

EFFECTIVE PROGRAMS SUPPORTING AT-RISK LEARNER: A SYSTEMATIC REVIEW

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ABSTRACT

Student dropout remains a persistent challenge that undermines inclusive and equitable quality education, particularly among learners at risk of disengaging from school. This study conducted a systematic review to synthesize recent evidence on effective programs and initiatives that support student retention, guided by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework and anchored on Sustainable Development Goal 4. Peer-reviewed studies published between 2021 and 2025 were systematically identified, screened, and analyzed to examine the types of interventions implemented, recurring best practices, and existing gaps and challenges in addressing learner dropout in Philippine and comparable international contexts. Findings revealed that student retention was most effectively strengthened through integrated and sustained interventions that addressed academic, socio-emotional, and structural barriers simultaneously. Academic recovery and remediation programs, mentorship and guidance initiatives, and socio-emotional support mechanisms consistently improved learner engagement, attendance, and persistence. Structural supports, including financial assistance, nutrition programs, flexible learning modalities, and technology-supported instruction, were also critical in mitigating socioeconomic constraints. In addition, proactive strategies such as early identification systems, data-informed monitoring, and whole-school collaboration with families and communities emerged as key best practices. However, the review also identified challenges related to program sustainability, implementation capacity, and policy alignment, which limited the long-term impact of many interventions. Overall, the study underscores that preventing dropout requires comprehensive, data-driven, and policy-aligned approaches supported by institutional commitment and cross-sector collaboration. The findings provide an evidence-based foundation to inform instructional practice, school leadership, and education policy aimed at ensuring that learners at risk remain engaged and succeed in school.

Keywords: *student retention, at-risk learners, dropout prevention, systematic review, Sustainable Development Goal 4, Cotabato Division*

INTRODUCTION

Education was widely recognized as a fundamental driver of human development and a cornerstone of social progress. However, retaining students in school had remained a persistent global challenge, particularly among learners at risk of dropping out. School dropout was not only an individual setback but also a societal concern that undermined national development goals and the achievement of Sustainable Development Goal (SDG) 4, which emphasized inclusive and equitable quality education for all. Various school systems in the Philippines had long implemented interventions to address student retention, yet the effectiveness of these efforts had remained uneven and fragmented across regions (Alvarez, 2022; Gonzales, 2021; Ramos, 2022). Given this reality, there had been a need for a systematic examination of existing initiatives to better understand which programs yielded consistent results in supporting learners at risk of quitting school.

Despite numerous interventions, dropout had continued to be a persistent problem in the Philippines. Data from the Philippine Statistics Authority recorded fluctuations in retention and completion rates, particularly at the secondary level, with poverty, limited parental support, and weak school-community linkages identified as key contributing factors (Bautista, 2021; Garcia, 2022). Several

localized programs, such as financial assistance schemes (Garcia, 2022), mentorship initiatives (Alvarez, 2022), and after-school activities (Chavez, 2023), had demonstrated positive outcomes. However, concerns regarding their scalability, sustainability, and long-term impact remained. While previous studies offered valuable insights, they were often case-specific, limited to single interventions, or constrained by short-term evaluations. What had remained lacking was a consolidated, evidence-based review that synthesized diverse approaches to student retention in order to inform long-term educational planning and policymaking.

At the global level, studies had revealed that dropout prevention strategies were highly context-dependent, yet shared common principles such as mentorship, early intervention, and the provision of social support services. Kang (2022) highlighted that comparative programs across Asia, Europe, and North America differed in approach but converged in addressing socioeconomic inequalities as a critical factor influencing retention. Wang (2021) emphasized that countries such as Finland and Canada had effectively combined flexible learning pathways, strong community engagement, and government-backed support systems to sustain student participation. Similarly, Nguyen (2023) demonstrated the importance of teacher capacity-building programs in Vietnam, which improved retention rates by equipping educators to respond more effectively to diverse learner needs. These international perspectives reinforced the importance of conducting a systematic review that examined not

only program effectiveness but also the conditions under which such interventions thrived.

The consequences of failing to address school dropout were severe and multifaceted. Beyond individual academic loss, dropping out increased vulnerability to poverty, unemployment, and social exclusion (Lopez, 2023; Lee, 2021). At the national level, persistently high dropout rates weakened human capital development, reduced labor force competitiveness, and perpetuated cycles of inequality. Over time, unresolved dropout issues constrained the Philippines' ability to achieve broader SDG targets, particularly those related to poverty reduction, health, and sustainable communities. Without an evidence-based framework to guide interventions, retention efforts risked remaining reactive, fragmented, and insufficient in addressing the underlying causes of student disengagement.

In response, this study undertook a systematic review of effective programs and initiatives designed to support learners at risk of quitting school. By synthesizing existing empirical findings, the review sought to identify recurring patterns of success, highlight best practices, and reveal persistent gaps in the literature. Unlike single-intervention studies, this review integrated evidence from school-based counseling programs (Dela Cruz, 2021), parental involvement strategies (De Leon, 2022), technological interventions (Hernandez, 2023), and community-based approaches (Ibarra, 2022) to develop a comprehensive

understanding of strategies that enhanced student retention. Anchored in the SDG framework, the study aimed to strengthen educational policy and practice through a holistic, systematically reviewed body of evidence.

Finally, the study contributed to addressing one of the most pressing challenges in education by systematically reviewing diverse retention programs for at-risk learners. By organizing and synthesizing findings across multiple contexts, it enhanced scholarly understanding while providing policymakers, educators, and stakeholders with an evidence-based foundation for designing sustainable and inclusive interventions. The systematic review emphasized the urgency of ensuring that no learner was left behind in the pursuit of inclusive, equitable, and quality education for all.

METHODS

Research Design

The research design of this study was a systematic review (SR), which followed rigorous procedures for planning, conducting, and documenting the review of relevant literature. Under this design, data drawn from published studies provided supportive secondary evidence that was critically appraised and synthesized. A systematic review was defined as the review of a clearly specified issue using systematic and reproducible techniques to locate, select, and

evaluate all relevant research, as well as to gather and analyze data from the included studies. According to Elsevier (2011), the primary aim of systematic reviews was to locate, analyze, and summarize findings from all relevant individual research on a particular topic, thereby making knowledge more accessible to decision makers.

The purpose of this systematic review was to collect and synthesize both quantitative and qualitative evidence related to effective programs and initiatives that supported learners at risk of quitting school. In this study, qualitative and quantitative data derived from the included articles were integrated either sequentially or simultaneously, depending on the designs of the primary studies. This systematic review was characterized by a clearly defined set of objectives, predetermined eligibility criteria, an explicit and repeatable methodology, and a comprehensive search process designed to identify all studies that met the established standards. Through this research design, the study consolidated evidence on student retention strategies and examined their alignment with the Sustainable Development Goals, particularly Sustainable Development Goal 4 on inclusive and equitable quality education.

The Role of PRISMA in the Study

The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) process played a central role in ensuring transparency, rigor, and credibility in this systematic review of student retention programs. PRISMA provided a structured protocol for identifying, screening, selecting, and analyzing relevant literature, which was essential for synthesizing high-quality evidence on interventions that addressed learners at risk of dropping out.

The PRISMA process began with the identification of relevant studies through systematic searches conducted in credible academic databases such as Google Scholar, ERIC, ProQuest, and institutional repositories. The study employed predefined keywords and Boolean operators, including “student retention,” “dropout prevention,” “at-risk learners,” “school-based interventions,” “mentorship,” “counseling,” and “Sustainable Development Goals.” This structured search strategy ensured that potentially relevant studies were captured comprehensively, thereby reducing selection bias and enabling the effective synthesis of both Philippine and international research.

