

Intervention Programs for Struggling Learners In Literacy and Numeracy in Public Elementary Schools In Alaminos City, Pangasinan

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ABSTRACT -

This study examined the implementation of intervention programs for struggling learners in literacy and numeracy in public elementary schools in Alaminos City, Pangasinan, during the School Year 2025-2026. It determined the profile of public elementary teachers, the level of implementation of selected literacy and numeracy intervention programs, the seriousness of problems encountered in implementation, and the significant relationship between teachers' profile variables and program implementation. Using a quantitative descriptive-correlational design, the study involved 100 teacher-respondents who were directly engaged in literacy and numeracy interventions. Data were gathered through a researcher-developed questionnaire and analyzed using frequency counts, percentages, weighted means, Kendall's Tau-b correlation, and biserial correlation. Findings revealed that literacy intervention programs were implemented at a high level overall, with the "Bawat Bata Makababasa Program" (BBMP) and "Hamon: Bawat Bata Bumabasa" (3Bs Initiative) obtaining very high implementation. Numeracy intervention programs were implemented at a very high level overall, with RMA-based interventions receiving the highest rating. Problems encountered in both literacy and numeracy were moderately serious, particularly those related to parental support, intervention time, learner readiness, instructional resources, learner participation, and teacher workload. Results further showed that most teacher profile variables had no significant relationship with implementation, although average family monthly income and marital status showed significant relationships in selected programs. Based on these findings, an intervention enhancement plan was proposed to strengthen parental involvement, teacher capacity, resource provision, learner monitoring, and program sustainability.

Keywords: literacy, numeracy, intervention programs, struggling learners, implementation

INTRODUCTION

Literacy and numeracy are foundational competencies that enable learners to understand texts, communicate ideas, solve problems, and participate meaningfully in school and daily life. Across educational systems, difficulties in reading and mathematics remain major concerns because learners who fail to master these skills often experience challenges in other learning areas and in later academic tasks. International reports have consistently emphasized the need to strengthen foundational learning, particularly among children who do not reach minimum proficiency levels in reading and mathematics (UNESCO, 2021; World Bank, 2021). In the Philippines, this concern is reflected in national and international assessment results, which show that many learners continue to struggle with comprehension, mathematical reasoning, and problem-solving

(OECD, 2019). To address these learning gaps, the Department of Education has implemented various literacy and numeracy programs, including the Bawat Bata Makababasa Program, Hamon: Bawat Bata Bumabasa, Brigada Pagbasa, Literacy Remediation Program, National Learning Recovery Program, Rapid Mathematics Assessment-based interventions, and other school-based initiatives. These programs are intended to provide targeted support through remediation, assessment-based instruction, learner monitoring, and community involvement. However, the effectiveness of such programs depends not only on their existence but also on the quality of implementation, availability of resources, teacher readiness, learner participation, and parental support. Studies on literacy and numeracy interventions emphasize that structured instruction, differentiated teaching, progress monitoring, and continuous professional support improve learning outcomes among struggling learners (Darling-Hammond et al., 2020; Vaughn & Fletcher, 2020; Flores et al., 2020). At the local level, the Schools Division Office of Alaminos City has implemented intervention initiatives to support learners with reading and mathematics difficulties. Assessment results in the division showed improvement in several areas, yet remaining frustration levels in reading and low proficiency levels in numeracy indicate that learning gaps still require sustained attention. These realities highlight the importance of examining how literacy and numeracy intervention programs are implemented in public elementary schools and what problems teachers encounter in carrying them out. Hence, this study focused on implementing intervention programs for struggling learners in literacy and numeracy in public elementary schools in Alaminos City, Pangasinan, as a basis for proposing an intervention enhancement plan.

