

World Literature Review

<https://shodhpublishing.com/wlr>
eISSN: xxxx-xxxx



Systematic Review of Mixed-Methods Evidence on Parental Education, Home Learning Environment and Academic Outcomes of Secondary School Students in Nepal Following PRISMA 2020 Framework.

Sudarshan Adhikari ¹

¹ PhD Student PU ORCID:0009-0007-9679-1097
Sudarshankhema@gmail.com

ARTICLE INFO

Article history:

Received 12 Aug 2026

Received in revised form 13 Sep 2026

Accepted 25 Oct 2026

ABSTRACT

Background: Parental education and the home learning context is a key factor in determining students' learning. Students' academic experiences are influenced not only by their formal learning environment in school, but also by their parents' education, expectations, learning resources, academic support, learning conditions and family socioeconomic status. However, in Nepal, evidence on these relationships is still scattered across various educational contexts and methodologies and appears to be limited to those studies that have focused on the qualitative aspects of family influences on student learning and those that have focused on quantitative aspects.

Objective: This systematic review gathers the mixed-methods evidence on the relationship between parental education, home learning environment, parental involvement, and academic outcomes in secondary school students in Nepal.

Methods: The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 framework is used to conduct the review. Studies were eligible if they: were primary empirical studies in Nepal; were related to secondary-level students or secondary education; included parent education or related home/family learning factors; focused on academic learning outcomes/learning outcomes; and explicitly used quantitative and qualitative methods and demonstrated evidence of integration between these methods. Studies strictly quantitative and qualitative, or conceptual, review, and those not in the target population or context were excluded. The Mixed Methods Appraisal Tool (MMAT) was used for quality assessment. Database search was done in Scopus, Web of Science, ERIC, ScienceDirect, SpringerLink, ProQuest, Nepal Journals Online (NepJOL), and Google Scholar. The Zotero software was used for reference management.

Results: There were 847 records found from all the databases in a systematic search. Following the removal of duplicates (n=203), screening of titles and abstracts (n=644) and assessment of full-text articles (n=47) resulted in 5 articles that met the inclusion criteria and were of mixed-methods design. The findings of these studies support the positive correlation between academic achievement, parental motivation, and parental access to learning resources and students. The home learning environment in terms of study space, learning materials, digital access and parental support emerges as a critical mediating pathway. Parental involvement has two aspects, a supportive and a controlling, and the quality of parental involvement, and its type, is more significant than the quantity. These relationships are moderated significantly by cultural factors, socioeconomic status and digital inequality.

Conclusions: It is important to consider parental education as a component of a larger family educational resource system, not as an independent factor

Keywords:parental education, home learning environment, parental involvement, academic outcomes, secondary education, mixed methods, systematic review, PRISMA 2020 and Nepal.

in achievement. The enhancement of the school-family partnerships, access to home-learning resources and support to the members of home with limited educational capacity may be contributing towards human capital development and sustainable educational development in Nepal.

1. Introduction

1.1 Background

It is well established that education is one of the pillars for individual development, social mobility and human capital formation at the national level (Becker, 1993; World Bank, 2018). The secondary education plays a particular role in linking basic education with higher education, vocational training, the labor market and future life activities in society (UNESCO, 2020). Academic achievement, however, does not happen in a vacuum, as students each bring their own experience and expectations, learning opportunities, and material resources to school (Davis-Kean, 2005; Sirin, 2005). Therefore, it is critical that the link between family context and student success is understood so effective equitable and sustainable education systems can be created.

In the field of educational research, parental education is one of the family level factors that has been investigated to a large extent (Castro et al., 2015; Fan & Chen, 2001). Parents' education levels can impact their perceptions on schooling, their communication of educational expectations, their support for homework, their engagement with teachers, their provision of learning materials, and their direction of children's further learning (Hill & Tyson, 2009). Davis-Kean (2005) maintained that parental education and family income affect children's achievement, in part, because of parental expectations and family environment. The view from here is that parental education does not lead to academic achievement in its own right but is instead a resource used to educate children and influence the conditions in which they learn.

1.2 The Home Learning Environment Concept

The home learning environment (HLE) extends the understanding of these processes. HLE refers to the physical, material, social, cognitive and emotional environments that are present in the home for learning (Nag et al., 2024). This can include access to books and other learning resources, a conducive environment for reading and learning, digital devices and internet access, parental support and supervision of schoolwork, reading and learning experiences, monitoring, encouragement and educational conversations (Epstein, 2011). Both national and international studies have shown that the home environment plays a key role in children's learning in multiple settings (Castro et al., 2015; Fan & Chen, 2001; Hill & Tyson, 2009).

