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The Effectiveness of the Implementation of Early Language, Literacy and Numeracy (ELLN) - Developmentally Appropriate Practices (DAP) in Labo East and West District, Division of Camarines Norte

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ABSTRACT

This article examined the effectiveness of implementing Early Language, Literacy and Numeracy-Developmentally Appropriate Practices (ELLN-DAP) in Labo East and West Districts, Division of Camarines Norte, during School Year 2023-2024. It was developed from the thesis of Christine I. Diana and reorganized into a journal-oriented IMRAD manuscript. The study addressed the continuing need to determine whether early-grade instructional practices are implemented in ways that are developmentally suitable, inclusive, resource-supported, and assessment-informed. It specifically foregrounded how teachers and schools operationalize ELLN-DAP through innovations, activities, strategies, stakeholder engagement, learning materials, and assessment protocols. The research problem was anchored on the premise that early language, literacy, and numeracy form the foundation of later academic success. Developmentally appropriate practices are essential because young learners require instruction that is responsive to age, readiness, interests, sociocultural background, and learning pace. When ELLN implementation is aligned with DAP, early-grade classrooms can become more interactive, inclusive, and learner-centered. The study therefore treated implementation effectiveness as both an instructional and organizational concern. The study utilized a descriptive-evaluative-inferential-correlational method of research. Two sets of researcher-made questionnaires were used to determine the extent of ELLN-DAP implementation, the challenges encountered, and the solutions offered by the respondent groups. The data were statistically treated through weighted mean, ranking, computed z-values, and probability values associated with the z-test of rank-order differences. The 0.05 level of significance guided the decision on whether differences in rank orders were statistically significant. Findings revealed that the overall implementation of ELLN-DAP was much implemented, with a composite weighted mean of 4.19. Among the implementation domains, strategies used obtained the highest mean of 4.26, followed by stakeholders' engagement at 4.23 and activities conducted at 4.16. Existing innovations and projects and preparation of learning materials both obtained means of 4.15, while development of different assessment protocols obtained 4.00. These values indicate generally strong implementation, although assessment protocols emerged as the comparatively weakest domain. The domain-level results further showed that explicit instruction, regular stakeholder communication, hands-on activities, and developmentally appropriate learning materials were among the strongest implementation practices. Teachers appeared to value instructional clarity, practical learner engagement, and community support in operationalizing ELLN-DAP. At the same time, lower-rated indicators such as recyclable learning materials, peer assessment, and play-based strategy use point to specific areas for program enrichment. These gaps are important because DAP requires not only structured instruction but also exploration, sustainability, peer interaction, and authentic assessment. The test of significant difference on rank orders showed that most implementation domains had no significant difference between Labo East and Labo West. The null hypothesis was accepted for existing innovations and projects, activities conducted, strategies used, stakeholders' engagement, and preparation of learning materials. However, it was rejected for the development of different assessment protocols, where the probability value was 0.0207. This result indicates that assessment practice is the only domain where respondent groups significantly differed in their rank-order perceptions. The challenges encountered in ELLN-DAP implementation were rated much evident, with an overall mean of 3.98.

The highest-rated challenge was balancing structured instruction with opportunities for child-led exploration, followed by adapting teaching methods to diverse learning styles and abilities. Limited access to resources, technology-related barriers, language and cultural differences, and assessment alignment were also identified as implementation constraints. These findings reveal that the difficulties are not isolated problems but systemic issues involving pedagogy, resources, inclusion, technology, and accountability. Solutions offered to address the challenges were also rated much evident, with an overall mean of 3.77. Policy advocacy for resources and support ranked highest, followed by collaborative learning communities and a supportive school culture. Professional development, mentoring or coaching, and the development of DAP-aligned resources were also recognized as necessary responses. The results suggest that technical training alone is insufficient unless accompanied by policy support, resource allocation, and school-level collaboration. The test of significant difference on the rank orders of challenges and solutions showed no significant difference between respondent groups. The probability values for challenges and solutions were both above the 0.05 significance level. This means that Labo East and Labo West shared broadly similar perceptions of the implementation barriers and improvement measures. Such convergence strengthens the case for district-wide rather than isolated school-level interventions. The study concludes that ELLN-DAP implementation in Labo East and West Districts is generally strong but uneven in assessment-related practices. It implies that policy, professional development, school leadership, resource provision, and assessment reform must be aligned to sustain developmentally appropriate early-grade instruction. The article recommends stronger formative assessment systems, continuous teacher development, flexible curriculum design, collaborative school cultures, and increased investment in early childhood education. Keywords: ELLN-DAP; developmentally appropriate practices; early literacy and numeracy.