The screening phase followed, during which duplicate entries were removed and abstracts were evaluated for relevance and methodological quality. Inclusion and exclusion criteria established prior to the review were applied to ensure that only studies focusing on student retention, dropout prevention, and support for at-risk learners were considered. Studies that fell

outside the defined scope or lacked sufficient methodological rigor were excluded to safeguard the quality and reliability of the evidence base.

Subsequently, the eligibility assessment involved a critical evaluation of the methodological soundness of the selected studies, taking into account factors such as sample size, research design, intervention methods, and documented outcomes. PRISMA ensured systematic documentation of inclusion and exclusion decisions, thereby enhancing transparency and reproducibility.

During the data extraction and synthesis stage, PRISMA provided a framework for collecting consistent and comparable information across studies. Key variables such as author details, year of publication, study location, research methodology, and major findings were extracted. Given that educational research frequently involved qualitative, mixed-methods, and program evaluation designs rather than exclusively randomized controlled trials, this review primarily employed a narrative synthesis approach. Narrative synthesis enabled the integration of diverse methodologies into a coherent discussion while allowing for the comparison of data trends to identify common strategies, best practices, and intervention outcomes.

Finally, PRISMA strengthened the reporting of the review by requiring clear documentation of each stage, including the presentation of a PRISMA flow diagram that visually represented the study selection process from identification to final inclusion. The framework also ensured that potential biases, limitations, and

gaps in the literature were explicitly acknowledged. This process guaranteed that the findings and recommendations generated from the review were transparent, reliable, and useful for educators, school heads, supervisors, policymakers, and researchers working to strengthen student retention in alignment with the Sustainable Development Goals.

Place of the Study

This study was conducted in the context of learners at risk of dropping out in public schools; however, the focus was on the analysis of published studies rather than the conduct of direct fieldwork. The systematic review primarily drew on literature available from reputable academic sources, including peer-reviewed journals, online publications, institutional repositories, and digital databases such as Google Scholar, ERIC, and ProQuest. By consolidating evidence from a wide range of contexts, both local and international, the review aimed to generate transferable insights into strengthening student retention programs and initiatives. As Smith et al. (2019) argued, the relevance of a systematic review did not depend on the geographical location of the researcher but rather on the rigor of the methodology employed and the reliability of the sources utilized.

Data Sources and Selection

The data sources for this systematic review included published systematic reviews, empirical studies, policy papers, and relevant scholarly articles retrieved from well-established academic databases. These sources comprised Google Scholar, ERIC, ProQuest, SAGE Journals, and other peer-reviewed education and social science journals. Gehad et al. (2016) emphasized that systematic reviews had to employ carefully constructed search strategies and rely on credible databases to minimize bias. In line with this guidance, the present study employed multiple databases, diverse keywords, and Boolean operators to ensure comprehensive coverage of the literature on student retention, dropout prevention, and interventions targeting learners at risk.

Inclusion and Exclusion Criteria

To ensure rigor, inclusion and exclusion criteria were predetermined and consistently applied throughout the review process. Only peer-reviewed articles published between 2020 and 2025 were included, provided that they explicitly addressed student retention, dropout prevention, or interventions supporting

learners at risk of quitting school. Eligible studies presented either empirical findings or systematic insights relevant to educational practice and policy.

Exclusion criteria were applied to duplicate records, articles with unavailable full texts, abstract-only publications, and studies that were unrelated to student retention strategies. In addition, multiple articles reporting identical outcomes from the same population during the same period were excluded to prevent duplication of evidence. By applying these criteria, the review minimized potential bias and maintained a clear focus on high-quality and relevant evidence.

Research Procedure

This study followed a three-phase systematic review process:

Phase 1: Planning the Review

1.1 A clear and well-defined research question focused on student retention programs and initiatives was formulated.

1.2 A systematic review protocol was developed and registered to ensure transparency and replicability in the research process.

Phase 2: Conducting the Review

2.1 A comprehensive literature search was carried out across multiple academic databases.

2.2 Abstracts were screened to determine eligibility based on the predetermined inclusion and exclusion criteria.

2.3 Full-text screening of selected studies was conducted to assess methodological rigor and thematic relevance.

2.4 Data were extracted using a structured extraction form that captured key details such as author, year of publication, study context, research design, intervention type, outcomes, and major findings.

2.5 Data were analyzed primarily through narrative synthesis to integrate findings from diverse research designs.

2.6 The quality and credibility of the included studies were assessed using established appraisal tools.

Phase 3: Documenting the Review

3.1 The systematic review report was prepared in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) standards.

3.2 A PRISMA flow diagram was included to visually represent the identification, screening, eligibility, and inclusion stages of the review process.

Research Duration

The review was conducted over a period of ten months, equivalent to one academic year. This duration covered the phases of planning and protocol

development, literature searching, abstract and full-text screening, eligibility assessment, data extraction, synthesis, quality appraisal, and final reporting.

Formulation of the Research Question

This systematic review focused on interventions and initiatives that supported student retention. After the research question was finalized, studies that did not meet the established inclusion criteria were excluded. Eligible studies described programs or strategies implemented for learners at risk of quitting school and reported outcomes related to retention, attendance, engagement, or completion. Each included study was examined to determine its research design, intervention type, outcomes measured, and reported effectiveness. This process ensured that only unique, relevant, and high-quality evidence was synthesized.

Development of the Systematic Review Protocol

The review followed the standards of the Cochrane Collaboration and the PRISMA framework. Protocol registration ensured transparency in the research process and reduced the risk of duplication. The protocol documented the research question, eligibility criteria, interventions of interest, quality appraisal tools, and planned strategies for data extraction and synthesis. This protocol served as the guiding framework for conducting the review in a consistent and reliable manner.

Literature Search Strategy

A comprehensive and database-specific search strategy was employed to identify relevant studies. Free-text terms and subject headings were combined to capture all potential sources, including “student retention,” “dropout prevention,” “learners at risk,” “mentorship programs,” “counseling interventions,” and “Sustainable Development Goals.” Searches were conducted across multiple databases, including Google Scholar, ERIC, ProQuest, and SAGE Journals. Studies published between 2020 and 2025 were prioritized. In addition, manual searches of reference lists were conducted to identify eligible studies that were not captured through electronic database searches.

Abstract and Full-Text Screening

Following retrieval, abstracts of all identified studies were screened using the predetermined eligibility criteria. Only studies that explicitly addressed student retention or dropout prevention were selected for full-text review. Full-text screening was then conducted to assess methodological soundness and thematic relevance. Reasons for exclusion were recorded systematically to maintain transparency. A PRISMA flow diagram documented the entire screening and selection process, presenting the number of studies identified, screened, excluded, and ultimately included in the synthesis.