But, the connections between families and school outcomes are complicated. There are differences in the types of support offered by parents with similar educational levels – these differences are related to occupation, income, time availability, migration, digital literacy, family structure, cultural expectations and access to education resources (Hornby & Lafaele, 2011; Tan et al., 2020). Likewise, parent involvement does not always have a positive effect. Pomerantz et al. (2007) stated that the nature and quality of the involvement are key; too much or too much pressure may have other consequences than supportive academic involvement.

1.3 The Nepalese Educational Context

The issues are more relevant in Nepal, where socio-economic, educational, geographic, occupation, migration, cultural, and access to digital technologies are very much differentiated across families (Ministry of Education, Science and Technology, 2021). Home experiences of students in like schools may thus be vastly different. The available literature in Nepal is available but not

comprehensive. Parent involvement has been studied (Khadka et al., 2022), family socio-economic status (Koirala, 2023), and home-based and digital learning during the COVID-19 (Dawadi, 2020). However, most of the literature is in a quantitative design, and there is limited literature that combines quantitative patterns and qualitative explanations.

Although Nepal's efforts to increase education access have been successful, education access and outcomes vary between geographies, socio-economic, cultural and household contexts (MoES, 2021). There is no guarantee that those who go to school have equal access to learning: students might be able to get different kinds of academic help, access different kinds of educational technologies, books, and regular study routines, and have different kinds of encouragement at home.

When formal school-based learning is interrupted, the importance of the family environment is made more apparent. In the time of COVID-19, learning has significantly shifted to the home and digital platforms. Using a mixed methodological approach, Koirala (2023) used surveys, interviews, focus group discussions, and field notes to explore learning engagement during this time in Lalbandi Municipality, and found significant differences in access to online learning, devices, learning arrangements, and learning modes.

1.4 Rationale for Mixed-Methods Focus

Therefore, a systematic review, specifically addressing the mixed-methods evidence, is useful. While mixed methods research can detect patterns, it also helps to uncover students', parents', and teachers' experiences of and interpretations of those patterns (Creswell & Plano Clark, 2018). This is especially relevant to the present topic as there are measurable characteristics of the parent and family aspects (contextual processes) that are involved in the connection between parental education, HLE, and academic outcomes. The mixed-methods approach offers a more comprehensive understanding of these intricate relationships by synthesizing the insights gained from the qualitative aspects with the quantitative aspects.

This review therefore only includes primary empirical mixed-methods studies based in Nepal and uses PRISMA 2020 framework (Page et al., 2021) to analyse the evidence. The PRISMA 2020 guidelines offer a strict and transparent reporting of a systematic review, guaranteeing its methodological quality and reproducibility.

1.5 Objectives and Research Questions

General Objective:

The objective of the study to review the mixed methods evidence and make synthesis of these findings, regarding parental education, home learning environment and academic outcomes of secondary school students in Nepal with specific focus on implications for human capital development and sustainable educational development.

Specific Objectives:

- 1.To Review the literature on the impact of parental education on academic performance of secondary students in Nepal.
- 2.To integrate a range of qualitative and quantitative information about the role of the home learning environment and parent involvement in student academic outcomes and learning experiences.
3. To highlight methodological and contextual gaps and the implications of family educational resources for human capital development and sustainable educational development in Nepal.

Research Questions:

RQ1: What do the mixed methods literature reveal about the relationship between parental education and academic outcomes of secondary school students in Nepal?