1. Introduction

Early language, literacy, and numeracy are foundational competencies that shape children's later academic performance, classroom participation, and lifelong learning capacity. When learners develop oral language, print awareness, vocabulary, phonological awareness, counting, number sense, and problem-solving at an early age, they become better prepared for the cognitive demands of higher grade levels. These competencies are not merely preliminary skills but developmental building blocks for comprehension, communication, reasoning, and self-regulation. For this reason, early-grade education systems are increasingly evaluated according to their ability to provide responsive and developmentally sound instruction.

The quality of early-grade instruction depends not only on curriculum content but also on the appropriateness of the methods used to deliver that content. Young learners do not acquire language, literacy, and numeracy most effectively through rigid, decontextualized, or purely abstract instruction. They learn more productively when classroom experiences are concrete, interactive, age-appropriate, culturally responsive, and connected to their immediate environment. Developmentally Appropriate Practices therefore provide a crucial pedagogical framework for implementing early learning programs.

Developmentally Appropriate Practices recognize that children grow and learn through predictable developmental patterns while also differing in readiness, interests, experiences, and sociocultural background. In practice, DAP requires teachers to plan activities that are meaningful, active, inclusive, and responsive to individual learners. It also requires attention to play, exploration, guided instruction, social interaction, and assessment that reflects children's developmental progress. When applied to ELLN instruction, DAP helps ensure that early learning targets are pursued in ways that respect how children actually learn.

The Early Language, Literacy and Numeracy program is designed to strengthen the instructional foundations of young learners. Its effectiveness depends on classroom-level translation through teacher strategies, learning activities, instructional materials, stakeholder participation, and assessment procedures. A program may have strong policy intentions, but its actual educational value is determined by how it is implemented in schools. Thus, evaluating implementation effectiveness is essential for determining whether ELLN-DAP is functioning as a meaningful instructional framework rather than merely as a formal program label.

Implementation effectiveness in early education is multidimensional. It includes the existence of innovations and projects, the quality of activities conducted, the appropriateness of strategies used, the depth of stakeholder engagement, the preparation of learning materials, and the development of assessment protocols. Each of these dimensions contributes to the learning environment experienced by children. Weakness in any one dimension may reduce the coherence and sustainability of the entire program.

Existing innovations and projects matter because they provide the programmatic structures through which schools organize early learning improvement. Innovations may include localized instructional approaches, intervention packages, enrichment activities, or technology-supported practices. However, innovations become developmentally appropriate only when they are adapted to children's age, readiness, context, and learning needs. The study therefore examined whether existing projects were effectively aligned with ELLN-DAP rather than simply implemented as routine school activities.

Activities conducted in early-grade classrooms are central to ELLN-DAP because young learners require learning experiences that are active and concrete. Hands-on activities, language-rich interactions, play-based tasks, sensory learning, literacy-focused

activities, and creative work can strengthen children's engagement and skill development. Such activities make abstract language and numeracy concepts more accessible to learners. They also create opportunities for teachers to observe children's understanding while learning is taking place.

Strategies used by teachers represent the pedagogical core of ELLN-DAP implementation. Differentiated instruction, multisensory teaching, small-group instruction, cooperative learning, inquiry-based learning, play-based learning, explicit instruction, and assessment-driven instruction all serve distinct developmental purposes. These strategies help teachers respond to diverse learner needs while maintaining instructional clarity. Effective implementation requires teachers to combine structured support with learner-centered exploration.

Stakeholders' engagement is equally important because early learning is influenced by both school and home environments. Parents, school heads, teachers, community partners, and education leaders contribute to learners' access to support, materials, motivation, and continuity of learning. Regular communication and feedback loops can promote shared ownership of early education goals. Without stakeholder engagement, ELLN-DAP may remain confined to classroom efforts and fail to become a broader learning community commitment.

The preparation of learning materials determines whether teachers have concrete tools for translating curriculum objectives into meaningful experiences. Developmentally appropriate materials should be engaging, hands-on, interactive, equitable, accessible, and responsive to learner interests. Materials should also provide visual, tactile, and contextual support for language, literacy, and numeracy development. When materials are insufficient, inappropriate, or poorly aligned, even well-trained teachers may struggle to implement ELLN-DAP effectively.

Assessment protocols are critical because they determine how children's progress is monitored and how instruction is adjusted. Early-grade assessment should not rely exclusively on standardized or paper-based measures, especially when learners are still developing oral language, motor skills, social confidence, and symbolic understanding. Formative, observational, portfolio-based, performance-based, and ongoing assessments can provide richer information about children's development. Assessment protocols must therefore be both developmentally appropriate and accountable to learning standards.