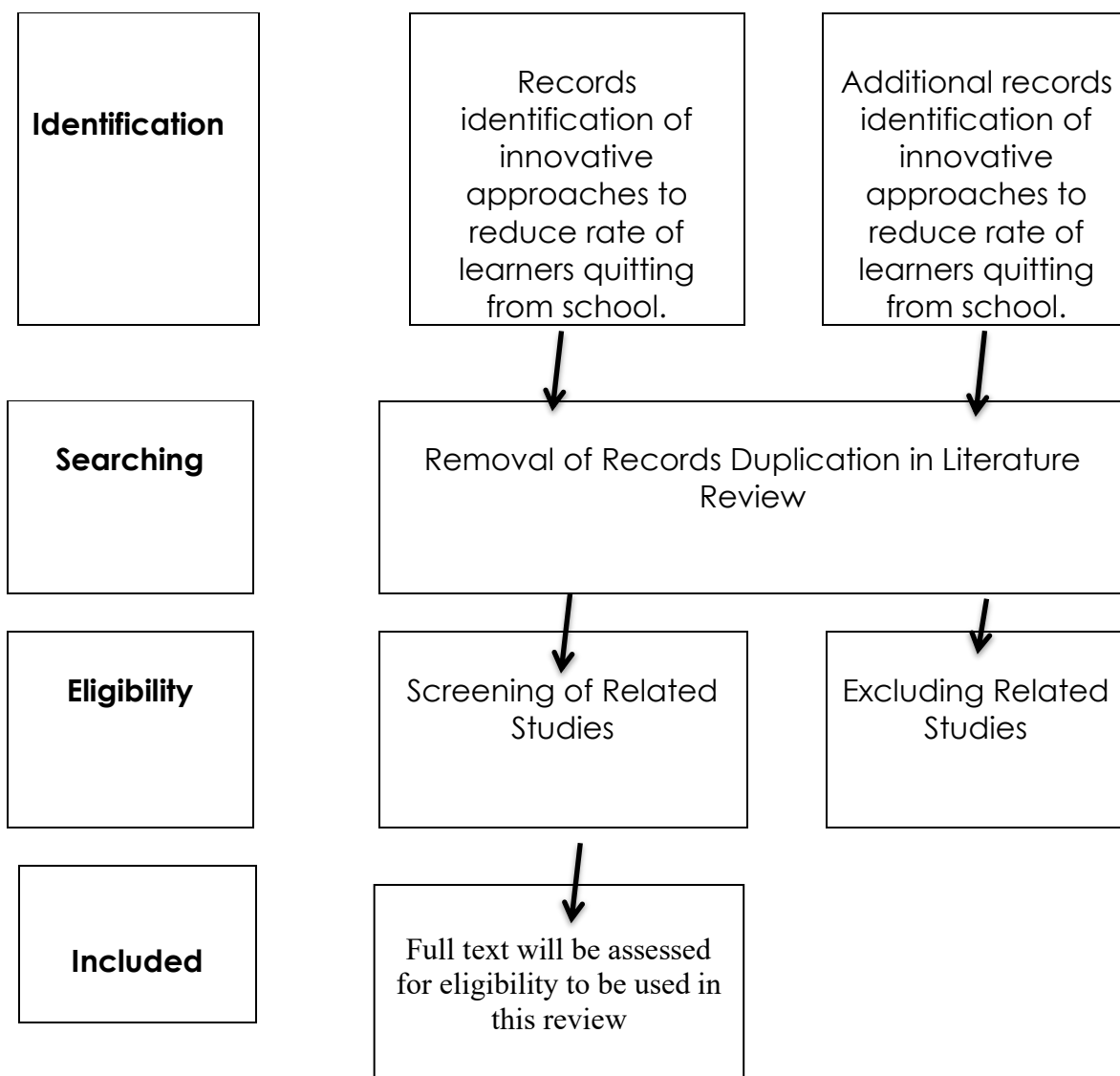


Figure 3. Preferred Reporting Items for Systematic Reviews flowchart.

2.4 Data Extraction

This research independently extracted data from the included studies using a structured electronic data collection form. The extracted information included the year of publication, author(s), study objectives, country of origin, research

design, sample characteristics, type of intervention, methodological approach, and reported primary and secondary outcomes. Particular attention was given to interventions that were school-based or community-based and specifically designed to strengthen student retention or reduce dropout among learners at risk of quitting school.

Only original research articles published in English between 2020 and 2025 were considered eligible for inclusion. These articles were identified through systematic searches conducted in databases such as Google Scholar, ERIC, ProQuest, and SAGE Journals. Titles and abstracts were initially reviewed to identify potentially relevant studies, followed by full-text screening to determine eligibility. Articles that clearly presented programs, initiatives, or strategies aimed at enhancing student retention were prioritized for data extraction. A consistent coding procedure was applied throughout the process to ensure reliability and minimize data loss during extraction.

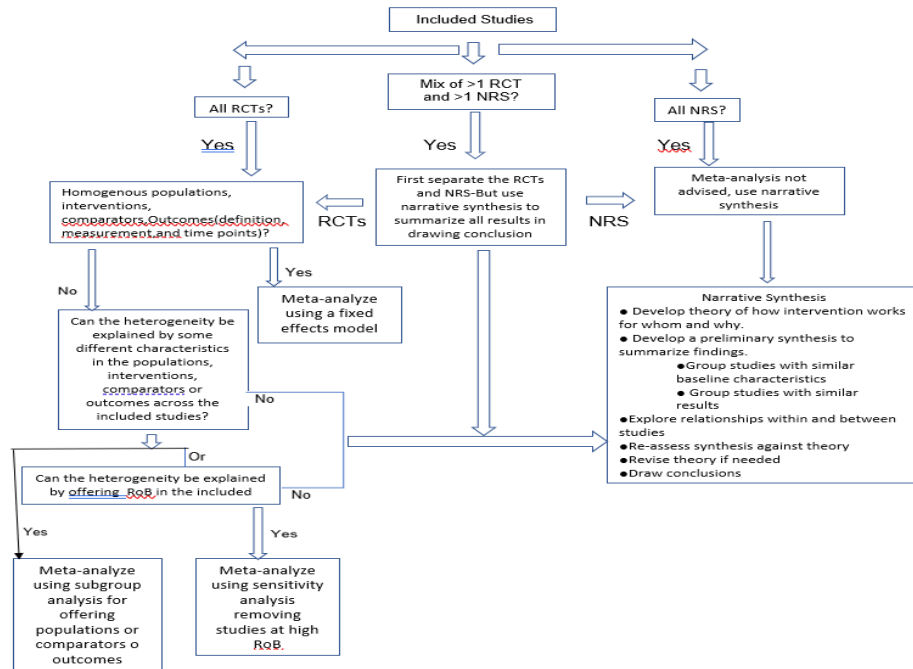
2.5 Data Analysis

To integrate and summarize findings from the included studies, both qualitative and quantitative synthesis methods were applied, depending on the nature and availability of the data. Given the diversity of educational research designs and program evaluations, narrative synthesis served as the primary analytical approach. This method enabled the comparison and contrast of findings across varied contexts, the identification of recurring themes, and the examination of patterns related to the effectiveness and limitations of existing retention strategies.

Where quantitative data were available, descriptive statistics such as frequencies and percentages were reported to illustrate trends in intervention types, target populations, and reported outcomes. Subgroup analyses were also conducted, where appropriate, to compare interventions implemented across different geographical settings, such as local and international contexts, or among different categories of programs, including financial assistance, mentorship, and counseling initiatives.

Potential sources of bias within the included studies, such as publication bias, selective reporting, and methodological limitations, were carefully examined to ensure the validity and reliability of the conclusions drawn. The application of strict inclusion criteria, systematic data extraction procedures, and comprehensive documentation further strengthened the credibility of the analysis. Ultimately, the synthesis provided a comprehensive understanding of

effective programs and initiatives for strengthening student retention within the framework of the Sustainable Development Goals.



2.6 Quality Assessment

The quality of the included studies will be assessed systematically to ensure the credibility and rigor of the review. Each study will be appraised using critical evaluation guides and design-specific quality checklists. This process will determine the reliability of the findings, highlight methodological strengths and weaknesses, and identify heterogeneity across interventions. Quality assessment will also inform the synthesis by distinguishing high-quality evidence from weaker studies, thereby increasing confidence in the conclusions drawn. The PRISMA

guidelines will be strictly followed to ensure that all assessment decisions are documented transparently and reproducibly.

