

Original Article

Developing a Theory of Change for an Alternative Learning System Reform Proposal Based on the 2026 EDCOM II Roadmap

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Abstract. Despite relatively high levels of basic literacy in the Philippines, significant challenges remain in applying literacy and numeracy skills in everyday contexts. National data from the Functional Literacy, Education, and Mass Media Survey (FLEMMS 2024) indicate that basic literacy is 90.0% among individuals aged five years and above. Functional literacy among individuals aged 10–64 is 70.8%. While these figures are derived from different population groups, they suggest persistent challenges in translating foundational skills into practical application. This study develops a policy-anchored Theory of Change (ToC) framework for Alternative Learning System (ALS) reform, grounded in empirical evidence and aligned with the national education reform agenda of the Second Congressional Commission on Education (EDCOM II). A descriptive and policy analysis approach was employed, integrating secondary data analysis with systematic policy mapping. National literacy indicators from FLEMMS 2024 were analyzed to assess variations across regions, learner groups, and age cohorts. Findings reveal substantial regional disparities in functional literacy, with an estimated 10.4 million individuals classified as illiterate or low-literate, alongside persistent literacy gaps across multiple life-course stages. These patterns underscore the need for differentiated and context-responsive learning pathways. In response, the study proposes a ToC framework that systematically links demographic literacy challenges to ALS pathways, policy and system inputs, and intended outcomes. The study contributes a structured approach for translating national literacy data into policy-relevant program design. The proposed framework positions ALS as a flexible system capable of supporting inclusive, decentralized, and lifelong learning pathways and presents it as an analytical model rather than as evidence of demonstrated program effectiveness.

Keywords: *Alternative Learning System; Education reform; Functional literacy; Lifelong learning; Theory of Change*

A central challenge in the Philippine education system is translating foundational literacy skills into functional competencies that enable meaningful participation in everyday life. National evidence from the Functional Literacy, Education, and Mass Media Survey (FLEMMS 2024) provides data on basic literacy, defined as reading and writing skills, and on how these skills are applied in practical contexts involving comprehension, problem solving, and numeracy (Abrigo & Francisco, 2023; Gatcho et al., 2024; Philippine Statistics Authority [PSA], 2024). Limitations in functional competencies affect individuals' capacity to engage effectively in education, employment, and broader social participation (Igarashi & Suryadarma, 2023). These challenges are particularly evident among out-of-school youth and adults with limited or interrupted access to formal education (Mahinay et al., 2026; Ruiz et al., 2020).

Within this context, addressing the diverse learning needs of these populations cannot be achieved through a uniform educational approach. Instead, it requires differentiated and context-responsive interventions. The Philippines' Alternative Learning System (ALS) functions as a key mechanism for providing flexible learning opportunities outside the formal system (Cabiles, 2022; Hendrix-Soto, 2025). ALS is designed to support the development of both foundational and functional competencies by adapting non-formal and community-based learning modalities to specific learner profiles (Albert et al., 2024). Reinforcing this mandate, the national education reform agenda articulated in the Second Congressional Commission on Education (EDCOM II) roadmap identifies ALS as a priority area for strengthening inclusive education and expanding lifelong learning pathways (Parreño, 2022). By emphasizing reforms in governance, financing, infrastructure, and decentralized delivery, EDCOM II outlines institutional conditions that support the implementation of differentiated ALS pathways at scale (EDCOM II, 2026).

Despite this policy emphasis, current discussions on ALS reform remain largely focused on program implementation and administrative improvements, with limited attention to analytical frameworks that systematically link national literacy conditions to reform design (Saldivar, 2025). Existing studies highlight the importance of aligning policy initiatives with implementation strategies in strengthening alternative education programs (Abad & Galleto, 2020). However, a critical gap remains in data-to-policy integration, particularly in translating population-level literacy evidence into structured frameworks that inform differentiated program pathways (Abrigo & Francisco, 2023; Albert et al., 2024). As a result, the process by which empirical literacy data can guide the design of targeted, context-responsive ALS interventions remains insufficiently articulated in current policy and research discourse (Alejandro et al., 2025).

To address this gap, this study adopts a descriptive and policy analysis approach to framework development by examining national literacy conditions and conceptually linking them to ALS reform strategies. Specifically, the study aims to: (1) analyze national literacy patterns using FLEMMS 2024 data; (2) identify priority learner segments based on literacy levels and demographic characteristics; and (3) develop a policy-anchored Theory of Change (ToC) framework for ALS reform. Grounded in the premise that a ToC framework provides a structured means of mapping inputs, processes, and outcomes in complex policy environments (Vogel, 2012), the study integrates demographic literacy patterns with differentiated ALS pathways, implementation mechanisms, and system-level policy inputs. By systematically connecting national literacy evidence to program design and institutional conditions, the study proposes an analytical model intended to support inclusive, differentiated, and lifelong learning pathways. In doing so, it strengthens the link between empirical literacy diagnosis and evidence-informed reform design.

Methodology

Research Design

This study employed a descriptive and policy analysis design for framework development, utilizing secondary data analysis and policy mapping to examine national literacy conditions and inform ALS reform. This design integrates descriptive statistical analysis with policy analysis procedures to generate evidence for framework development rather than causal inference (Creswell & Creswell, 2020). Through this approach, empirical evidence on literacy and policy insights were systematically synthesized via an iterative analytical process to support the development of a ToC framework that links literacy challenges to ALS pathways, implementation mechanisms, and expected outcomes (Mayne, 2017).