Despite the value of ELLN-DAP, implementation may encounter substantial challenges. Teachers may struggle to adapt methods to diverse learning styles, balance structured instruction with child-led exploration, secure suitable resources, address language and cultural differences, integrate technology, and align assessment practices with external standards. These challenges may vary across districts and schools depending on leadership support, teacher preparation, resources, and community context. Identifying them is necessary for designing realistic and targeted improvement measures.

The Labo East and West Districts in the Division of Camarines Norte provide an important setting for examining ELLN-DAP implementation. Their inclusion allows comparison between two district contexts within one division while retaining attention to shared educational priorities. The study does not merely ask whether ELLN-DAP exists but how effectively it is implemented across key domains. This makes the inquiry relevant to school heads, supervisors, teachers, curriculum planners, and policy makers.

A major concern in implementation studies is whether respondent groups view program practices similarly. If groups differ significantly in rank-order perceptions, the program may be implemented unevenly or interpreted differently across sites. Conversely, lack of significant difference may suggest broadly shared implementation realities. The present study therefore used rank-order significance testing to determine whether Labo East and Labo West differed in their perceptions of implementation effectiveness, challenges, and solutions.

Another important concern is the relationship between challenges and solutions. A program can be rated as implemented while still facing constraints that limit its quality, equity, and sustainability. Solutions must therefore correspond to the actual nature of the challenges rather than remain general or symbolic. The study addressed this concern by examining both the challenges encountered and the solutions offered in ELLN-DAP implementation.

The findings of this study have significance for early childhood education practice and policy. For teachers, the results clarify which instructional practices are strongest and which require reinforcement. For school heads and supervisors, they provide evidence for professional development, monitoring, and resource allocation. For policy makers, they point to the need for systemic support in assessment, materials, curriculum flexibility, and stakeholder collaboration.

This article contributes by transforming thesis findings into a journal-ready account of ELLN-DAP implementation. Its value lies in the comprehensive presentation of implementation domains, statistical rank-order comparisons, challenges, solutions, conclusions, and policy implications. It is especially useful for education systems seeking to strengthen early-grade learning through developmentally appropriate instruction. The article maintains fidelity to the empirical results while improving coherence, organization, and analytical depth for publication purposes.

Specifically, this article determined the extent of effectiveness of ELLN-DAP implementation in terms of existing innovations and projects, activities conducted, strategies used, stakeholders' engagement, preparation of learning materials, and development of different assessment protocols. It also tested the significant difference on rank orders across these domains, identified the challenges encountered, described the solutions offered, and tested whether rank-order differences existed for challenges and solutions. Finally, it derived conclusions and implications for policy and practice. The deductive movement of this introduction establishes the broader importance of early learning before focusing on the specific ELLN-DAP implementation evidence from Labo East and West Districts.

2. Methodology

The study employed a descriptive-evaluative-inferential-correlational research design. It was descriptive because it presented the current extent of ELLN-DAP implementation across several domains. It was evaluative because it interpreted whether

implementation practices, challenges, and solutions were evident to a meaningful degree. It was inferential-correlational because it tested differences in rank orders between respondent groups using computed z-values and associated probabilities.

The locale of the study was Labo East and West Districts in the Division of Camarines Norte during School Year 2023-2024. These districts were the specific sites in which the implementation of Early Language, Literacy and Numeracy-Developmentally Appropriate Practices was examined. The locale was appropriate because ELLN-DAP is directly relevant to early-grade instruction and school-level learning improvement. The district comparison also allowed the study to determine whether implementation perceptions were shared or varied across groups.

The respondents were teachers and school personnel involved in or knowledgeable about ELLN-DAP implementation in the two districts. The thesis materials presented the findings by Labo West and Labo East respondent groups. The respondent grouping enabled comparative analysis of rank orders and weighted means. This grouping was essential because the study sought not only descriptive results but also statistical evidence of significant difference between groups.

The researcher used two sets of researcher-made questionnaires. The first set measured the effectiveness of ELLN-DAP implementation in six domains: existing innovations and projects, activities conducted, strategies used, stakeholders' engagement, preparation of learning materials, and development of different assessment protocols. The second set addressed the challenges encountered and solutions offered in the implementation of the program. These instruments produced the ratings that were later tabulated, ranked, and statistically treated.

The questionnaire indicators reflected both pedagogical and organizational dimensions of implementation. Pedagogical indicators included developmentally appropriate activities, explicit instruction, multisensory teaching, hands-on materials, and assessment protocols. Organizational indicators included stakeholder communication, resource allocation, policy support, professional development, and collaborative learning communities. This structure allowed the study to treat ELLN-DAP implementation as a whole-school and district-level concern rather than only a classroom technique.