3.1 Writing the Review Report

Once the systematic review is completed and the guiding research questions are fully addressed, the results will be presented in a structured review report. This report will include the background of the study, research objectives, methodological procedures, PRISMA flow diagram, synthesized findings, detailed discussions, study limitations, and recommendations for educational practice and policy. The final output will be prepared for possible submission to an academic journal to ensure wider dissemination of the results among educators, school heads, supervisors, policymakers, and researchers who are working toward strengthening student retention within the framework of the Sustainable Development Goals.

Systematic Review Process

This systematic review followed five main steps:

Step 1. Framing Questions for the Review

The central research question was: *What effective programs and initiatives had been implemented locally and internationally to support learners at risk of quitting school, and how effective were these in strengthening student retention within the framework of the Sustainable Development Goals (SDGs)?* Only studies that explicitly addressed student retention or dropout prevention were included in the review. Duplicate publications were excluded to maintain the integrity and accuracy of the dataset.

Step 2. Finding Relevant Research

An extensive search across multiple academic databases and digital repositories was conducted, prioritizing peer-reviewed articles and systematic reviews published in English between 2020 and 2025. Keywords such as “student retention,” “dropout prevention,” “at-risk learners,” “school-based interventions,” “mentorship,” “counseling,” and “Sustainable Development Goals” were employed. Manual searching of reference lists and bibliographies complemented electronic database searches to ensure that no relevant studies were overlooked.

Step 3. Assessing the Quality of Studies

Each included study underwent a systematic quality appraisal using established assessment tools appropriate for qualitative, quantitative, or mixed-methods research designs. This process ensured that studies retained for synthesis were methodologically sound and that conclusions were grounded in credible and trustworthy evidence. Quality assessment also documented potential risks of bias and methodological limitations present in the primary studies.

Step 4. Summarizing the Evidence

The evidence was systematically summarized through the tabulation of study characteristics, methodological quality, types of interventions implemented, and reported effects on student retention. Narrative synthesis served as the primary method of integration, allowing findings from diverse contexts to be coherently combined. This stage highlighted common strategies, recurring themes, and contextual factors that influenced the effectiveness of student retention initiatives.

Step 5. Analyzing and Interpreting the Results

The findings were analyzed to identify patterns, strengths, limitations, and contextual differences across the included studies.

Potential sources of bias were acknowledged, and recommendations were formulated based on the overall weight and consistency of the evidence. The insights generated provided an evidence-based foundation for educators, school leaders, policymakers, and communities in supporting effective student retention strategies aligned with the broader goals of inclusive and equitable education under the Sustainable Development Goals framework.

RESULTS AND DISCUSSION

This chapter presented the results and discussion of the systematic review on effective programs and initiatives supporting learners at risk of quitting school. The findings synthesized key themes and patterns derived from the reviewed studies that examined how various school-based and community-based interventions strengthened student retention across Philippine public schools and comparable international contexts. The discussion focused on how programs such as mentorship initiatives, financial assistance schemes, school-based counseling, after-school activities, parental and community engagement, and technology-supported interventions contributed to improved learner attendance, engagement, persistence, and completion. It also examined the reported effectiveness of these interventions, the challenges encountered in their

implementation, and their implications for instructional practices, school leadership, policy formulation, and support systems at the district and division levels. Guided by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework and reported in accordance with APA 7th edition standards, the results of the review were systematically presented with corresponding discussions. The chapter organized the findings based on recurring themes across the included studies, providing an integrated interpretation of how effective retention programs contributed to inclusive, equitable, and quality education in alignment with national education priorities and the broader goals of Sustainable Development Goal 4.

Effective Programs and Initiatives Supporting Learners at Risk

Table 1 synthesized empirical and review studies published from 2021 to 2025 that examined effective programs and initiatives supporting learners at risk of dropping out. The table reflected a wide range of interventions implemented in Philippine and international contexts, including academic recovery initiatives, mentorship programs, counseling services, financial assistance, health and nutrition programs, and technology-supported learning options. The synthesis revealed three dominant themes: academic recovery interventions, socio-

emotional support mechanisms, and structural support systems. Overall, the table highlighted that student retention was most effectively strengthened when interventions addressed multiple and interconnected risk factors through sustained and institutionalized approaches.

Academic Recovery Interventions

The synthesis of studies indicated that academic recovery interventions consistently played a central role in strengthening student retention. Across the reviewed literature, learners at risk of dropping out were often those experiencing persistent learning gaps, poor academic performance, and difficulty coping with curriculum demands. Programs that provided targeted remediation, contextualized instructional support, and learning acceleration demonstrated positive effects on attendance, engagement, and completion. The synthesis showed that academic recovery was most effective when delivered systematically, monitored continuously, and integrated into regular instructional practices rather than implemented as isolated remedial activities.

The implications of this theme suggest that schools and education systems must prioritize academic recovery as a core retention strategy. Learning recovery initiatives should be embedded within school improvement plans and supported by structured monitoring systems to ensure continuity. Failure to institutionalize academic recovery may result in recurring learning loss and increased dropout risk, particularly among vulnerable learners. Policymakers and school leaders are

therefore encouraged to allocate resources and provide policy support for sustained academic intervention programs aligned with inclusive education goals.

This theme gains strong support from the findings of Abellanosa (2025), who revealed that the National Learning Recovery Program reduced learning loss and re-engaged at-risk learners. The results corroborate with the findings of Combo et al. (2025), which demonstrated that contextualized reinforcement and intervention programs improved engagement and persistence among senior high school students. This is congruent with the findings of Mutya (2025), who showed that strategic intervention materials enhanced learning outcomes and sustained participation. Enriquez (2025) further supported this theme by emphasizing that learning recovery and acceleration initiatives contributed to improved retention when integrated into broader educational reform efforts. This is true as the study of Fuchs and Fuchs (2023) revealed that evidence-based instructional support within Response to Intervention frameworks prevented academic difficulties from escalating into dropout.

Socio-Emotional Support Mechanisms

The synthesis revealed that socio-emotional support mechanisms were consistently associated with improved retention outcomes. Many studies indicated that learners at risk of dropping out experienced emotional distress, behavioral challenges, low motivation, and weak school attachment. Programs

that provided counseling services, restorative practices, health support, and a positive school climate were effective in addressing these issues. The synthesis highlighted that socio-emotional interventions complemented academic support by fostering resilience, belonging, and emotional safety among learners.

The theme emphasizes that retention strategies must address learners' emotional and psychological needs alongside academic concerns. Schools that focus solely on instructional remediation risk neglecting critical non-academic factors that influence disengagement and dropout. Strengthening guidance services, counseling programs, and school-wide positive behavior initiatives is therefore essential. Education leaders should ensure adequate staffing, training, and institutional support for socio-emotional programs to sustain their impact.

This theme was supported by the findings of Dela Cruz (2021), which revealed that school-based counseling programs significantly reduced dropout rates by addressing emotional and behavioral challenges. The results corroborate with the study of Santos (2023), which emphasized the role of school counselors in supporting resilience and engagement among at-risk learners. This was supported by Quinto (2023), who demonstrated that restorative practices reduced behavioral-related dropouts. Morales (2021) also found that school-based health programs improved attendance and persistence by addressing learners' physical and emotional well-being. This is congruent with the study of Lee (2021), which

revealed that a positive and supportive school climate was strongly associated with higher student retention rates.

Structural Support Systems

The synthesis further indicated that structural support systems were essential in sustaining student retention. Across the reviewed studies, economic hardship, food insecurity, limited access to technology, and inflexible learning arrangements were identified as major contributors to dropout. Programs that provided financial assistance, school nutrition, flexible learning options, and technology access enabled learners to remain enrolled despite challenging circumstances. The synthesis showed that structural supports often determined whether learners could benefit from academic and socio-emotional interventions.