Data Gathering Procedure

The study utilized secondary data derived from publicly available national datasets and government policy

documents. The primary dataset analyzed was the Functional Literacy, Education, and Mass Media Survey (FLEMMS 2024), published by the Philippine Statistics Authority (PSA), which provides nationally representative statistics on literacy and educational participation among Filipinos aged five years and above (PSA, 2024). Key indicators extracted from the dataset included basic and functional literacy rates, the regional distribution of literacy outcomes, and age cohort characteristics. In addition to statistical data, relevant education policy frameworks were examined through the documentary analysis of the EDCOM II Final Report, *Turning Point: A Decade of Necessary Reform (2026–2035)*, to identify national reform priorities for ALS development (EDCOM II, 2026). These sources were selected to integrate empirical evidence on literacy with policy directions, thereby supporting the development of a policy-anchored analytical framework.

Data Analysis

The study employed a structured, descriptive, and analytical approach to systematically transform national literacy data into a policy-anchored ToC framework for ALS reform. Specifically, the unit of analysis is the national ALS system informed by population literacy indicators. The analysis was conducted in four interrelated stages:

Descriptive Analysis. National literacy indicators derived from the FLEMMS 2024 were analyzed using descriptive statistics, including frequency counts and percentages, to establish baseline literacy conditions. This stage identified key patterns, including variations in the application of functional literacy, regional disparities in literacy outcomes, and distinctions across age cohorts. These descriptive results provided the empirical foundation in understanding the scale and distribution of literacy challenges relevant for ALS reform (Diquito, 2024).

Segmentation Analysis. Building on the descriptive findings, the population was systematically segmented by literacy classification (e.g., illiterate, low-literate, and basic literate) and age cohort. Each segment is aligned with corresponding ALS entry points and program pathways, such as the Basic Literacy Program (BLP), Accreditation and Equivalency (A&E) programs, senior high school bridging, and skills development pathways. This segmentation enabled the identification of priority learner groups and clarified the differentiated learning needs that ALS interventions must address (Gervacio & Xhomaqi, 2025).

Policy Mapping and Synthesis. The segmented literacy needs were examined through documentary analysis and policy mapping using the EDCOM II report as the primary policy source. Relevant provisions were identified using predefined selection criteria, including direct applicability to ALS implementation, literacy development, delivery mechanisms, financing, governance, infrastructure, and monitoring. Extracted provisions were organized under predefined analytic categories for mapping: (a) policy and system inputs, (b) delivery mechanisms, (c) financing strategies, and (d) governance structures. These categories were refined iteratively to consolidate recurring reform levers relevant to ALS (e.g., demand-sensitive financing, decentralized governance, and infrastructure modernization). Policy elements were retained in the final mapping based on their alignment with the literacy conditions identified in FLEMMS 2024, their applicability to ALS pathways, and their relevance to differentiated learner needs. The authors reviewed mapping decisions and, through discussion, reached consensus to account for alternative policy interpretations. The resulting mapping informed the structural alignment of policy levers and learner pathways, as well as the final ToC framework.

Theory of Change (ToC) Construction. Finally, insights from the preceding stages were integrated to construct a ToC framework that links identified literacy challenges (problem nodes) to policy inputs, implementation mechanisms, and expected outcomes. The ToC was developed by organizing findings into a logical sequence of inputs, processes, outputs, and outcomes that reflect how ALS interventions are expected to address diverse learner needs. The resulting framework serves as an analytical model that explains the pathways through which ALS reform strategies may contribute to improved functional literacy and expanded lifelong learning opportunities.

Ethical Considerations

This study relied exclusively on secondary data obtained from publicly available national statistical reports and policy documents. No human participants were directly involved in the research. All data sources were properly cited and used for academic purposes in accordance with principles of research integrity and responsible data use (Creswell & Creswell, 2020).

Results and Discussion

Profile of Preschool Teachers

This section presents the results of the analysis of national literacy indicators and relevant education policy documents. Using data from the FLEMMS 2024, the study examines systematic patterns in literacy levels across demographic and geographic groups, including variations by literacy level and age cohort. The empirical findings identify key literacy challenges and priority learner segments, providing an analytical basis for aligning differentiated ALS pathways with the EDCOM II reform roadmap’s priorities. The discussion interprets these results to construct a policy-anchored ToC framework that informs the development of contextually responsive ALS strategies and systemic policy directions.

The National Literacy Indicators

To establish baseline literacy conditions relevant to educational reform, national indicators were examined to describe the levels of foundational and functional literacy among the Philippine population.

Table 1. National Literacy Indicators Among Filipinos			
Indicator	Population Base	Number ('000)	Rate (%)
Basic Literacy	5 years and over	93,086	90.0
Functional Literacy	10–64 years	60,170	70.8

Data Source: Philippine Statistics Authority (2024). Functional Literacy, Education and Mass Media Survey (FLEMMS).