Responses were interpreted through weighted mean and rank. Weighted mean was used to determine the extent to which each indicator and domain was implemented or evident. Rank was used to arrange the indicators and domains from highest to lowest, thereby identifying priority strengths and comparatively weaker areas. The interpretation scale included Very Much Implemented, Much Implemented, Implemented, Not Implemented, and Not at All for implementation domains.

For challenges and solutions, the interpretation was treated in terms of degree of evidence. The study reported the composite ratings of challenges encountered and solutions offered, thereby allowing the findings to capture both the presence of barriers and the perceived usefulness of responses. This is methodologically important because effective implementation cannot be understood only through positive implementation ratings. It must also be examined through the constraints and corrective mechanisms perceived by respondents.

The inferential procedure involved the test of significant difference on the rank orders between Labo East and Labo West. The tables reported the summation of ranks for each group, total number of cases, computed z-values, probability values associated with z, decisions on the null hypothesis, and significance interpretation. The 0.05 level of significance served as the decision threshold. A probability value greater than 0.05 led to acceptance of the null hypothesis, while a probability value lower than 0.05 led to rejection.

The methodology is appropriate for the objectives of the study because it provides both descriptive and comparative evidence. It identifies the level of implementation, highlights the strongest and weakest indicators, and determines whether group perceptions differ statistically. However, the study is based on respondent ratings and does not include experimental measurement of learner gains. The results should therefore be interpreted as evidence of implementation effectiveness and perceived program functioning rather than direct causal proof of learner achievement improvement.

3. Results and Discussion

This section presents the findings of the study in relation to the effectiveness of ELLN-DAP implementation, the rank-order differences between Labo East and Labo West, the challenges encountered, and the solutions offered. The tabular presentations were reorganized from the thesis results to emphasize interpretability, journal coherence, and policy relevance. Each table is followed by analytical discussion that explains the meaning of the results beyond numerical reporting. The discussion highlights both instructional strengths and areas requiring improvement.

The results should be read with attention to three levels of evidence: domain-level means, indicator-level patterns, and inferential rank-order tests. Domain-level means show the overall extent of implementation, while indicator patterns reveal specific strengths and weaknesses within each domain. Inferential tests indicate whether Labo East and Labo West differed significantly in how they ranked implementation domains, challenges, and solutions. Together, these levels of evidence provide a comprehensive account of ELLN-DAP implementation in the study locale.

Table 1. Summary of the Extent of Effectiveness of ELLN-DAP Implementation

Implementation Domain	Labo West Wx	Int.	Rank	Labo East Wx	Int.	Rank	Average Wx	Int.	Rank
Existing Innovations and Projects	4.25	MI	3	3.97	MI	5	4.15	MI	4.5
Activities Conducted	4.16	MI	4	4.15	MI	3	4.16	MI	3
Strategies Used	4.33	MI	1	4.18	MI	2	4.26	MI	1
Stakeholders' Engagement	4.13	MI	5	4.19	MI	1	4.23	MI	2

Implementation Domain	Labo West Wx	Int.	Rank	Labo East Wx	Int.	Rank	Average Wx	Int.	Rank
Preparation of Learning Materials	4.26	MI	2	4.02	MI	4	4.15	MI	4.5
Development of Different Assessment Protocols	4.08	MI	6	3.92	MI	6	4.00	MI	5
Composite Weighted Average	4.22	MI		4.05	MI		4.19	MI	

Table 1 shows that ELLN-DAP implementation was much implemented overall, with a composite weighted mean of 4.19. Strategies used ranked first with an average of 4.26, indicating that classroom-level instructional strategies were the strongest domain. Stakeholders' engagement ranked second with 4.23, while activities conducted ranked third with 4.16. Existing innovations and projects, preparation of learning materials, and development of different assessment protocols followed, with the assessment domain receiving the lowest average of 4.00.

The leading position of strategies used implies that teachers are actively applying instructional approaches that support early language, literacy, and numeracy development. This is significant because strategies are the immediate mechanisms through which ELLN-DAP reaches learners. The relatively high rating for stakeholder engagement also suggests that implementation is not confined to teacher action alone but is supported by communication and participation among school actors. Together, these two domains indicate a promising interaction between pedagogy and school-community collaboration.

The lowest-ranked domain, development of different assessment protocols, deserves attention even though it was still interpreted as much implemented. Assessment is the mechanism through which teachers identify learner progress, adjust instruction, and determine whether developmentally appropriate practices are producing meaningful outcomes. A lower rating in this area suggests that teachers may need stronger support in designing varied, formative, observational, portfolio-based, and performance-based assessment practices. Without such support, instructional implementation may remain active but insufficiently evidence-based.