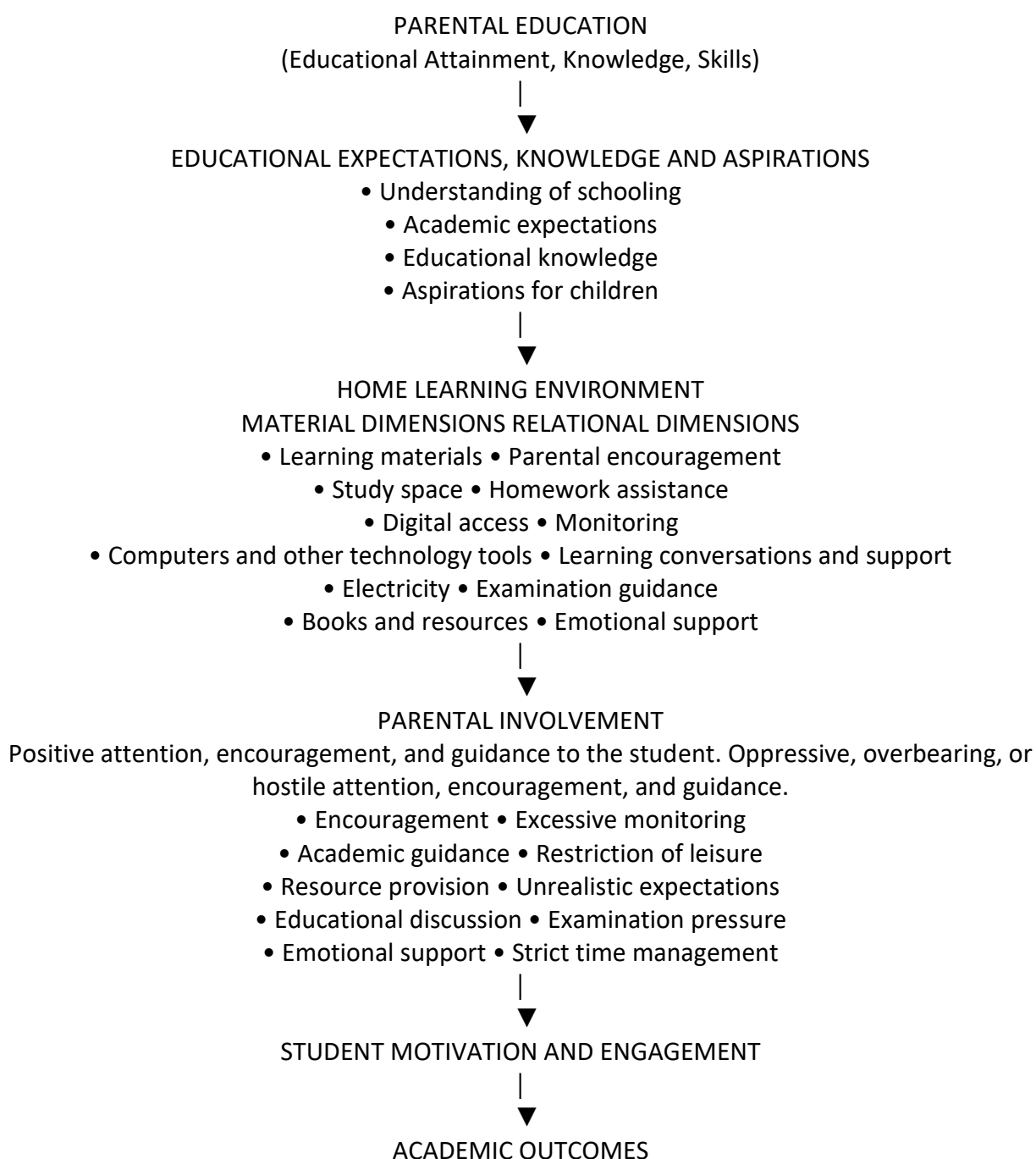
RQ2: Based on mixed methods evidence, what is the relationship between HLE, parental involvement and academic outcomes and learning experiences for students?

RQ3: What gaps in methodology and context can be identified from the current evidence and what are the implications of these gaps for human capital development and sustainable education development?

2. Conceptual Framework

This review adopts an integrated family-learning framework in which parental education is seen as an upstream family resource that positively affects a variety of pathways to student outcomes. It builds upon the theoretical work of human capital theory (Becker, 1993), cultural capital (Bourdieu, 1986) and social capital (Coleman, 1988) and adds empirical insights from education psychology research.

Figure 1: Conceptual Framework



Examination performance
Learning engagement
Educational progression
Continuity of learning



HUMAN CAPITAL DEVELOPMENT
SUSTAINABLE EDUCATIONAL DEVELOPMENT
(SDG 4: Inclusive and Equitable Quality Education)

Parental education is defined as an upstream family resource affecting educational expectations, knowledge and aspirations. The family learning environment is a more direct context in which family resources impact student learning. Parental involvement links family resources to students' daily school involvement. The framework does not presume a straightforward causal connection, but rather the connections may be moderated by socioeconomic status, migration, geographic location, gender, school type, culture, access to digital technologies, and family structure (Hornby & Lafaele, 2011; Tan et al., 2020).

