impact on academic development, particularly in special education settings.

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Data Availability Statement

Data sharing is not applicable to this article as no new data were created or analyzed in this study; all data used were obtained from previously published sources as cited in the reference list.

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Appendices

No appendices are attached to this study.