Statement of the Problem

The study aimed to examine the implementation of intervention programs for struggling learners in literacy and numeracy in public elementary schools in Alaminos City, Pangasinan. Specifically, it sought to answer the following:

1. The profile of public elementary teachers in terms of:
 - a. age
 - b. sex
 - c. marital status
 - d. highest educational attainment
 - e. bachelor's degree
 - f. position
 - g. number of years of teaching experience in public school
 - h. number of seminars or trainings attended related to intervention programs
 - i. average family monthly income
2. The level of implementation of literacy intervention programs for struggling learners in terms of the Bawat Bata Makababasa Program, Hamon: Bawat Bata Bumabasa, Brigada Pagbasa, Literacy Remediation Program, and Summer Academic Remedial/Learning Camp Programs.
3. The level of implementation of numeracy intervention programs for struggling learners in terms of the National Learning Recovery Program, CARE+1, Summer Academic Remedial Programs/Remediation Classes, Rapid Mathematics Assessment-based interventions, and regional or school-based numeracy programs.

4. The level of seriousness of the problems encountered in the implementation of literacy and numeracy intervention programs.
5. Is there is a significant relationship between the level of implementation of literacy intervention programs and the profile of teachers?
6. Is there a significant relationship between the level of implementation of numeracy intervention programs and the profile of teachers?
7. What intervention enhancement plan, based on the findings of the study, can be proposed?

Scope and Delimitation

This study focused on the implementation of literacy and numeracy intervention programs for struggling learners in public elementary schools in Alaminos City, Pangasinan, during the 2025–2026 school year. It examined the profile of teacher-respondents, the level of implementation of selected intervention programs, the seriousness of problems encountered, and the relationship between teachers' profiles and program implementation. The respondents were teachers directly involved in these programs, including reading coordinators, mathematics coordinators, and designated focal persons. The study was limited to quantitative data gathered through a structured survey questionnaire and did not directly measure learners' actual reading and mathematics performance. Therefore, the findings were based on teachers' reported practices and perceptions and may not be generalized to other school divisions or educational contexts.

Review of Related Literature

Literature on literacy and numeracy emphasizes that these skills are the foundation of meaningful learning and long-term academic success. Learners who struggle in reading often experience difficulty understanding lessons across subject areas, while those with weak numeracy skills may find it hard to solve problems, reason mathematically, and apply concepts in daily life (OECD, 2019; UNESCO, 2021). Studies also show that intervention programs are more effective when structured, consistent, and grounded in learners' actual needs. Strategies such as guided reading, remediation, differentiated instruction, use of manipulatives, progress monitoring, and parental support help address learning gaps among struggling learners (Al Otaiba et al., 2022; Flores et al., 2020; Sénéchal & Young, 2020; Vaughn & Fletcher, 2020). These findings support the need for schools to strengthen literacy and numeracy programs, so learners receive timely, appropriate, and sustained assistance.