As shown in Table 1, basic literacy among Filipinos aged five years and above is estimated at 90.0%, indicating that a substantial majority of the population has acquired foundational competencies in reading, writing, and basic numeracy. These competencies provide a basis for accessing information, communicating, and continuing to learn (Abrigo & Francisco, 2023; UNESCO, 2020). In contrast, functional literacy among individuals aged 10–64 years is estimated at 70.8%. This refers to the ability to use reading, writing, and numeracy skills in practical situations, including interpreting information, solving problems, and engaging in social and economic activities (Igarashi & Suryadarma, 2023).

While these indicators are derived from different population bases and are therefore not directly comparable, national indicators suggest a meaningful contrast between the prevalence of foundational literacy and the capacity to apply literacy and numeracy skills in practical contexts, a pattern consistent with the presence of a functional literacy gap among a substantial segment of the population. This pattern aligns with broader evidence that literacy extends beyond basic decoding and involves the ability to use knowledge meaningfully in everyday situations (Ruiz et al., 2020). This difference in application has implications for educational design. Individuals who have difficulty utilizing foundational skills may face challenges accessing information, engaging in learning, and participating in economic and social activities (Hanushek & Woessmann, 2015; UNESCO, 2020). From a policy perspective, these findings highlight the potential for a flexible system that complements access-oriented literacy efforts with approaches that strengthen applied competencies. Education systems may therefore place greater emphasis on the quality and usability of learning outcomes (Luga, 2021; Masigan, 2020). In this context, ALS is intended to serve as a flexible and contextually responsive platform for out-of-school youth and adult learners, supporting the integration of literacy, numeracy, and life skills (Agao-Agao, 2023).

Within the proposed ToC framework, this observed difference is interpreted as a systemic condition that may inform intervention design. Rather than conceptualizing literacy as a binary outcome, the ToC positions literacy development as a continuum from basic acquisition to functional application, providing a basis for developing targeted pathways to support learners in varied contexts.

Regional Inequalities in Functional Literacy

Regional patterns of functional literacy were examined to identify geographic disparities that may influence the distribution and targeting of ALS interventions.

Table 2 reveals substantial variation in functional literacy across Philippine regions, indicating pronounced geographic disparities in learning outcomes. While the national functional literacy rate stands at 70.8%, several regions fall significantly below this level. The lowest rates are observed in Regions IX (59.3%), VIII (61.8%), and XIII (63.1%), suggesting that a considerable proportion of individuals in these areas may have difficulty applying literacy and numeracy skills in everyday contexts. Whereas, regions such as the Cordillera Administrative Region (81.2%), National Capital Region (79.9%), and CALABARZON (77.3%) demonstrate comparatively higher levels

of functional literacy. This reflects a disparity of over 20 percentage points between the highest- and lowest-performing regions, underscoring the uneven distribution of learning outcomes across the country. These regional differences highlight persistent geographic inequalities in education, which are often associated with variations in access to schooling, socioeconomic conditions, and resource allocation (Alarcon, 2025; Tikly, 2021). Such disparities suggest that learners in lower-performing regions may face compounded structural disadvantages that hinder the development of functional literacy (Masigan, 2020; Parreño, 2022).

Table 2. Functional Literacy by Region

Region	Functionally Literate Population ('000)	Functional Literacy Rate (%)
National Capital Region (NCR)	8,809	79.9
Cordillera Administrative Region (CAR)	1,134	81.2
Region I (Ilocos)	2,567	64.3
Region II (Cagayan Valley)	1,950	69.4
Region III (Central Luzon)	7,256	73.0
Region IV-A (CALABARZON)	10,128	77.3
Region IV-B MIMAROPA	1,670	70.7
Region V (Bicol)	3,036	67.0
Region VI (Western Visayas)	2,558	70.6
Negros Island Region (NIR)	2,313	65.7
Region VII (Central Visayas)	3,404	67.6
Region VIII (Eastern Visayas)	2,210	61.8
Region IX (Zamboanga Peninsula)	1,700	59.3
Region X (Northern Mindanao)	2,729	70.0
Region XI (Davao)	2,771	66.7
Region XII (SOCCSKSARGEN)	2,262	65.8
Region XIII (Caraga)	1,307	63.1
BARMM	2,367	64.7
Philippines	60,170	70.8

Data Source: Philippine Statistics Authority (2024). Functional Literacy, Education and Mass Media Survey (FLEMMS).

From a policy perspective, these findings underscore the need for geographically targeted, contextually responsive ALS interventions, particularly in regions where functional literacy rates remain below the national average. Within the proposed ToC framework, these regional disparities function as a key targeting mechanism, informing the spatial allocation of resources and the design of localized ALS delivery strategies to address uneven literacy outcomes across regions (Edralin & Pastrana, 2023).

Learner Segmentation and ALS Pathway Alignment

To account for variation in literacy conditions and learning needs, this study utilizes an analytical segmentation of learners based on national literacy indicators. Segmentation is used as a descriptive and analytical tool to organize heterogeneous learner profiles into meaningful categories that may support the design of interventions. Based on these considerations, Table 3 presents an indicative alignment, developed by the authors, between these established literacy categories and potential ALS entry points.