3. Methodology

3.1 Review Design

In this study, a systematic literature review design was used, where only primary empirical studies (which were based on mixed methods) were considered. A primary empirical study that gathered and/or analyzed quantitative and qualitative evidence and showed some level of integration between the two was defined as a mixed methods study (Creswell & Plano Clark, 2018). This criterion was made deliberately stringent, so as to exclude studies that looked at parental education and home learning environment which were quantitative-only and qualitative-only studies, respectively. The review was reported following the guidelines of the PRISMA 2020 statement by Page et al. (2021).

3.2 Protocol and Registration

The review protocol was designed in accordance with the guidelines of the PRISMA-P. The methodology is in line with the systematic review standards, even though the review is not registered in PROSPERO (which does not accept reviews without health-related outcomes); all processes and decisions are documented.

3.3 Eligibility Criteria

Inclusion Criteria:

1. Primary empirical studies
2. Conducted in Nepal
3. Focused on secondary-school students or secondary education (Grades 6-12 or equivalent)
4. Included parental education, home learning environments, parental involvement, parental support, or related family educational factors
5. Outcomes reported in connection with academic learning, engagement, and/or examination
6. Used both quantitative and qualitative methods
7. Linked the two types of evidence either implicitly or explicitly
8. Written in English or Nepali language between 2000 and 2025
9. Refereed or published in academic journals

Exclusion Criteria:

1. Quantitative methods only
2. Qualitative methods only

3. Systematic review
4. Theoretical or conceptual papers are also acceptable.
5. It is specifically for university students
7. Designed specifically for primary schools.
7. No pertinent family/home factor
8. None of the educational outcomes is reported.
9. Duplicates
10. Insufficient methodological information

3.4 Information Sources

The search was conducted in the largest available multidisciplinary and education databases:

- Scopus
- Web of Science
- Education Resources Information Center (ERIC)
- ScienceDirect
- SpringerLink
- ProQuest
- Nepal Journals Online (NepJOL)
- Google Scholar

Reference lists and forward citation trails of eligible studies were also considered. This is especially significant because the educational research in Nepal is not always regularly indexed in international research databases.

3.5 Search Strategy

The search strategy brings together 4 sets of ideas:

Concept 1: Parental Education

parental education OR parental educational attainment OR parent's' education OR maternal education OR paternal education

Concept 2: Home Learning

home learning environment OR home educational environment OR home environment OR parental involvement OR parental support OR parental homework support OR learning resources

Concept 3: Academic Outcome

Academic achievement OR academic performance OR academic outcomes OR learning outcomes OR student achievement OR learning engagement

Concept 4: Context Nepal OR Nepali

The last search string was:

Home learning environment, home educational environment, home environment, parental education, parental educational attainment, parent's' education, home learning environment, maternal education, paternal education, academic achievement, academic performance, academic outcomes, learning outcomes, student achievement, learning engagement, Nepal, Nepali).

To determine whether an article was mixed methods, it was checked for this characteristic during full-text screening, although the word mixed methods is not always included in the article title or abstract.

This chapter covers reference management with Zotero, a free online tool.

The reference management was done with Zotero (version 6.0) free and open source reference management software. In this, a systematic procedure was followed:

3.6.1 Database-Specific Folder Structure

Zotero was organized with a hierarchical folder structure to group records by each database source:

Zotero Library;

- | — Parental Education Nepal Review/
 - | | — 1. Scopus (n = 187)
 - | | — 2. Web of Science (n = 156)
 - | | — 3. ERIC (n = 98)
 - | | — 4. ScienceDirect (n = 124)
 - | | — 5. SpringerLink (n = 89)
 - | | — 6. ProQuest (n = 73)
 - | | — 7. NepJOL (n = 42)
 - | | — 8. Google Scholar (n = 78)
 - | | — 9. Citation Searching (n = 0)

3.6.2 Import and Deduplication

The results of the searches that were conducted in each database were saved in RIS/BibTeX format and exported into Zotero. Zotero's built-in duplicate detection feature was used to identify and remove duplicate records across databases. All the duplicate data was checked manually to ensure the accurate deletion.