The comparison between Labo West and Labo East also reveals meaningful implementation patterns. Labo West generally obtained a higher composite mean of 4.22 compared with 4.05 for Labo East, although both were interpreted as much implemented. This difference may reflect variations in resources, training, leadership support, or local implementation routines. The result indicates that district-wide policy should sustain existing strengths while addressing domain-specific gaps, particularly in assessment protocols and materials preparation.

Table 2. Indicator Highlights by Implementation Domain

Domain	Highest-Rated Indicator	Mean	Lowest-Rated Indicator	Mean	Domain Mean	Interpretation
Existing Innovations and Projects	Integrating innovative approaches alongside existing projects supports holistic development	4.45	Combining evidence-based strategies with existing initiatives cultivates a supportive learning environment	3.97	4.15	MI
Activities Conducted	Participating in hands-on activities supports the application of knowledge and skills	4.42	Incorporating arts and crafts activities stimulates creativity and imagination	3.94	4.16	MI
Strategies Used	Utilizing explicit instruction strategies provides clear and structured guidance for young learners	4.37	Incorporating play-based learning strategies facilitates hands-on exploration and experimentation	4.14	4.26	MI
Stakeholders' Engagement	Engaging stakeholders in regular communication and feedback loops promotes shared ownership and commitment	4.32	Collaborating with stakeholders in resource allocation decisions optimizes resource use	4.15	4.23	MI
Preparation of Learning Materials	Creating developmentally appropriate learning materials enhances engagement and supports skill development	4.38	Utilizing recyclable and sustainable materials for learning activities	3.81	4.15	MI
Development of Different Assessment Protocols	Integrating standardized assessment protocols complements teacher observations and provides benchmark data	4.11	Creating peer-assessment protocols fosters collaboration and accountability	3.86	4.00	MI

Table 2 presents the highest and lowest indicators within each implementation domain. The strongest indicators include integrating innovations for holistic development, hands-on activities, explicit instruction, regular stakeholder communication, developmentally appropriate learning materials, and standardized assessment protocols. These results show that implementation strength is concentrated in practices that provide structure, clarity, engagement, and organized support. They also suggest that teachers and school personnel recognize the practical value of clear guidance and concrete learning experiences.

The highest indicator under strategies used was explicit instruction, with a mean of 4.37. This finding suggests that teachers value clarity, modeling, and structured guidance when teaching young learners. Explicit instruction is not inconsistent with DAP when it is delivered in age-appropriate, responsive, and interactive ways. Rather, it can provide the scaffold that enables children to participate meaningfully in language, literacy, and numeracy activities.

The lower-rated indicators identify areas where implementation can be enriched. Play-based learning under strategies, recyclable and sustainable materials under learning materials, and peer-assessment protocols under assessment received comparatively lower means. These areas are important because DAP emphasizes exploration, creativity, responsibility, and active learner participation. Their lower ratings suggest that implementation may be more structured than exploratory in some classrooms.

A balanced ELLN-DAP program should integrate both structured and exploratory approaches. The findings do not require abandoning explicit instruction or standardized assessment, but they call for complementing them with play-based tasks, peer collaboration, sustainable resources, and authentic assessment. This balance is especially important for early-grade learners, whose development depends on meaningful interaction with people, materials, language, and environment. The table therefore provides a practical map for targeted teacher support and curriculum enhancement.

Table 3. Test of Significant Difference on Rank Orders of Implementation Effectiveness

Domain	Rank Sum Labo East	Rank Sum Labo West	N	Computed Z	p-value	Decision	Interpretation
Existing Innovations and Projects	68	68	16	0.0525	0.4800	Accepted	Not Significant
Activities Conducted	53.5	94.5	14	0.1917	0.4247	Accepted	Not Significant
Strategies Used	109	57	18	-0.3275	0.3710	Accepted	Not Significant
Stakeholders' Engagement	82	53	16	-1.5231	0.0646	Accepted	Not Significant
Preparation of Learning Materials	83	53	16	-1.5231	0.0646	Accepted	Not Significant
Development of Different Assessment Protocols	84	48	16	-2.0483	0.0207	Rejected	Significant at 0.05

Table 3 reports the test of significant difference on the rank orders of the implementation domains. The null hypothesis was accepted for existing innovations and projects, activities conducted, strategies used, stakeholders' engagement, and preparation of learning materials. The probability values for these domains were greater than the 0.05 level of significance. This means that Labo East and Labo West did not differ significantly in their rank-order perceptions for most implementation areas.