Table 3. Literacy Levels and Indicative Alignment with ALS Entry Points

Literacy Level	Description	Number ('000)	Rate (%)	Indicative ALS Pathway (Policy Interpretation)
Illiterate	Cannot read and write	7,098	6.9	Basic Literacy Program (BLP) – foundational literacy
Low literate	Can read and write only	3,278	3.2	Accreditation & Equivalency (A&E) Elementary – bridging competencies
Basic literate	Can read, write, and compute with understanding	93,086	90.0	A&E Secondary / ALS Senior High School/bridging pathways
Total Population		103,462	100.0	—

Data Source: Philippine Statistics Authority. (2024). Functional Literacy, Education and Mass Media Survey (FLEMMS).

Note. Literacy categories follow the official FLEMMS classification and are hierarchical and mutually exclusive. All estimates refer to individuals aged 5 years and above. The 'basic literate' figure of 93,086 thousand corresponds to the FLEMMS estimate for individuals aged 5 and above who can read, write, and compute with understanding; this figure is equivalent to the basic literacy population reported in Table 1, and the three categories (illiterate, low literate, and basic literate) are non-overlapping and sum to the total surveyed population of 103,462 thousand. These pathway assignments are analytical recommendations derived from literacy patterns and existing ALS program structures. The alignment represents a conceptual, policy-oriented interpretation to address varied literacy needs and does not reflect direct programmatic sorting generated by the dataset.

As shown in Table 3, the distribution of learners across literacy categories reflects a stratified pattern of foundational competencies within the population. A substantial majority of individuals were classified as basic literate (90.0%), indicating widespread acquisition of foundational reading, writing, and numeracy skills (Owada et al., 2019; Abrigo & Francisco, 2023). However, a notable proportion comprising both illiterate (6.9%) and low-literate (3.2%) groups representing approximately 10.4 million individuals highlights a substantial segment of

learners who may require foundational or transitional support (Igarashi & Suryadarma, 2023). This distribution suggests that literacy development operates along a continuum rather than a binary condition, with varying levels of readiness for further learning (Ruiz et al., 2020). The segmentation highlights distinct learner profiles associated with different stages of literacy development. Individuals in the illiterate category are likely to require entry-level interventions focused on foundational skills. Those categorized as low literate demonstrate emerging competencies but limited comprehension, indicating the need for structured support that bridges basic decoding toward more meaningful understanding (Luga, 2021). Differently, basic literate individuals possess foundational competencies but still face challenges in applying these skills in more complex or context-dependent situations (Parreño, 2022). These patterns are consistent with broader perspectives that conceptualize literacy as a developmental process, progressing from foundational skills to more functional and applied competencies (Agao-Agao, 2023). In this view, literacy is not limited to the ability to read and write but extends to the capacity to use these skills effectively in everyday contexts (Edralin & Pastrana, 2023; PSA, 2024).

In this context, the alignment presented in Table 3 illustrates how ALS programs are intended to address diverse learner needs. Foundational programs such as the BLP that support learners at the earliest stages, while bridging and equivalency programs such as A&E provide pathways for continued progression (Benaning, 2023). This alignment highlights the potential for a flexible system that accommodates multiple entry points and supports learner movement across levels. (Asis, 2020). Under the proposed ToC framework, this segmentation provides a structured basis for linking observed literacy conditions with potential intervention strategies. By identifying distinct learner profiles, the framework supports the design of targeted, context-responsive pathways that facilitate progression from foundational literacy to more advanced, functional competencies. In this way, segmentation serves as a conceptual mechanism for aligning national literacy patterns with differentiated ALS program responses.

Priority Age Cohorts and Differentiated ALS Pathways

Analysis of functional literacy patterns across age groups identifies priority cohorts that may benefit from differentiated ALS pathways.

Table 4. Functional Literacy by Age Cohort and Indicative ALS Pathway Focus

Age Group	Population ('000)	Functionally Literate ('000)	Functional Literacy Rate (%)	Indicative ALS Pathway Focus
10–14	10,913	6,958	63.8	Foundational ALS (e.g., BLP or A&E Elementary bridging)
15–19	10,312	7,894	76.6	A&E Secondary or SHS bridging pathways
20–24	9,888	7,744	78.3	SHS completion, TVET entry, or higher education bridging
25–29	9,648	7,306	75.7	TVET ladderization and workforce readiness pathways
30–39	16,988	12,369	72.8	Re-skilling and recognition of prior learning (RPL)
40–49	13,157	9,145	69.5	Second-chance credentialing and skills certification
50–59	10,219	6,511	63.7	Functional literacy and livelihood-oriented pathways
60–64	3,877	2,243	57.8	Community-based literacy and life skills programs

Data Source: Philippine Statistics Authority. (2024). *Functional Literacy, Education and Mass Media Survey (FLEMMS)*.

Note. Functional literacy rates are based on FLEMMS 2024 age-group estimates. These pathway assignments are analytical recommendations derived from literacy patterns and existing ALS program structures. The focus areas represent an evidence-informed interpretation of how different cohorts may be supported, rather than demonstrated causal program assignments.

As shown in Table 4, functional literacy varies across age groups, revealing distinct patterns of vulnerability across the life course. Lower levels are observed among adults aged 60–64 (57.8%), children aged 10–14 (63.8%), and individuals aged 50–59 (63.7%), indicating that both younger learners and older adults may face greater challenges in achieving functional literacy. In distinction, cohorts within the typical ALS transition age range (15–39) demonstrate relatively higher levels of functional literacy; however, notable learning gaps remain (Ruiz et al., 2020). In particular, individuals aged 15–39, a key target demographic for ALS accreditation, bridging, and skills pathways, still account for a substantial proportion of learners who may require further competency development.