Theoretical Framework

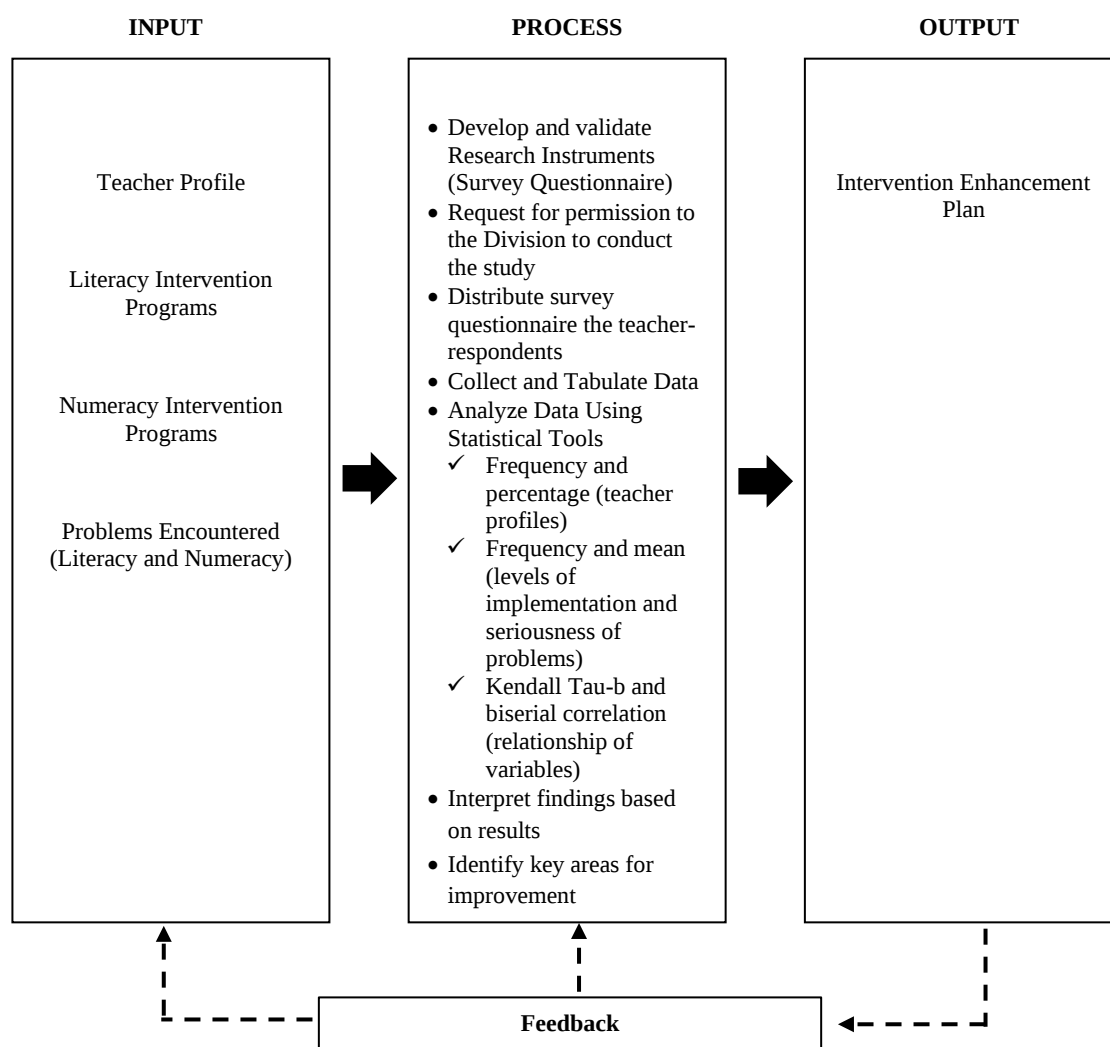
This study was anchored on three theories that helped explain the implementation of literacy and numeracy intervention programs.

Social Cognitive Theory explains how teachers' characteristics, practices, and the school environment influence the implementation of interventions.

Constructivist Learning Theory supports the use of active, guided, and differentiated learning activities for struggling learners.

Systems Theory views literacy and numeracy intervention as a shared process influenced by teachers, learners, resources, parents, and school support.

Conceptual Framework



METHODOLOGY

This quantitative study examined the implementation of literacy and numeracy intervention programs for struggling learners in public elementary schools in Alaminos City, Pangasinan. Using a descriptive-correlational design, the study gathered survey data from teacher-implementers and analyzed it using descriptive and correlational statistical tools.

Research Design

The purpose of this quantitative research was to examine the implementation of literacy and numeracy intervention programs for struggling learners in public elementary schools in Alaminos City, Pangasinan. The study employed a descriptive-correlational research design to describe the profile of teacher-respondents, determine the level of implementation of intervention programs, identify the seriousness of problems encountered, and test the relationship between teachers' profile variables and program implementation.

Research Steps

The study followed a systematic process to ensure that the data were gathered, organized, and interpreted properly. Since the research dealt with the implementation of literacy and numeracy intervention programs, each step was designed to obtain reliable information from teachers who were directly involved in planning, conducting, and monitoring these programs in public elementary schools.

First, the researcher secured the necessary permissions from the concerned authorities before conducting the study. After approval was granted, the teacher-respondents were identified based on their involvement in literacy and numeracy intervention programs, particularly reading coordinators, mathematics coordinators, and designated focal persons. Second, the researcher administered a structured survey questionnaire to gather data on the respondents' profiles, the level of implementation of intervention programs, the seriousness of problems encountered, and other variables related to the study.