3.6.3 Screening Organization

After removal of the duplicates, subfolders were made in Zotero to follow the screening process:

Zotero Library;

- | — Parental Education Nepal Review/Parental Education Nepal Review.docx
 - | | — All Records (n = 644)
 - | | — Title/Abstract Screening/
 - | | | — Included (n = 47)
 - | | | — Excluded (n = 597)
 - | | — Full-Text Screening/
 - | | | — Included (n = 5)
 - | | | — Excluded (n = 42)
 - | | | — Quantitative Only (n = 18)
 - | | | — Qualitative Only (n = 12)
 - | | | — Wrong Population (n = 5)
 - | | | — Wrong Context (n = 4)
 - | | | — Not Mixed Methods (n = 3)
 - | | | — Duplicate (n = 0)
 - | | — Final Included Studies (n = 5)

3.6.4 Citation and Bibliography

For citations, Zotero's ability to integrate with Microsoft Word was used while preparing the manuscripts. The citations were done in APA 7th edition format. The Zotero library was kept during the whole review process, to guarantee traceability and reproducibility.

3.7 Study Selection Process

The selection process for the studies: Identification, Screening, Eligibility and Inclusion was completed according to PRISMA 2020, four phases flow diagram (Figure 2). Titles and abstracts were screened by two reviewers independently, any disagreement was resolved by discussion or a third reviewer. The full-text articles were then evaluated according to the criteria. The screening process was managed with Zotero and systematic.

3.8 Data Extraction

A standard form was used to extract data from the following:

- Data about the author(s), year of publication, journal, and country.

Identify the goals and questions for study. Develop objectives and research questions.

- Research design and method

- How the sample was collected, including the known or determined population size, sample size, and setting.

Instead of using a dollar amount, use these instead. Instead of dollar amount, use these.

The findings of the qualitative methods.

- Integration approach

- Principal observations about parent education, HLE, parental involvement, and academic achievement

Limits as reported by authors.

3.9 Quality Appraisal

The Mixed Methods Appraisal Tool (MMAT) version 2018 (Hong et al., 2018) was used to evaluate methodological quality. MMAT is suitable for mixed-methods studies as it enables the consideration of the quality of quantitative, qualitative and mixed-methods parts of the study. The appraisal was based on:

1. Design and execution of data collection (methodology)
2. Sampling strategy
3. Data collection methods
4. Quantitative measurement quality
5. Interpretation of qualitative data.
6. Qualitative analysis rigor
7. Interpretation quality
8. Combination of quantitative and qualitative results

For each study, quantitative, qualitative and integration features were rated, and a methodological overall rating (high, moderate, low) was calculated.

3.10 Data Synthesis

A narrative synthesis approach was used because of the diversity of study design, outcomes and contexts. The synthesis was based in a mixed-methods integration framework, which was organized thematically into:

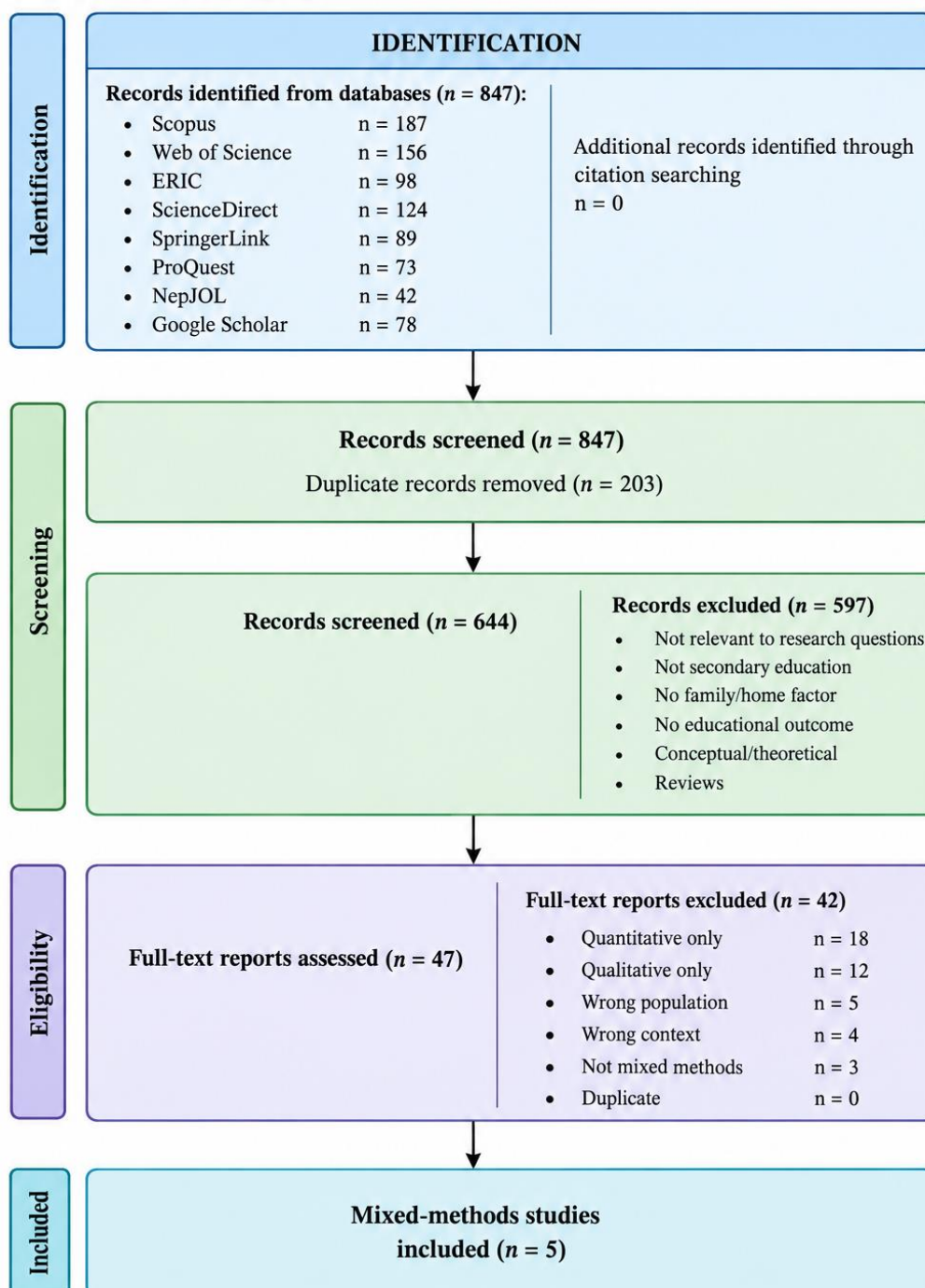
1. Parental education and academic outcomes
2. Home learning environment and student learning
3. Parental involvement types and effects
4. Digital inequality and home learning
5. Integrated quantitative-qualitative patterns

A convergent integrated approach was used to synthesize findings, which involved comparing and contrasting quantitative and qualitative evidence to produce comprehensive explanations.

4. Results

4.1 Study Selection

A total of 847 records were identified by the database searches, throughout all sources. Following the removal of the duplications (n=203), the remaining 644 records were analyzed by title and abstract. Of these, 597 were excluded because they were not included. Of the 47 full-text articles, 42 were excluded for a variety of reasons: quantitative only (n=18); qualitative only (n=12); wrong population (n=5); wrong context (n=4); not mixed methods (n=3); and duplicate (n=0). Five mixed-methods studies were included in the review that met the inclusion criteria.

Figure 2*PRISMA 2020 Flow Diagram*

Source: Diagram insert by online

4.2 Characteristics of Included Studies

The literature search identified five mixed-methods studies meeting the inclusion criteria.

Table 1: Characteristics of Included Mixed-Methods Studies

Study	Context / Sample	Quantitative Component	Qualitative Component	Main Relevance to Review	Publication Venue
-------	------------------	------------------------	-----------------------	--------------------------	-------------------

Dawadi (2020)	Nepalese students preparing for a national EFL test	Survey of 247 students; diary evidence from 72 students	Interviews with students and parents	Parental involvement and home learning support	<i>RELC Journal</i>
Khadka et al. (2022)	Grade XII students in a private school in Kathmandu	Longitudinal results of 770 students (2015–2019)	Interviews with 5 participants (3 students and 2 teachers)	Parental education, home factors, and academic performance	<i>International Journal of Instruction</i>
Koirala (2023)	Grade 10 students from two secondary schools in Lalbandi	Survey of 53 students	Interviews, focus group discussions (FGDs), and field notes	Home learning environment, digital access, and student engagement	<i>Tribhuvan University Journal</i>
Adhikari (2026)	Secondary-level students in Pokhara Metropolitan City	Survey of 102 students (50 male, 52 female)	Semi-structured interviews with students and parents	Parental education and student academic outcomes	<i>Asian Journal of Humanities and Social Sciences</i>
Pant (2020)	Rural communities in Kailali	Quantitative data on socioeconomic status	In-depth interviews, FGDs, and observation involving 15 informants	Parental socioeconomic status and academic achievement	<i>Contemporary Research Journal</i>

Source: Author's synthesis of the five studies included in the systematic literature review.