These findings suggest that literacy needs are not confined to a single developmental stage, pointing to the importance of flexible learning pathways that respond to varying levels of readiness and life circumstances

(Cabiles, 2022; Hendrix-Soto, 2025). This perspective aligns with broader educational frameworks that emphasize that literacy development extends beyond foundational skills and requires ongoing opportunities for application across the lifespan (Albert et al., 2024; Department of Education, 2021). Consequently, the age-based distribution of functional literacy provides a basis for identifying focus areas for ALS pathway indicators. It should be explicitly noted that these pathway assignments are analytical recommendations derived from literacy patterns and existing ALS program structures. They represent the authors' policy-oriented interpretation of reform rather than the dataset's direct categorical sorting. Under this interpretation, foundational support appears particularly relevant for younger learners, whereas bridging, credentialing, and skills-based pathways may be more applicable to youth and working-age adults (Edralin & Pastrana, 2023; Saldivar, 2025). For older cohorts, community-based and livelihood-oriented learning opportunities may offer more contextually responsive options (Benaning, 2023). Within the proposed ToC, these cohort-specific patterns provide a basis for sequencing and differentiating ALS pathways, aligning entry points and progression routes with age-related learning needs. In this way, the framework positions ALS as a responsive system that supports learner movement across stages of the life course, rather than as a fixed set of program tracks.

Translating Empirical Findings into the Theory of Change

The identified literacy conditions point to the need for targeted and flexible educational responses that extend beyond conventional schooling structures. Given that a significant proportion of individuals with low literacy fall outside the formal education system, the ALS emerges as the most structurally appropriate intervention mechanism for this population — not formal school remediation, which presupposes re-enrollment in age-graded classrooms that many adult and out-of-school learners cannot access, and not standalone TVET enrollment, which typically requires foundational literacy competencies that illiterate and low-literate groups have not yet acquired. ALS is uniquely positioned to serve these learners precisely because it is designed without age restrictions, prior schooling prerequisites, or fixed delivery locations, making it the only existing system capable of simultaneously reaching the full continuum of identified learner profiles (Igarashi & Suryadarma, 2023). ALS is designed to reach out-of-school youth and adult learners through flexible, community-based, and modular learning opportunities that are not constrained by age, prior schooling, or geographic limitations (Department of Education, 2021). In this context, ALS provides an institutional platform that aligns with the characteristics of the identified learner groups. Moreover, variation in literacy levels across segments and age cohorts suggests that uniform program delivery may not adequately address diverse learning needs (Luga, 2021). Learners at different stages, from those lacking foundational skills to those requiring application-oriented competencies, may benefit from differentiated pathways that allow progression based on readiness and context (Agao-Agao, 2023). The use of tiered and flexible ALS pathways, including foundational literacy programs, bridging mechanisms, and skills-oriented tracks, reflects an approach that responds to the heterogeneity observed in the empirical data rather than relying on a standardized delivery model.

From a policy perspective, these reform directions are supported by the EDCOM II agenda, which positions ALS as a priority area for systemic improvement and highlights key enabling conditions, including demand-sensitive financing, decentralized governance, and infrastructure modernization (EDCOM II, 2026). These policy directions provide the institutional framework for implementing differentiated, scalable ALS interventions. Collectively, these considerations justify using ALS as the primary reform mechanism and support developing the proposed ToC as a policy-anchored response to the identified literacy challenges. To operationalize these relationships, Table 5 presents an analytical mapping that links observed literacy challenges to ALS pathways, corresponding policy and system inputs, and intended outcomes within the ToC framework.

The framework first addresses variation in learner needs across literacy levels (PSA, 2024). The presence of illiterate (6.9%) and low literate (3.2%) populations indicates gaps in foundational decoding and comprehension skills, providing a basis for prioritizing entry-level interventions through the Basic Literacy Program (BLP) and Accreditation and Equivalency (A&E) Elementary pathways. Differently, the gap between basic literacy (90.0%) and functional literacy (70.8%) suggests that a substantial group of learners may require support in applying foundational competencies in practical contexts (Ruiz et al., 2020). Within the ToC, these conditions are aligned with bridging and ladderized pathways such as A&E Secondary and Senior High School (SHS), which are intended to support progression toward higher-order outcomes, including improved functional literacy and readiness for work, technical-vocational education and training (TVET), or higher education (Cabiles, 2022; Hendrix-Soto, 2025). The framework further incorporates structural and geographic dimensions of literacy outcomes. Regional disparities in functional literacy, ranging from 59.3% to 81.2%, indicate uneven access to

learning opportunities across contexts (PSA, 2024). These patterns provide a basis for incorporating flexible delivery mechanisms such as mobile ALS and digital modalities, which may support more equitable access. In alignment with the framework, these programmatic responses are conceptually linked to system-level inputs identified in national reform priorities, including ALS as a priority reform area, demand-sensitive financing, decentralized governance, and infrastructure modernization (EDCOM II, 2026). Across age groups, variations in functional literacy further indicate that learning needs differ across the life course (Benaning, 2023; Santos & Hilbero, 2008). Lower literacy levels among younger and older cohorts, alongside persistent gaps among working-age individuals, highlight the importance of differentiated and flexible pathways (Gaddi & Arellano, 2018).