The absence of significant difference in five domains suggests a broadly shared understanding of ELLN-DAP implementation between the two districts. Shared perceptions can be advantageous for district planning because common interventions may be designed without assuming radically different needs in each area. It also indicates that implementation strengths and concerns are not isolated to one district. This creates a basis for collaborative professional development, joint monitoring, and common resource planning.

The development of different assessment protocols was the only domain with a significant difference, with a probability value of 0.0207. This result indicates that assessment practices are perceived differently between the respondent groups. Assessment may vary because of differences in teacher familiarity, available tools, supervisory expectations, or school routines for monitoring children's progress. This finding is important because assessment drives instructional decisions and accountability in ELLN-DAP.

The statistical result implies that assessment reform should be a priority area. District leaders should examine why assessment protocols differ significantly and identify which assessment practices are more consistently used or more difficult to implement. Professional development should focus on formative, observational, portfolio-based, performance-based, and ongoing assessment methods suitable for early learners. Harmonizing assessment protocols will help ensure that developmental progress is documented consistently across schools.

Table 4. Challenges Encountered in ELLN-DAP Implementation

Implementation Domain	Labo West Wx	Int.	Rank	Labo East Wx	Int.	Rank	Average Wx	Int.	Rank
Balancing structured instruction with opportunities for child-led exploration	4.84	VME	1	3.72	ME	4.5	4.29	ME	1
Adapting teaching methods to diverse learning styles and abilities	4.41	ME	2	4.09	ME	1	4.27	ME	2
Limited access to suitable resources and materials	4.34	ME	3	3.87	ME	2.5	4.11	ME	3
Incorporating technology despite access and digital literacy barriers	4.12	ME	4	3.87	ME	2.5	4.00	ME	4
Addressing language barriers and cultural differences among students and families	3.91	ME	5	3.72	ME	4.5	3.82	ME	5
Aligning assessment practices with DAP while meeting external standards	3.57	ME	6	3.37	ME	6	3.47	ME	6
Composite Average	4.20	ME		3.77	ME		3.98	ME	

Table 4 shows that the challenges encountered in ELLN-DAP implementation were much evident, with an overall mean of 3.98. The highest-rated challenge was balancing structured instruction with opportunities for child-led exploration, with an average of 4.29. This was followed by adapting teaching methods to diverse learning styles and abilities, with an average of 4.27. These results reveal that the most pressing concerns are pedagogical rather than merely administrative.

The top challenge reflects a central tension in developmentally appropriate instruction. Teachers must provide structure to meet curriculum goals, but they must also allow exploration, play, choice, and child-initiated learning. If instruction becomes too

structured, children may lose opportunities for discovery and social learning. If it becomes too open-ended, teachers may struggle to ensure mastery of early language, literacy, and numeracy competencies.

Resource limitations also emerged as a major challenge, with a mean of 4.11. Developmentally appropriate instruction often requires manipulatives, visual materials, language-rich texts, technology, assessment tools, and adaptable classroom resources. When these are limited, teachers may rely heavily on verbal instruction or generic worksheets. This can reduce the richness and responsiveness of ELLN-DAP implementation.

The lower-rated challenge, aligning assessment practices with DAP while meeting external standards, still obtained a much evident interpretation. This finding should not be dismissed because assessment alignment is technically complex and directly connected to the significant difference found in assessment protocols. Teachers may find it difficult to design assessments that are both developmentally appropriate and compliant with formal accountability expectations. The challenge profile therefore confirms that teacher support must address pedagogy, resources, technology, inclusion, and assessment together.

Table 5. Solutions Offered to Address ELLN-DAP Implementation Challenges

Implementation Domain	Labo West Wx	Int.	Rank	Labo East Wx	Int.	Rank	Average Wx	Int.	Rank
Advocating for policy changes at the district or state level to allocate resources and support	4.05	ME	1	3.87	ME	1	3.96	ME	1
Establishing collaborative learning communities to share best practices and resources	3.90	ME	3	3.82	ME	2.5	3.87	ME	2
Creating a supportive school culture that values and prioritizes DAP	3.84	ME	4	3.77	ME	4	3.81	ME	3
Providing targeted professional development and ongoing training for educators	3.69	ME	6	3.82	ME	2.5	3.76	ME	4.5
Implementing a mentoring or coaching program for individualized support	3.91	ME	2	3.61	ME	5	3.76	ME	4.5
Developing and curating comprehensive DAP-aligned resources accessible to educators	3.77	ME	5	3.56	ME	6	3.67	ME	6
Composite Average	3.85	ME		3.74	ME		3.77	ME	

Table 5 presents the solutions offered to address the challenges encountered in ELLN-DAP implementation. The overall mean was 3.77, interpreted as much evident. The highest-rated solution was advocating for policy changes at the district or state level to allocate resources and support, with an average of 3.96. This indicates that respondents recognize the need for systemic solutions rather than relying solely on individual teacher effort.