This underscores that dropout is frequently driven by systemic and socioeconomic factors rather than individual learner motivation. Retention initiatives must therefore integrate economic, nutritional, and technological support to address structural inequities. Policymakers and education systems should align retention strategies with broader social protection and development

programs to ensure that learners' basic needs are met and barriers to schooling are reduced.

This theme gains support from the findings of Garcia (2022), who demonstrated that financial assistance programs mitigated economic pressures that led to dropout. The results corroborate with the study of Vargas (2022), which showed that school nutrition programs improved attendance and reduced dropout among disadvantaged learners. Hernandez (2023) further supported this theme by revealing that technology-supported interventions enhanced engagement and access for at-risk learners. Urbano (2023) found that flexible learning options sustained participation among learners facing contextual constraints. This is true as the study of Lopez (2023) revealed that addressing socioeconomic barriers was central to effective dropout prevention.

Table 1. Effective Programs and Initiatives Supporting Learners at Risk

Author(s) & Year	Pedagogical Focus / Innovation	Design / Method	Key Findings	Implications for Practice
Abellanosa (2025)	Learning Recovery Program	Qualitative	Targeted recovery reduced learning loss and disengagement	Institutionalize recovery programs
Alvarez (2022)	Mentorship Programs	Quantitative	Improved attendance and persistence	Scale structured mentoring
Bautista, J. (2025)	RTI / MTSS	Policy analysis	Early intervention reduced dropout risk	Strengthen tiered supports

Author(s) & Year	Pedagogical Focus / Innovation	Design / Method	Key Findings	Implications for Practice
Bautista, L. (2021)	Community-based Programs	Case study	Community engagement improved retention	Strengthen LGU–school ties
Chavez (2023)	After-school Programs	Quasi-experimental	Reduced dropout rates	Expand enrichment programs
Dela Cruz (2021)	School Counseling	Survey	Emotional support improved retention	Increase counselor deployment
De Leon (2022)	Parental Involvement	Mixed methods	Family engagement reduced absenteeism	Parent education initiatives
Garcia (2022)	Financial Assistance	Descriptive	Economic support prevented dropouts	Sustain scholarship schemes
Gonzales (2021)	Mentorship	Correlational	Strong mentor relationships increased persistence	Formalize mentoring
Hernandez (2023)	Educational Technology	Mixed methods	Tech tools improved engagement	Invest in EdTech access
Ibarra (2022)	School–Community Partnership	Qualitative	Shared responsibility improved retention	Community-based planning
Javier (2021)	Early Warning Systems	Quantitative	Early identification reduced dropout	Integrate analytics
Kang (2022)	International Programs	Comparative	Multi-sector models were most effective	Policy benchmarking
Lee (2021)	School Climate	Survey	Positive climate correlated with retention	Improve school culture
Lopez (2023)	Socioeconomic Support	Qualitative	Poverty mitigation reduced dropout	Integrate social services

Author(s) & Year	Pedagogical Focus / Innovation	Design / Method	Key Findings	Implications for Practice
Mendoza (2022)	Peer Tutoring	Experimental	Improved engagement and completion	Promote peer learning
Morales (2021)	School Health Programs	Descriptive	Health support sustained attendance	Strengthen health services
Nguyen (2023)	Teacher Training	Quasi-experimental	Trained teachers improved retention	Continuous PD
Pangilinan (2021)	Extracurricular Activities	Survey	Participation increased school attachment	Expand co-curriculars
Quinto (2023)	Restorative Practices	Case study	Reduced behavioral dropouts	Adopt restorative approaches
Ramos (2022)	Instructional Leadership	Correlational	Leadership quality influenced retention	Leadership development
Torres (2021)	Family Support Programs	Qualitative	Family-school linkage improved persistence	Family-centered interventions
Urbano (2023)	Flexible Learning	Mixed methods	Flexibility supported at-risk learners	Institutionalize flexible modes
Vargas (2022)	School Nutrition	Descriptive	Nutrition improved attendance	Sustain feeding programs
Yocampo (2021)	Saving Angels Program	Program evaluation	Comprehensive support reduced dropout	Replicate integrated models

Recurring themes, strategies, and best practices that strengthened student retention across studies

Table 2 synthesized recurring themes, strategies, and best practices identified across the reviewed studies that focused on strengthening student retention among learners at risk of dropping out. The table highlighted patterns in how effective retention initiatives were conceptualized and implemented across Philippine and international contexts. From the synthesis, three dominant themes emerged: mentorship and guidance structures, early identification and monitoring systems, and whole-school collaborative approaches. Collectively, the findings emphasized that best practices in student retention were proactive, learner-centered, and sustained through coordinated efforts beyond isolated classroom interventions.

Mentorship and Guidance Structures

The synthesis revealed that mentorship and guidance structures consistently emerged as effective strategies in strengthening student retention. Across the reviewed studies, learners who had access to mentors, peer tutors, or trusted adults demonstrated higher levels of engagement, attendance, and persistence. Mentorship programs provided not only academic assistance but also emotional encouragement, role modeling, and accountability, which were particularly beneficial for learners experiencing disengagement. The synthesis showed that mentorship was most effective when relationships were sustained

over time and formally embedded within school programs rather than implemented informally or temporarily.

The implications of this theme suggest that schools should institutionalize mentorship and guidance programs as part of their retention strategies. Structured mentor assignment, clear roles, and regular monitoring are necessary to ensure continuity and effectiveness. Without institutional support, mentorship initiatives risk inconsistency and limited reach. School leaders and policymakers are therefore encouraged to allocate resources, provide training, and establish policies that support long-term mentoring and guidance systems for learners at risk.

This theme gains strong support from the findings of Alvarez (2022), who demonstrated that mentorship programs in Metro Manila improved attendance and reduced dropout rates. The results corroborate with the findings of Gonzales (2021), which showed that sustained mentor–learner relationships reduced dropout risk in Philippine high schools. This is congruent with the study of Mendoza (2022), which revealed that peer tutoring programs enhanced engagement and persistence among struggling learners. Pangilinan (2021) further supported this theme by showing that extracurricular activities fostered school attachment and learner motivation. This is true as the study of Kang (2022) revealed that mentorship and adult guidance were common elements of successful dropout prevention programs across international contexts.

Early Identification and Monitoring Systems

The synthesis indicated that early identification and continuous monitoring systems were central to effective student retention. Across the reviewed studies, early warning systems, predictive analytics, and learner monitoring tools enabled schools to detect academic, behavioral, and attendance risks before they escalated into dropout. The synthesis highlighted that early identification was most effective when combined with timely and targeted interventions, allowing schools to respond proactively rather than reactively to learner disengagement.

The theme emphasizes the need for schools and education systems to strengthen their data-driven capacities. Investing in early warning systems, analytics tools, and staff training is essential to ensure that at-risk learners are identified promptly and supported effectively. Without systematic monitoring, learners may remain unnoticed until disengagement becomes irreversible. Policymakers and administrators should therefore prioritize the integration of early identification mechanisms within school management and support systems.

This theme was supported by the findings of Javier (2021), which revealed that early warning systems in Cebu enabled timely interventions that reduced dropout rates. The results corroborate with the study of Ocampo (2022), which demonstrated that data analytics improved schools' capacity to predict and prevent dropout. Dai et al. (2025) further supported this theme by showing that learning analytics enhanced real-time identification of at-risk learners. De Jesus (2021) revealed that prescriptive analytics improved the precision of intervention

planning. This is congruent with the findings of Mesias et al. (2025), who identified key predictors of students at risk of dropping out that informed targeted retention strategies.