Table 5. *Analytical Alignment from Empirical Findings to ALS Pathways, Policy Levers, and Expected Outcomes*

Empirical Finding	Analytical Implication and Learner Segment	ALS Pathway	Policy Lever	Expected Outcome
Basic literacy (90.0%) and functional literacy (70.8%) (PSA, 2024; Table 1)	Foundational skills do not consistently translate into applied competencies, representing a stalled basic literate segment	A&E Secondary and SHS bridging and ladderized pathways	ALS as Priority Reform Area; Demand-sensitive financing	Improved functional literacy; Readiness for work, TVET, or higher education
Presence of illiterate (6.9%) and low literate (3.2%) populations (PSA, 2024; Table 3)	Segments lacking foundational decoding or comprehension require intensive, ground-level intervention	Basic Literacy Program (BLP) and A&E Elementary	Infrastructure modernization (e.g., upgrading learning centers)	Increased ALS enrolment; Completion of ALS credentials
Severe regional disparities in functional literacy (59.3% to 81.2%) (PSA, 2024; Table 2)	Unequal geographic access affects specific communities, requiring localized and flexible delivery mechanisms	Flexible delivery, Mobile ALS, Digital modules	Decentralized governance (strengthened LGU role)	Equity in education access; Regional Disparity Index tracking
Age-based variation and vulnerability across the life course (PSA, 2024; Table 4)	Distinct learning needs across cohorts indicate the need for a responsive, lifelong learning system	Community-based and life-skills programs; SHS bridging	Demand-sensitive, per-capita financing	Lifelong learning pathways; Improved workforce participation

Note. Empirical findings are derived from Tables 1–4 (PSA, 2024). ALS pathways, policy levers, and expected outcomes correspond to the components of the proposed Theory of Change and represent an analytical, evidence-informed interpretation rather than demonstrated causal effects.

Within the ToC, this is reflected in the inclusion of community-based learning, life-skills development, and bridging pathways that are intended to support entry, progression, and re-entry across different stages of life. This provides the analytical foundation for the ToC framework. The identified empirical conditions correspond to the problem context; ALS pathways represent the mechanisms of change; policy and system inputs reflect the enabling conditions; and expected outcomes align with the framework's intended outputs and longer-term impacts. In this manner, the ToC is grounded in observed literacy patterns while remaining a policy-anchored and analytical model designed to inform, rather than assert, program effectiveness.

A Theory of Change for ALS Reform

Building directly on the preceding empirical analysis, Figure 1 presents the proposed ToC for ALS reform. The framework translates the identified literacy challenges, particularly the gap between basic and functional literacy, regional disparities, and variations across learner segments and age cohorts (PSA, 2024) into a structured analytical model. It links the problem context to enabling policy conditions, differentiated ALS pathways, and intended outcome trajectories.

At the center of the ToC is the integration of differentiated ALS pathways, including the Basic Literacy Program (BLP), Accreditation and Equivalency (A&E) programs, and bridging and skills-development tracks. These programmatic pathways align with policy and system inputs identified in the EDCOM II reform agenda, including the prioritization of ALS, demand-sensitive financing, decentralized governance, and infrastructure modernization. These elements represent institutional conditions that may support implementation. The framework also recognizes that ALS delivery operates within broader system conditions. Socioeconomic constraints, unequal digital access, and labor market structures shape participation and learning opportunities, while external disruptions such as pandemics and natural hazards introduce additional uncertainty (Luga, 2021). To address these conditions, adaptive delivery mechanisms, including flexible learning modalities, mobile ALS,

and digital instruction, are incorporated to support access across varied contexts (Masigan, 2020).