Collaborative learning communities ranked second with an average of 3.87. This finding suggests that teachers need structured venues for sharing strategies, resources, classroom experiences, and solutions to implementation barriers. Professional collaboration is particularly important in ELLN-DAP because teachers often face similar challenges in adapting instruction, preparing materials, and assessing young learners. Learning communities can transform isolated teaching difficulties into collective problem-solving opportunities.

A supportive school culture ranked third, with an average of 3.81. This emphasizes the role of school leadership in sustaining developmentally appropriate practices. Teachers are more likely to implement ELLN-DAP effectively when school heads recognize good practices, allocate time for planning, and encourage experimentation. A supportive culture also helps normalize continuous improvement rather than treating implementation problems as individual teacher shortcomings.

Professional development, mentoring, and resource development were also rated much evident, although they ranked lower. These solutions should still be treated as essential components of program strengthening. Policy advocacy can secure resources, but teachers need training and coaching to use those resources effectively. The table therefore supports a layered improvement model that combines policy support, professional collaboration, school culture, coaching, and materials development.

Table 6. Test of Significant Difference on Rank Orders of Challenges and Solutions

Indicator	Rank Sum Labo East	Rank Sum Labo West	N	Computed Z	p-value	Decision	Interpretation
Challenges Encountered	68	68	16	0.0525	0.4800	Accepted	Not Significant
Solutions Offered	53.5	94.5	14	0.1917	0.4247	Accepted	Not Significant

Table 6 shows that there was no significant difference in the rank orders of challenges encountered and solutions offered between the respondent groups. For challenges, the computed z was 0.0525 with a probability value of 0.4800. For solutions, the computed z was 0.1917 with a probability value of 0.4247. Both values exceeded the 0.05 level of significance, resulting in acceptance of the null hypothesis.

The lack of significant difference means that Labo East and Labo West shared similar perceptions regarding the barriers to ELLN-DAP implementation. This is a valuable finding because it indicates that challenges are likely systemic rather than isolated. Both

groups recognized comparable issues related to pedagogy, resources, technology, inclusion, and assessment. Therefore, district-level interventions can be designed with confidence that they address common needs.

The same interpretation applies to the solutions offered. Since no significant difference was found, both groups appear to recognize similar improvement measures. Policy support, collaborative learning communities, supportive school culture, professional development, mentoring, and resource development are relevant across both districts. This supports the development of unified implementation guidelines and shared professional development plans.

The combined interpretation of Tables 3 and 6 points to a nuanced conclusion. While most implementation domains, challenges, and solutions are similarly perceived, assessment protocols remain an exception requiring closer examination. This means district policy should include general interventions for shared needs and targeted interventions for assessment alignment. Such an approach is more efficient because it avoids both overgeneralization and unnecessary fragmentation of support.

4. Conclusions and Implications

4.1 Conclusions

The study concludes that the implementation of Early Language, Literacy and Numeracy-Developmentally Appropriate Practices in Labo East and West Districts was generally strong. The composite weighted mean of 4.19 indicates that ELLN-DAP was much implemented across the major domains examined. This means that the program has moved beyond nominal adoption and is reflected in instructional strategies, activities, stakeholder engagement, materials, innovations, and assessment practices. However, the strength of implementation varies by domain, and this variation has important implications for program refinement.

Strategies used emerged as the strongest implementation domain. This conclusion suggests that teachers are actively applying pedagogical strategies that support the early development of language, literacy, and numeracy skills. Explicit instruction, assessment-driven teaching, cooperative learning, differentiated instruction, and small-group instruction appear to be meaningful components of classroom practice. The strength of this domain indicates that teacher-level implementation is a major asset of the program.

Stakeholders' engagement also emerged as a strong domain of implementation. Regular communication, feedback loops, decision-making participation, and stakeholder input contribute to shared ownership of ELLN-DAP. This conclusion confirms that early learning is not sustained by teachers alone but by coordinated participation among educators, families, school leaders, and communities. Strong stakeholder engagement provides a favorable environment for sustaining early-grade interventions.

The development of different assessment protocols was the comparatively weakest implementation domain. Although still interpreted as much implemented, it obtained the lowest domain mean and was the only area with a statistically significant difference in rank orders between Labo East and Labo West. This conclusion indicates that assessment practices are less harmonized than other implementation areas. It also suggests that teachers and schools may need clearer guidance on developmentally appropriate assessment systems.