Whole-School Collaborative Approaches

The synthesis further showed that whole-school collaborative approaches were essential in sustaining student retention. Across the reviewed studies, effective retention initiatives extended beyond classroom instruction and involved families, communities, and external stakeholders. Collaboration strengthened learners' support systems by addressing academic, social, and environmental factors simultaneously. The synthesis indicated that retention programs were more sustainable and impactful when schools fostered shared responsibility and coordinated action among stakeholders.

The result suggests that dropout prevention should be approached as a collective responsibility rather than a school-only function. Schools should actively engage parents, local communities, and partner organizations in designing and implementing retention initiatives. Establishing formal partnerships and communication channels can enhance resource sharing and program sustainability. Education leaders are encouraged to promote collaborative governance models that align school-based interventions with community needs and resources.

This theme gains support from the findings of Bautista (2021), who demonstrated that community-based interventions improved retention through

shared accountability. The results corroborate with the study of Ibarra (2022), which showed that school–community partnerships strengthened dropout prevention efforts in the Davao Region. De Leon (2022) further supported this theme by revealing that parental involvement strategies reduced absenteeism and dropout. Torres (2021) found that family support programs strengthened home–school relationships and learner persistence. This is congruent with the findings of UNESCO (2024) and UNDP (2023), which emphasized that collaborative and cross-sector approaches were critical to achieving inclusive and equitable education aligned with Sustainable Development Goal 4.

Table 2. Recurring Themes, Strategies, and Best Practices that strengthened student retention across studies

Author(s) & Year	Pedagogical Focus / Innovation	Design / Method	Key Themes Identified	Best Practices
Abellanosa (2025)	Learning Recovery	Qualitative	Targeted remediation	Data-driven intervention
Alvarez (2022)	Mentorship	Quantitative	Caring adult support	Long-term mentor matching
Bautista, J. (2025)	RTI	Policy	Early identification	Tiered intervention
Bautista, L. (2021)	Community Programs	Case study	Shared responsibility	Community ownership
Chavez (2023)	After-school	Quasi-experimental	Engagement beyond class	Structured enrichment
Dela Cruz (2021)	Counseling	Survey	Emotional safety	Accessible counseling
De Leon (2022)	Parental Involvement	Mixed	Family engagement	Parent education

Author(s) & Year	Pedagogical Focus / Innovation	Design / Method	Key Themes Identified	Best Practices
Garcia (2022)	Financial Aid	Descriptive	Economic stability	Needs-based aid
Gonzales (2021)	Mentorship	Correlational	Belonging	Peer-mentor models
Hernandez (2023)	Technology	Mixed	Digital engagement	Blended learning
Ibarra (2022)	Partnerships	Qualitative	Collective action	Multi-stakeholder planning
Javier (2021)	Early Warning	Quantitative	Proactive monitoring	Predictive analytics
Kang (2022)	Comparative	Review	Holistic support	Integrated services
Lee (2021)	School Climate	Survey	Safe environment	Inclusive culture
Lopez (2023)	Socioeconomic	Qualitative	Poverty reduction	Social protection
Mendoza (2022)	Peer Tutoring	Experimental	Peer connection	Structured tutoring
Morales (2021)	Health	Descriptive	Physical well-being	School health programs
Nguyen (2023)	Teacher Training	Quasi	Teacher capacity	Continuous PD
Pangilinan (2021)	Extracurriculars	Survey	Student identity	Co-curricular inclusion
Quinto (2023)	Restorative	Case	Positive discipline	Restorative justice
Ramos (2022)	Leadership	Correlational	Visionary leadership	Instructional focus
Torres (2021)	Family Support	Qualitative	Home-school link	Family outreach
Urbano (2023)	Flexible Learning	Mixed	Accessibility	Alternative delivery
Vargas (2022)	Nutrition	Descriptive	Food security	School feeding
Yocampo (2021)	Integrated Program	Evaluation	Holistic care	Whole-child approach

Gaps, Challenges, and Opportunities for Improvement within the SDG framework

Table 3 synthesized gaps, challenges, and opportunities identified across studies published from 2021 to 2025 that examined interventions addressing the needs of learners at risk of dropping out. The table revealed that while many programs demonstrated effectiveness, their long-term impact was often constrained by systemic and structural limitations. From the synthesis, three dominant themes emerged: program sustainability constraints, implementation capacity limitations, and policy alignment opportunities. Collectively, the table highlighted that improving student retention requires not only effective interventions but also sustained institutional support, strengthened capacity, and coherent policy integration within the framework of the Sustainable Development Goals.

Program Sustainability Constraints

The synthesis revealed that program sustainability was a recurring challenge across retention initiatives. Many studies reported that effective programs were implemented on a short-term or project-based basis, often dependent on limited funding, external support, or temporary policy directives. As a result, interventions that initially demonstrated positive outcomes struggled

to maintain continuity and scale. The synthesis further showed that sustainability issues were particularly evident in after-school programs, learning recovery initiatives, and financial assistance schemes, where long-term institutionalization was limited.

The theme suggests that retention initiatives must move beyond pilot implementation toward sustained integration within school systems and education governance structures. Without stable funding, clear ownership, and long-term planning, effective programs risk discontinuation, reducing their cumulative impact on student retention. Policymakers and education leaders are therefore encouraged to institutionalize proven interventions through policy mandates, budgetary allocation, and integration into school improvement plans to ensure durability and scalability.

This theme gains support from the findings of Abellanos (2025), who noted that learning recovery programs faced challenges in sustaining implementation beyond initial phases. The results corroborate with the study of Chavez (2023), which found that after-school programs reduced dropout but were difficult to maintain without stable funding. Garcia (2022) similarly reported limited coverage and continuity in financial assistance programs. Vargas (2022) highlighted instability in nutrition program funding, affecting long-term effectiveness. This is congruent with the findings of Dela Rosa (2023), who emphasized that many SDG-aligned retention initiatives lacked institutional mechanisms for sustainability.

Implementation Capacity Limitations

The synthesis indicated that limited implementation capacity significantly constrained the effectiveness of retention interventions. Several studies reported shortages in trained personnel, high counselor-to-student ratios, uneven access to professional development, and limited technical expertise in implementing data-driven systems. These capacity gaps affected the consistency, quality, and reach of programs, particularly in schools serving high numbers of at-risk learners. The synthesis showed that even well-designed interventions were less effective when staff capacity and institutional readiness were insufficient.

The implications of this theme emphasizes the need for sustained investment in human and organizational capacity. Retention programs require trained teachers, counselors, administrators, and technical staff who are capable of implementing and monitoring interventions effectively. Without adequate capacity building, schools may struggle to translate policy intentions into meaningful practice. Education systems should therefore prioritize professional development, staffing support, and technical assistance as integral components of dropout prevention strategies.

This theme was supported by the findings of Dela Cruz (2021) and Santos (2023), who reported that high counselor workloads limited the reach of counseling programs. The results corroborate with the study of Quinto (2023), which emphasized that restorative practices required extensive teacher training

to be effective. Nguyen (2023) further supported this theme by showing that teacher training programs improved retention but were unevenly accessible. Nasim (2024) revealed variability in teachers' understanding and application of Response to Intervention practices. This is congruent with the findings of Ramos (2022), which demonstrated that school leadership capacity influenced the successful implementation of retention initiatives.

Policy Alignment Opportunities

The synthesis further revealed opportunities to strengthen student retention through improved policy alignment. Several studies noted gaps between effective school-level practices and broader education policies, resulting in fragmented implementation and limited scaling. The synthesis showed that while many interventions aligned conceptually with inclusive education and SDG 4, explicit policy integration and coordination across levels of governance were often lacking. This disconnect limited the ability of education systems to replicate and sustain effective practices across contexts.