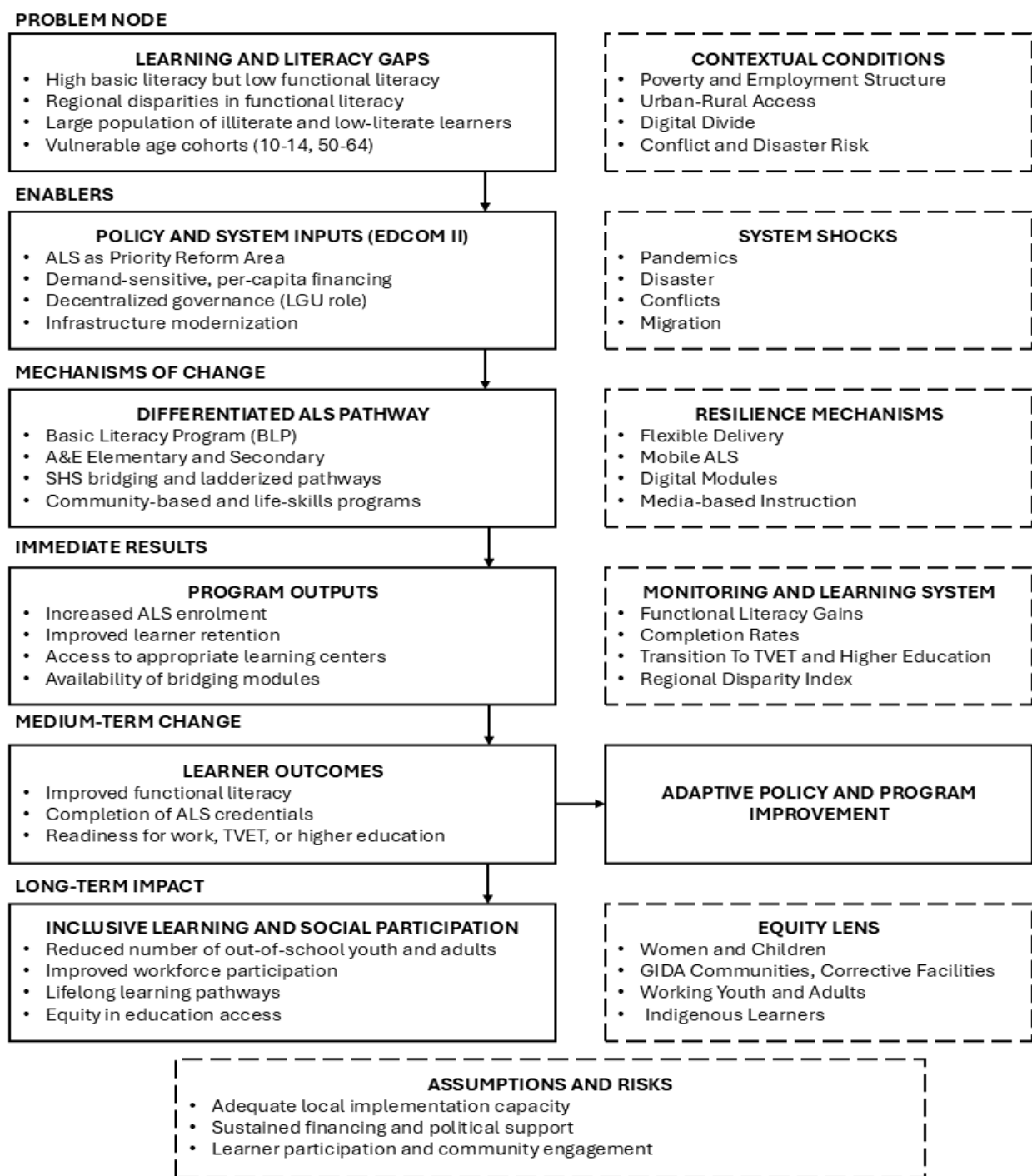


Figure 1. Theory of Change for ALS Reform

Note. Solid bordered boxes represent the core causal pathway of the framework – from problem identification through inputs, mechanisms, outputs, and outcomes – while dashed bordered boxes denote contextual factors, system shocks, adaptive mechanisms, and equity considerations that are analytically distinct from the primary intervention logic but remain integral to the framework operating environment.

Within this structure, ALS interventions are intended to generate immediate outputs, including increased participation, improved learner retention, expanded access to learning opportunities, and the availability of bridging options. These outputs are conceptually linked to intermediate outcomes such as improved functional literacy, completion of ALS credentials, and readiness for technical-vocational education and training (TVET) or employment. Over time, the framework posits that these intermediate gains may contribute to broader system-level outcomes, including reduced numbers of out-of-school youth and adults and strengthened lifelong learning

pathways (Asis, 2020; Cruz, 2022). The ToC further incorporates a feedback loop through a monitoring and learning system that tracks key indicators, including literacy gains, completion rates, and learner transitions. These feedback processes provide a basis for adaptive policy and program improvement, allowing ALS interventions to respond to evolving learner needs and system conditions (Gatcho et al., 2024). An equity lens is applied throughout the framework, emphasizing the inclusion of marginalized groups, including women, indigenous learners, and disadvantaged communities (Gervacio & Xhomaqi, 2025; Tomada & Galido, 2024).

The framework operates under several key assumptions. First, it assumes sufficient institutional capacity to implement ALS programs across different contexts — an assumption grounded in the existing network of Community Learning Centers and the devolved governance structures supported by EDCOM II Priority Area 27, though capacity gaps in lower-performing regions such as Zamboanga Peninsula (59.3%) and Eastern Visayas (61.8%) remain a recognized risk. Second, it assumes that learners can be appropriately identified and supported through relevant pathways — a condition that depends on functional local data systems and outreach mechanisms, which EDCOM II's accountability and monitoring provisions are intended to support. Third, it assumes that participation in ALS interventions may contribute to improvements in literacy and learning outcomes — a plausible expectation consistent with prior evaluations of ALS programs in the Philippines (Albert et al., 2024; Ruiz et al., 2020), though causal confirmation requires prospective implementation data. It also assumes that policy and system-level enablers, particularly demand-sensitive financing, decentralized delivery, and infrastructure support, are sustained over time — a condition subject to political and budgetary contingency.

Policy and System Levers Supporting ALS Reform

Policy and institutional conditions relevant to implementing the proposed ToC were examined in relation to the national reform priorities outlined in the EDCOM II roadmap.