Third, the completed questionnaires were collected, checked, and organized for analysis. The responses were tallied, tabulated, and analyzed using appropriate statistical tools, including frequency, percentage, weighted mean, rank, and correlational analyses. Finally, the results were interpreted in light of the research problems and used to develop an intervention enhancement plan aimed at strengthening literacy and numeracy programs for struggling learners in Alaminos City.

Data Collection and Sample Collection

Data were collected through a structured survey questionnaire that gathered information on the respondents' profiles, level of implementation of literacy and numeracy intervention programs, and seriousness of problems encountered. The sample consisted of public elementary school teachers in Alaminos City who were directly involved in intervention programs, including reading and mathematics coordinators and designated focal persons. They were purposively selected because of their direct experience in planning, implementing, and monitoring programs for struggling learners. After securing permission from concerned authorities, the questionnaires were distributed, retrieved, checked, tallied, and analyzed, with all responses treated confidentially.

Data Analysis Methods

The data analysis employed descriptive and correlational statistical methods to interpret the responses gathered from the teacher-respondents. Frequency counts and percentages were used to describe the respondents' profile, while the weighted mean and rank were used to determine the level of implementation of literacy and numeracy intervention programs and the seriousness of the problems encountered. To examine whether significant relationships existed between teachers' profile variables and the level of program implementation, appropriate correlational tools were applied. The results were then interpreted based on the statement of the problem and used as basis for the proposed intervention enhancement plan.

Research Hypotheses and Validation

This study tested the null hypothesis that there is no significant relationship between the level of implementation of literacy and numeracy intervention programs and the profile of public elementary teachers in Alaminos City. The hypotheses were validated through correlational analysis using the data gathered from the structured survey questionnaire. Results showed that most teacher profile variables were not significantly related to the implementation of literacy and numeracy programs, indicating that the programs were generally implemented across teacher groups. However, selected variables, such as marital status and average monthly family income, showed significant relationships with certain numeracy programs. These findings suggest that while teacher profile has limited influence on overall implementation, certain personal and socioeconomic factors may still affect the consistency of program participation and delivery.

Study Limitations and Ethical Considerations

The study adhered to ethical protocols by securing permission from the relevant authorities and obtaining informed consent from the teacher-respondents before data collection. The researcher ensured that anonymity and confidentiality were maintained throughout the collection, analysis, and reporting of data. All gathered information was used strictly for academic and research purposes. The respondents' views, responses, and experiences were also presented respectfully, accurately, and without misrepresentation.

RESULTS AND DISCUSSION

SOP 1. Profile of the Respondents

The teacher-respondents were generally experienced, professionally prepared, and exposed to intervention-related training. Most were female, married, 51 years old and above, and had substantial teaching experience, suggesting that many implementers were in the late-career stage. Their graduate education and training background may have supported their role in literacy and numeracy interventions, although added coordination duties may still contribute to workload concerns.

Table 1
Profile of Respondents (n=100)

Profile	Dominant Category	frequency (%)
Age	51 years old and above	30 (30%)
Sex	Female	90 (90%)
Marital Status	Married	72 (72%)
Educational Attainment	With Master's Units	38 (38%)
Bachelor's Degree	BEED General Education	85 (85%)
Position	Teacher III	46 (46%)
Teaching Experience	20 years and above	38 (38%)
Trainings/Seminars	1-3 trainings	41 (41%)
Average Income	₱30,001-₱40,000	34 (34%)

SOP 2. Level of Implementation of Literacy Intervention Programs

Literacy intervention programs were implemented at a high level, with an overall mean of 4.48. BBMP obtained the highest mean of 4.65, followed by the 3Bs Initiative, Summer Reading/Learning Camp, Literacy Remediation Program, and Brigada Pagbasa. The findings indicate regular conduct of reading assessment, remediation, guided reading, and progress monitoring, though community participation, leveled materials, and home reading support may still be strengthened.