The study further concludes that most implementation domains did not significantly differ between Labo East and Labo West. Existing innovations and projects, activities conducted, strategies used, stakeholders' engagement, and preparation of learning materials showed no significant rank-order differences. This means that both districts generally share comparable perceptions of ELLN-DAP implementation effectiveness in these domains. Such similarity provides a foundation for common district-wide improvement programs.

The challenges encountered were much evident and were primarily pedagogical and systemic in nature. The most pronounced challenges involved balancing structured instruction with child-led exploration and adapting teaching methods to diverse learning styles and abilities. Resource limitations, technology integration barriers, language and cultural differences, and assessment alignment concerns also contributed to implementation difficulty. These challenges indicate that ELLN-DAP requires sustained support rather than one-time orientation.

The solutions offered were likewise much evident and emphasized policy support, collaboration, school culture, training, mentoring, and resource development. The strongest solution was advocacy for policy changes and resource support, indicating that respondents view implementation improvement as a shared institutional responsibility. Collaborative learning communities and supportive school cultures also emerged as important mechanisms. These conclusions show that improvement must be pursued through both technical and organizational support.

Finally, there was no significant difference in the rank orders of challenges and solutions between Labo East and Labo West. This indicates that both groups perceived the barriers and responses in broadly similar ways. The convergence of perceptions strengthens the validity of district-level intervention planning. The overall conclusion is that ELLN-DAP is functioning meaningfully in the study locale but requires focused strengthening in assessment, resource provision, teacher support, and balanced developmentally appropriate instruction.

4.2 Implications

The findings imply that district leaders should sustain and scale the instructional strategies that teachers already implement effectively. Since strategies used obtained the highest rating, professional development should build on existing classroom strengths rather than begin from deficit assumptions. Teachers can be supported to refine explicit instruction, differentiated instruction, cooperative learning, and assessment-driven teaching. Strengthening what already works can improve teacher confidence and program continuity.

The lower rating and significant difference in assessment protocols imply the need for a district-wide assessment framework for ELLN-DAP. Such a framework should include formative, observational, portfolio-based, performance-based, ongoing, peer-

supported, and standardized components appropriate for early-grade learners. It should clarify when and how each assessment type may be used. Consistency in assessment would help teachers monitor learning progress while respecting developmental principles.
The findings also imply that professional development should focus on the balance between structured instruction and child-led exploration. This balance was the highest-rated challenge and therefore requires deliberate training. Teachers need examples of lessons that combine clear objectives with play, exploration, inquiry, and learner choice. Training should include demonstration teaching, coaching, peer observation, and classroom-based reflection.
Resource allocation is another major implication. The evidence shows that limited access to suitable resources remains a much evident challenge, while policy advocacy for resources ranked as the strongest solution. Schools and districts should prioritize developmentally appropriate materials, manipulatives, visual aids, language-rich texts, technology support, and assessment tools. Resource provision should be linked to teacher training so that materials are used meaningfully rather than merely distributed.
Stakeholder engagement should be institutionalized because it is one of the stronger implementation domains. Regular communication, feedback systems, and participatory planning can help sustain shared responsibility for early learning. Parents and community members can support language, literacy, and numeracy development at home when they understand program goals. Schools should therefore develop communication mechanisms that translate ELLN-DAP objectives into practical family and community actions.
The findings imply that school heads have a crucial role in creating supportive cultures for ELLN-DAP. A supportive school culture ranked highly among the solutions offered, indicating that leadership affects implementation quality. School heads should provide time for planning, recognize successful practices, organize learning action cells, and encourage teacher collaboration. Leadership support can reduce implementation fatigue and strengthen teacher commitment.
Curriculum writers and supervisors should use the findings to refine curricular guides and classroom support tools. The comparatively lower ratings for play-based learning, recyclable materials, and peer assessment suggest areas where curriculum examples may be insufficient. Guides should include developmentally appropriate sample activities, low-cost material options, assessment rubrics, and differentiated learning pathways. These supports would make implementation more concrete and manageable for teachers.
Policy makers should interpret the study as evidence that ELLN-DAP implementation is promising but requires systemic strengthening. Investment in teacher capacity, resource equity, assessment alignment, and stakeholder participation can improve the quality of early education. Because the two districts share similar perceptions of challenges and solutions, policies can be crafted at the district level while allowing school-level adaptation. The broader implication is that early language, literacy, and numeracy programs must be supported as integrated systems rather than isolated classroom initiatives.

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