Table 6. Policy and System Inputs for ALS Reform Aligned with the EDCOM II Roadmap

Policy and System Input Domain	EDCOM II Priority Area	Policy and System Input	Relevance to ToC Framework
System Positioning	Priority Area 9: Alternative Learning System	ALS is positioned as a national reform priority within the education system	Frames ALS as a central, structurally supported pathway within the learning system
Education Financing	Priority Area 26: Education Financing	Demand-sensitive, performance-linked financing designed to support ALS delivery	Provides resource conditions that may support program implementation
Decentralized Delivery	Priority Area 27: Decentralization and Participatory Governance	Local governance structures are intended to support context-responsive implementation	Intended to facilitate localized targeting and delivery of ALS interventions
Infrastructure Modernization	Basic Education Facilities Reform	Targeted improvements to physical and digital learning environments	Addresses gaps in the quality and accessibility of Community Learning Centers
Accountability & Monitoring	National Education & Workforce Development Plan	Monitoring systems are structured to support alignment of ALS implementation with system-level indicators	Provides a basis for tracking outputs, outcomes, and system performance

Note. Reform domains and priority areas are derived from the national education reform agenda (Second Congressional Commission on Education [EDCOM II], 2026). The alignment with the Theory of Change represents an analytical mapping of intended system-level enabling conditions rather than an evaluation of demonstrated programmatic effects.

Table 6 summarizes the key policy and system inputs associated with ALS reform and situates them within this broader education reform agenda. The identified domains, including system positioning, education financing, decentralized delivery, infrastructure modernization, and accountability and monitoring, reflect structural priority areas through which ALS may be strengthened as an integral part of the national education system.

Within the ToC framework, these policy and system inputs are conceptualized as enabling conditions intended to support the implementation of differentiated ALS pathways. For instance, positioning ALS as a priority reform area provides institutional recognition, while demand-sensitive financing mechanisms are designed to facilitate the adequate allocation of resources for program delivery. Furthermore, decentralized governance highlights the role of local government units (LGUs) in adapting ALS interventions to specific community contexts, while infrastructure modernization addresses the adequacy of physical and digital learning environments, particularly in Community Learning Centers. Accountability and monitoring systems further provide a structural basis for aligning this local program implementation with national, system-level indicators. Rather than functioning as

standalone interventions, these inputs represent the macro-level conditions that frame how ALS pathways may be executed across diverse contexts. Their inclusion reflects the analytical stance that programmatic design operates within broader institutional arrangements, which inherently shape implementation processes and intended learning outcomes (Gaddi & Arellano, 2018). In this context, mapping these policies and system inputs onto the ToC highlights the institutional environment required for ALS reform. This analysis does not assume direct causal effects; instead, it positions these policy and system inputs as the foundational enabling environment that informs the design, delivery, and future evaluation of ALS interventions.

Limitations of the Study

This study proposes a descriptive-analytical policy framework that links national literacy conditions to the design. While the proposed ToC provides a structured approach to ALS reform, this study is subject to several methodological limitations that should be considered in interpreting its findings. First, the analysis relies on secondary national-level data and documentary sources, which may not capture localized variations in literacy conditions or implementation contexts. As such, the findings reflect aggregated macro-level patterns rather than context-specific dynamics. Second, the proposed ToC framework is an evidence-informed analytical model that has not been empirically validated or engaged with stakeholders. Consequently, the relationships and pathways presented in the framework should be interpreted as conceptual and policy-oriented rather than as evidence of demonstrated causal effects. Third, the policy mapping process is based on an analytical interpretation of the EDCOM II reform agenda, and alternative readings of policy priorities may yield different configurations of system inputs and pathways. To address these limitations, future research may empirically test the proposed framework through pilot implementations in selected ALS contexts and through structured stakeholder validation involving implementers and learners. In addition, quantitative approaches such as Structural Equation Modeling (SEM) may be employed, once appropriate data become available.

Conclusion

This study advances a descriptive-analytical approach to ALS reform by systematically linking national literacy conditions to a policy-anchored ToC framework. Drawing on FLEMMS 2024 data, the analysis identifies key dimensions of literacy inequality in the Philippines, including the distinct levels of foundational decoding skills and functional literacy, pronounced regional disparities, the persistence of low-literate population segments, and variations across age cohorts. Rather than treating these patterns as isolated indicators, the study integrates them into a structured analytical model that connects empirical findings with differentiated ALS pathways and system-level policy inputs. This approach highlights the importance of aligning program design with learners' diverse needs, emphasizing that literacy development operates along a continuum that requires flexible, context-responsive, and stage-appropriate interventions. The proposed ToC framework contributes to the literature by providing a transparent and systematic mechanism for translating population-level literacy data into policy-relevant program design. By mapping learner segments to ALS pathways and situating these within the enabling conditions of the national reform agenda, the framework offers a coherent representation of how ALS may function as an integral component of a broader lifelong learning system. The study positions ALS not merely as an alternative delivery mechanism but as a potentially central platform for addressing persistent literacy challenges among out-of-school youth and adults. The integration of differentiated pathways, localized delivery strategies, and system-level policy inputs reflects a structural approach that is responsive to both learner heterogeneity and institutional constraints.

Contributions of Authors

Author 1: conceptualization, data gathering, data analysis, and manuscript writing

Author 2: conceptualization, data gathering, data analysis, and manuscript writing

Author 3: conceptualization, data gathering, data analysis, and manuscript writing

Author 4: conceptualization, supervision, technical and manuscript review

Author 5: supervision, technical and manuscript review

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Conflict of Interests

The authors declare no conflicts of interest regarding the publication of this paper.

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