The theme tells that retention initiatives should be embedded within coherent national and local policy frameworks. Aligning school-based interventions with curriculum standards, accountability systems, and development agendas can enhance coherence and sustainability. Policymakers are encouraged to use evidence from systematic reviews to inform policy refinement, ensuring that effective retention strategies are scaled and aligned

with national priorities and global commitments such as the Sustainable Development Goals.

This theme gains support from the findings of Kang (2022), who emphasized the need to contextualize international best practices within local policy environments. The results corroborate with the study of Wang (2021), which highlighted policy coherence as a prerequisite for sustainable dropout prevention. UNESCO (2024) further supported this theme by emphasizing alignment with SDG 4 in education interventions for at-risk learners. UNDP (2023) reinforced the importance of integrating retention strategies within national development frameworks such as Ambisyon Natin 2040. These findings collectively demonstrate that policy alignment represents a critical opportunity for strengthening the long-term impact of retention initiatives.

Table 3. Gaps, Challenges, and Opportunities for Improvement within the SDG Framework

Author(s) & Year	Focus	Design	Gaps / Challenges Identified	Opportunities for Improvement
Abellanosa (2025)	Recovery Programs	Qualitative	Short-term funding	Institutionalization
Alvarez (2022)	Mentorship	Quantitative	Mentor availability	Volunteer pipelines
Bautista, J. (2025)	RTI	Policy	Inconsistent implementation	National RTI standards
Bautista, L. (2021)	Community	Case	Uneven LGU support	Policy integration

Author(s) & Year	Focus	Design	Gaps / Challenges Identified	Opportunities for Improvement
Chavez (2023)	After-school	Quasi	Sustainability issues	Budget allocation
Dela Cruz (2021)	Counseling	Survey	High counselor–student ratio	Staffing expansion
De Leon (2022)	Parental Involvement	Mixed	Low parent participation	Flexible engagement models
Garcia (2022)	Financial Aid	Descriptive	Limited coverage	Expanded targeting
Gonzales (2021)	Mentorship	Correlational	Program inconsistency	Standardized frameworks
Hernandez (2023)	Technology	Mixed	Digital divide	Infrastructure investment
Ibarra (2022)	Partnerships	Qualitative	Coordination gaps	Inter-agency MOUs
Javier (2021)	Early Warning	Quantitative	Data capacity limits	Training in analytics
Kang (2022)	International	Review	Context mismatch	Localization strategies
Lee (2021)	Climate	Survey	Cultural resistance	Inclusive policy reform
Lopez (2023)	Socioeconomic	Qualitative	Structural poverty	SDG-aligned social policy
Mendoza (2022)	Peer Tutoring	Experimental	Limited scalability	School-wide models
Morales (2021)	Health	Descriptive	Resource constraints	Health–education linkage
Nguyen (2023)	Teacher Training	Quasi	PD access gaps	Systematic PD plans
Pangilinan (2021)	Extracurriculars	Survey	Participation barriers	Inclusive programming
Quinto (2023)	Restorative	Case	Teacher readiness	Capacity building
Ramos (2022)	Leadership	Correlational	Leadership turnover	Succession planning
Torres (2021)	Family Support	Qualitative	Cultural barriers	Context-sensitive outreach

Author(s) & Year	Focus	Design	Gaps / Challenges Identified	Opportunities for Improvement
Urbano (2023)	Flexible Learning	Mixed	Policy ambiguity	Formal policy adoption
Vargas (2022)	Nutrition	Descriptive	Funding instability	Cross-sector financing
Yocampo (2021)	Integrated Programs	Evaluation	Replication challenges	Policy mainstreaming

Synthesis of the Results

The synthesis of findings from the systematic review revealed that effective support for learners at risk of dropping out is multidimensional, requiring the integration of academic, socio-emotional, structural, and systemic interventions. Across the reviewed studies, student retention was most successfully strengthened when programs addressed learning gaps, emotional well-being, and socioeconomic barriers simultaneously rather than through isolated initiatives. This integrated approach was evident in both Philippine and international contexts, underscoring that dropout is a complex phenomenon shaped by interacting academic, personal, and environmental factors (Abellanos, 2025; Dela Rosa, 2023; Kang, 2022).

A key pattern that emerged from the synthesis was the centrality of **academic recovery and instructional support** in preventing dropout. Learners at risk were frequently characterized by persistent learning loss, low academic confidence, and difficulty meeting curriculum demands. Studies consistently

demonstrated that targeted remediation, contextualized instruction, and learning recovery initiatives improved engagement and persistence when delivered systematically and monitored continuously (Abellanos, 2025; Combo et al., 2025; Mutya, 2025; Fuchs & Fuchs, 2023). These findings suggest that academic failure often serves as an early trigger of disengagement, reinforcing the need to embed learning recovery within regular instructional systems rather than treating it as a temporary or remedial measure.

The synthesis further highlighted the **critical role of socio-emotional support mechanisms** in sustaining student retention. Many learners at risk experienced emotional distress, behavioral challenges, weak school attachment, and limited access to guidance services. Programs that provided counseling, restorative practices, health services, and positive school climate initiatives consistently reported reductions in absenteeism and dropout (Dela Cruz, 2021; Santos, 2023; Morales, 2021; Quinto, 2023; Lee, 2021). The convergence of evidence indicated that socio-emotional interventions were not supplementary but essential, as emotional well-being directly influenced learners' motivation, resilience, and capacity to benefit from academic support.

Another major insight from the synthesis was the importance of **structural and socioeconomic support systems** in enabling learners to remain in school. Financial hardship, food insecurity, limited access to technology, and inflexible learning arrangements were repeatedly identified as barriers to retention. Studies showed that financial assistance, school nutrition programs, flexible learning

modalities, and technology-supported instruction mitigated these barriers and improved attendance and persistence among vulnerable learners (Garcia, 2022; Vargas, 2022; Hernandez, 2023; Urbano, 2023; Lopez, 2023). These findings reinforced that dropout is often rooted in systemic inequality rather than individual learner choice, highlighting the necessity of aligning retention strategies with broader social protection and development initiatives.

The synthesis also revealed that **proactive and data-informed approaches** were fundamental to effective retention. Early identification systems, learning analytics, and continuous monitoring enabled schools to detect risk indicators before disengagement escalated into dropout. Evidence consistently showed that early warning systems and predictive analytics improved the timing and precision of interventions, resulting in more effective support for at-risk learners (Javier, 2021; Ocampo, 2022; Dai et al., 2025; De Jesus, 2021; Mesias et al., 2025). These findings underscore the importance of shifting from reactive to preventive retention strategies, supported by institutional investment in data systems and staff capacity.

Across the studies, **mentorship, guidance, and relational support** emerged as recurring best practices. Sustained mentor-learner relationships, peer tutoring, and extracurricular engagement fostered belonging, accountability, and motivation, which were particularly important for learners experiencing disengagement (Alvarez, 2022; Gonzales, 2021; Mendoza, 2022; Pangilinan, 2021; Kang, 2022). The synthesis indicated that relational support served as a protective

factor that complemented both academic and socio-emotional interventions, especially when mentorship structures were formally institutionalized within schools.

At the systems level, the synthesis identified persistent **gaps and challenges** related to sustainability, capacity, and policy alignment. Many effective programs were implemented on a short-term or project-based basis, limiting their scalability and long-term impact (Abellanos, 2025; Chavez, 2023; Dela Rosa, 2023). Capacity constraints, including high counselor workloads, uneven access to teacher training, and limited leadership readiness, further weakened implementation fidelity (Dela Cruz, 2021; Santos, 2023; Nguyen, 2023; Nasim, 2024; Ramos, 2022). These challenges suggest that effectiveness alone is insufficient without institutional mechanisms that support continuity and quality.