Table 2
Level of Implementation of Intervention Programs in Literacy

Program	Mean	Description
BBMP	4.65	Very High
3Bs Initiative	4.52	Very High
Brigada Pagbasa	4.34	High
Literacy Remediation Program	4.44	High
Summer Reading/Learning Camp	4.48	High
Overall Mean	4.48	High Implementation

SOP 3. Level of Implementation of Numeracy Intervention Programs

Numeracy intervention programs were implemented at a very high level, with an overall mean of 4.63. RMA-based interventions obtained the highest mean of 4.75, showing strong use of assessment results in identifying numeracy gaps, grouping learners, and planning remediation. The high ratings for NLRP, CARE+1, and school-based numeracy programs indicate strong attention to mathematics recovery and competency development.

Table 3
Level of Implementation of Intervention Programs in Numeracy

Program	Mean	Description
NLRP	4.63	Very High
CARE+1	4.61	Very High
Summer Math Remediation	4.43	High
RMA-Based Interventions	4.75	Very High
School-Based Numeracy Programs	4.66	Very High
Overall Mean	4.63	Very High Implementation

SOP 4. Problems Encountered in Program Implementation

Problems encountered in literacy and numeracy intervention programs were rated moderately serious, with an overall mean of 3.30. Literacy concerns included limited materials, poor attendance, low motivation, limited parental support, and insufficient time. Numeracy concerns included weak basic skills, lack of manipulatives, limited practice time, and difficulty in problem-solving. These results show that the programs are functional but still need stronger support systems.

Table 4
Summary of the Level of Seriousness of Problems Encountered

Domain	Mean	Description
Literacy	3.28	Moderate Seriousness
Numeracy	3.32	Moderate Seriousness
Overall Mean	3.30	Moderate Seriousness

SOP 5. Relationship Between Teacher Profile and Literacy Implementation

Most teacher profile variables had no significant relationship with the implementation of literacy intervention programs. This means that literacy programs were carried out across different teacher groups regardless of age, sex, marital status, educational attainment, position, experience, or trainings attended. However, average family monthly income showed a significant relationship with the 3Bs Initiative, suggesting that some socioeconomic factors may affect selected areas of implementation.

SOP 6. Relationship Between Teacher Profile and Numeracy Implementation

For numeracy programs, most teacher profile variables also showed no significant relationship with implementation. However, marital status was significantly related to Summer Academic Remedial Programs, while average family monthly income was significantly related to NLRP and overall numeracy implementation. These results suggest generally consistent implementation, although certain personal or socioeconomic conditions may influence participation or consistency in selected programs.

Table 4
Significant Relationships Between Teacher Profile and Program Implementation

Significant Relationship	Statistical Result
Literacy: Income and 3Bs Initiative	$\tau B = .188^*$, $p = .030$
Numeracy: Marital Status and Summer Remedial	$rpb = -.284^*$, $p = .016$
Numeracy: Income and NLRP	$\tau B = .236^{**}$, $p = .007$
Numeracy: Income and Overall Mean	$\tau B = .178^*$, $p = .023$

SOP 7. Proposed Intervention Enhancement Plan

Based on the findings, an intervention enhancement plan was proposed to strengthen literacy and numeracy programs for struggling learners. The plan focuses on teacher capacity building, localized materials, parental and community participation, learner monitoring, and workload-sensitive implementation. These priorities address concerns about resources, learner participation, parental support, and teacher workload while sustaining the already high level of intervention implementation.

SUMMARY

This study examined the implementation of literacy and numeracy intervention programs for struggling learners in public elementary schools in Alaminos City, Pangasinan. It described the profile of teacher-respondents, determined the level of implementation of selected programs, identified the seriousness of problems encountered, and tested the relationship between teachers' profile variables and program implementation. The findings showed that the respondents were generally experienced, professionally prepared, and exposed to relevant training, which may have supported their ability to carry out intervention activities.