Finally, the synthesis emphasized **policy alignment as a critical opportunity for improvement**. While many interventions aligned conceptually with inclusive education and Sustainable Development Goal 4, explicit integration into national and local policy frameworks was often limited. Studies highlighted the need for coherent alignment between school-level practices, curriculum standards, accountability systems, and national development agendas (Wang, 2021; Kang, 2022; UNESCO, 2024; UNDP, 2023). This synthesis indicates that strengthening student retention requires systemic reform that integrates evidence-based practices into policy, governance, and long-term planning.

In summary, the synthesis of results demonstrated that effective student retention for learners at risk depends on integrated academic recovery, robust socio-emotional support, structural assistance, proactive identification, relational guidance, and strong policy alignment. These interrelated components collectively advance inclusive and equitable quality education, reinforcing the central objectives of Sustainable Development Goal 4 and providing a robust evidence base for future policy and practice.

SUMMARY, CONCLUSION AND RECOMMENDATION

This chapter presented the summary, conclusions, and recommendations of the study by synthesizing the key findings from the systematic review on effective programs and initiatives supporting learners at risk of dropping out. The results highlighted that student retention was most effectively strengthened through integrated interventions that addressed academic recovery, socio-emotional support, structural assistance, early identification, and collaborative engagement among schools, families, and communities, consistent with the goals of inclusive and equitable quality education under Sustainable Development Goal 4. The conclusions emphasized the need to institutionalize evidence-based retention strategies, strengthen instructional and counseling capacity, and align school-level practices with data-informed systems and policy frameworks. The recommendations underscored the importance of sustaining

these interventions through curriculum integration, continuous professional development, and coherent policy alignment to ensure that no learner is left behind.

Summary

On the Effective Programs and Initiatives Supporting Learners at Risk

The results summarized in Table 1 indicated that effective programs supporting learners at risk of dropping out consistently addressed academic, socio-emotional, and structural dimensions of learner need. Studies showed that academic recovery and remediation programs reduced learning loss and improved persistence (Abellanos, 2025; Combo et al., 2025; Mutya, 2025; Fuchs & Fuchs, 2023), while counseling, health, and restorative interventions strengthened emotional well-being and school attachment (Dela Cruz, 2021; Santos, 2023; Morales, 2021; Quinto, 2023; Lee, 2021). Financial assistance, nutrition programs, flexible learning options, and technology-supported instruction further reduced socioeconomic barriers that contributed to dropout (Garcia, 2022; Vargas, 2022; Hernandez, 2023; Urbano, 2023; Lopez, 2023). Overall, the evidence demonstrated that comprehensive and sustained interventions were more effective than isolated initiatives in strengthening student retention.

On the Recurring Themes, Strategies, and Best Practices in Strengthening Student Retention

The results in Table 2 revealed recurring best practices across the reviewed studies, particularly the use of mentorship and guidance, early identification systems, and whole-school collaborative approaches. Mentorship programs, peer tutoring, and extracurricular engagement consistently enhanced learner motivation and persistence (Alvarez, 2022; Gonzales, 2021; Mendoza, 2022; Pangilinan, 2021; Kang, 2022). Early warning systems, data analytics, and learning analytics enabled timely identification and support of at-risk learners (Javier, 2021; Ocampo, 2022; Dai et al., 2025; De Jesus, 2021; Mesias et al., 2025). In addition, family engagement and school–community partnerships strengthened retention by extending support beyond the classroom (Bautista, 2021; Ibarra, 2022; De Leon, 2022; Torres, 2021; UNESCO, 2024). Collectively, these strategies emphasized proactive, learner-centered, and collaborative approaches to dropout prevention.

On the Gaps, Challenges, and Opportunities for Improvement in Student Retention Interventions

The results presented in Table 3 highlighted key gaps and challenges that limited the long-term effectiveness of retention interventions. Sustainability issues were evident in short-term funding, limited program coverage, and lack of institutionalization (Abellanosa, 2025; Chavez, 2023; Garcia, 2022; Vargas, 2022;

Dela Rosa, 2023). Capacity constraints, including high counselor workloads, uneven access to teacher training, and limited leadership readiness, affected implementation quality (Dela Cruz, 2021; Santos, 2023; Nguyen, 2023; Nasim, 2024; Ramos, 2022). The table also identified opportunities for improvement through stronger policy alignment with inclusive education and Sustainable Development Goal 4, emphasizing the need for coherent integration of effective practices into national and local education frameworks (Wang, 2021; Kang, 2022; UNESCO, 2024; UNDP, 2023).

Conclusions

On the Effective Programs and Initiatives Supporting Learners at Risk

The systematic review concluded that programs and initiatives supporting learners at risk of dropping out were most effective when they addressed academic, socio-emotional, and structural barriers simultaneously through sustained and institutionalized interventions, demonstrating that comprehensive and integrated support systems are essential in strengthening student retention and advancing inclusive and equitable quality education.

On the Recurring Themes, Strategies, and Best Practices in Strengthening Student Retention

The review concluded that best practices in strengthening student retention consistently involved mentorship and guidance structures, early identification and monitoring systems, and whole-school collaboration, indicating that proactive, learner-centered, and collaborative approaches are critical to preventing dropout and sustaining learner engagement across diverse educational contexts.

On the Gaps, Challenges, and Opportunities for Improvement in Student Retention Interventions

The findings concluded that despite the effectiveness of many retention initiatives, their long-term impact was constrained by sustainability issues, implementation capacity limitations, and insufficient policy alignment, highlighting the need for systemic reform, capacity building, and coherent integration of evidence-based practices within national and global education frameworks such as Sustainable Development Goal 4.

Recommendations

Based on the findings of the systematic review, the following recommendations are advanced to strengthen programs and initiatives supporting learners at risk of dropping out:

1. First, schools and education systems should institutionalize integrated retention frameworks that combine academic recovery, socio-emotional support, and structural assistance. Academic remediation and learning recovery programs should be embedded within regular instructional planning and supported by continuous monitoring to prevent learning gaps from escalating into disengagement. At the same time, schools should strengthen guidance, counseling, and school-based health services to address learners' emotional and behavioral needs, recognizing that academic success and well-being are interdependent. Structural supports such as financial assistance, school nutrition programs, flexible learning options, and access to technology should also be sustained to mitigate socioeconomic barriers that undermine learner persistence.
2. Second, education leaders should prioritize the development and use of early identification and data-informed monitoring systems. Schools and divisions are encouraged to invest in early warning mechanisms, learning analytics, and capacity building for teachers and administrators to ensure timely detection of at-risk

learners. Proactive intervention, guided by reliable data, should replace reactive responses to dropout, enabling targeted and timely support aligned with learners' needs.

3. Third, mentorship and relational support structures should be formally established and strengthened within schools. Sustained mentorship programs, peer tutoring initiatives, and co-curricular engagement opportunities should be institutionalized to foster learner belonging, motivation, and accountability. Clear guidelines, training, and monitoring mechanisms are recommended to ensure the consistency and effectiveness of these relational supports.
4. Fourth, collaborative partnerships among schools, families, communities, and external stakeholders should be expanded and formalized. Strengthening parental involvement, school–community partnerships, and cross-sector collaboration can extend support beyond the classroom and enhance the sustainability of retention initiatives. Schools are encouraged to develop shared responsibility models that align educational interventions with community resources and needs.
5. Finally, policymakers are urged to align effective retention strategies with national education priorities and global commitments such as Sustainable Development Goal 4 and

Ambisyon Natin 2040. Evidence from this systematic review should inform policy refinement, resource allocation, and long-term planning to ensure the scalability and sustainability of retention programs. Continuous professional development, leadership capacity building, and institutional support mechanisms are essential to translating evidence-based practices into lasting improvements in student retention.

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