Results revealed that literacy intervention programs were implemented at a high level, while numeracy intervention programs were implemented at a very high level. However, teachers still encountered moderately serious problems with learner motivation, parental support, instructional resources, intervention time, material availability, and workload. Most teacher profile variables were not significantly related to program implementation, although selected variables, such as marital status and average monthly family income, showed significant relationships with certain programs. Based on these findings, an intervention enhancement plan was proposed to strengthen teacher capacity, the use of localized materials, learner monitoring, stakeholder participation, and workload-sensitive implementation.

CONCLUSION

The study concluded that literacy and numeracy intervention programs for struggling learners in public elementary schools in Alaminos City were generally implemented at high to very high levels. The teachers involved in these programs were mostly experienced, professionally prepared, and well-trained in relevant areas, which may have contributed to the effective delivery of intervention activities. Literacy programs such as the Bawat Bata Makababasa Program, 3Bs Initiative, Brigada Pagbasa, Literacy Remediation Program, and Summer Reading/Learning Camp were actively implemented, while numeracy programs such as the National Learning Recovery Program, CARE+1, RMA-based interventions, and school-based numeracy programs also showed strong implementation.

Despite the favorable level of implementation, the study found that teachers still encountered moderate problems related to learner motivation, parental support, instructional resources, intervention time, documentation, and workload. These challenges suggest that successful implementation depends not only on the presence of programs but also on sustained support systems, adequate resources, and shared responsibility among teachers, school heads, parents, and community stakeholders. The study further revealed that most teacher profile variables were not significantly related to the implementation of literacy and numeracy programs, indicating that intervention practices were generally carried out across different teacher groups.

Overall, the findings imply that existing literacy and numeracy intervention programs in Alaminos City provide a strong foundation for addressing learning gaps among struggling learners. However, these programs may be further strengthened through continuous professional development, localized instructional materials, improved progress monitoring, stronger parental and community involvement, and workload-sensitive implementation mechanisms. Thus, the proposed intervention enhancement plan may serve as a practical guide for improving the

sustainability and effectiveness of literacy and numeracy interventions in public elementary schools.

RECOMMENDATIONS

Based on the findings, it is recommended that schools continue strengthening the implementation of literacy and numeracy intervention programs through sustained teacher training, improved resource provision, systematic learner monitoring, and stronger stakeholder participation. Professional development activities may focus on differentiated instruction, assessment-based remediation, guided reading, use of mathematics manipulatives, progress monitoring, and preparation of localized intervention materials.

In relation to teachers' profiles, school leaders may provide continuous mentoring, coaching, and Learning Action Cell sessions to ensure that both experienced and less experienced teachers are equipped with up-to-date intervention strategies. Since literacy programs were implemented at a high level, schools may further enhance BBMP, the 3Bs Initiative, Brigada Pagbasa, the Literacy Remediation Program, and the Summer Reading/Learning Camp by providing leveled reading materials, structured remediation schedules, and home reading support. For numeracy, schools may strengthen NLRP, CARE+1, RMA-based interventions, and school-based numeracy programs through assessment-based grouping, contextualized worksheets, mathematics manipulatives, peer tutoring, and frequent practice in basic operations and problem-solving.

To address implementation problems, school heads and program coordinators may reduce teacher burden by simplifying documentation, using shared templates, creating resource banks, and distributing intervention-related tasks more fairly. Parental and community involvement should also be strengthened through practical parent orientations, home-based reading and numeracy activities, and volunteer-assisted remediation. Since most teacher profile variables were not significantly related to program implementation, literacy and numeracy interventions should be sustained across all teacher groups and schools, while additional support may be provided in areas where personal or socioeconomic factors affect the consistency of implementation.

Finally, the proposed intervention enhancement plan may be adopted, modified, and monitored by schools and division leaders as a guide for improving the sustainability and effectiveness of literacy and numeracy programs for struggling learners in public elementary schools. This plan may help ensure that intervention efforts are not limited to compliance but are directed toward measurable learner progress and long-term learning recovery.

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AI DECLARATION STATEMENT

AI-supported tools helped with grammar and structure in creating this article. No AI tools were used to collect, analyze, or interpret data; all authors are credited for their academic contributions.

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