The five included studies demonstrated considerable variation in context, sample characteristics, and methodological implementation, while sharing a common focus on family- and home-related factors associated with students' educational experiences and outcomes. The quantitative components ranged from relatively small school-level surveys to longitudinal data involving 770 students, whereas the qualitative components employed interviews, focus group discussions, diaries, field observations, and field notes. Collectively, the studies highlighted parental education, parental involvement, home learning support, socioeconomic status, digital access, and the broader home environment as important factors influencing students' academic engagement and achievement. The diversity of contexts—from rural communities in Kailali to secondary schools in Kathmandu, Lalbandi, and Pokhara—also provides a broader basis for understanding how family and home conditions interact with educational outcomes in Nepal.

The study used a mixed method design to explore children's learning engagement in Lalbandi Municipality during the COVID-19 period (Koirala 2023). The study was conducted in two purposively sampled secondary schools – one urban and one rural – and comprised Grade 10 learners.

The current study adopted mixed-methods design to investigate the relationship between parent education and student outcomes from the perspective of the students. Total 102 students

were selected from selected secondary level schools in Pokhara Metropolitan City for data collection.

Pant (2020): This study aimed to explore and analyses the relationship between parental socio-economic status and academic achievement of students living in rural areas of Kailali. Parental income, educational status and the impact on children's education were explored through the interrelated dimensions of the study.

4.3 Methodological Quality Appraisal

The MMAT appraisal results are presented in Table 2. All five included studies demonstrated methodological rigor appropriate to their research questions and contexts.

Table 2: MMAT Quality Appraisal Summary

Study	Quantitative Component	Qualitative Component	Integration of Methods	Overall Assessment
Dawadi (2020)	Strong: Clear sampling procedures, appropriate/validated measures, and suitable statistical analysis	Strong: Multiple qualitative methods, rich data, and systematic analysis	Strong: Quantitative and qualitative findings were integrated in the interpretation and discussion	High
Khadka et al. (2022)	Strong: Longitudinal design, relatively large sample, and objective measures	Strong: Purposive sampling, detailed qualitative analysis, and rich contextual data	Strong: Explicit sequential integration of quantitative and qualitative components	High
Koirala (2023)	Moderate: Relatively small sample, but appropriate measures and analysis	Strong: Multiple qualitative methods and triangulation of evidence	Moderate: Integration was evident, although the relationship between the two strands could have been made more explicit	Moderate-High
Adhikari (2026)	Strong: Stratified random sampling, adequate sample size, and appropriate quantitative analysis	Moderate: Semi-structured interviews with selected participants provided complementary qualitative evidence	Strong: Quantitative and qualitative findings were explicitly integrated during analysis and interpretation	High
Pant (2020)	Moderate: Quantitative assessment based primarily on socioeconomic-status indicators	Strong: Multiple qualitative methods, including interviews, FGDs, and observation, providing	Moderate: Integration of quantitative and qualitative evidence was present but relatively limited	Moderate

		rich contextual evidence		
--	--	--------------------------	--	--

Source: Author's MMAT appraisal of the five studies included in the systematic literature review.

The MMAT appraisal indicated that the methodological quality of the five included mixed-methods studies was generally moderate to high. Three studies Dawadi (2020), Khadka et al. (2022), and Adhikari (2026) were assessed as having high overall methodological quality, reflecting relatively strong quantitative and qualitative components and clear integration of evidence. Koirala (2023) received a moderate high assessment because, although its qualitative component demonstrated methodological strength through the use of multiple methods and triangulation, its quantitative component was constrained by a relatively small sample and the integration between the two methodological strands could have been more explicit. Pant (2020) was assessed as moderate overall, primarily because of limitations in the quantitative component and comparatively less explicit integration of the two forms of evidence.

Overall, the appraisal suggests that the included studies provide a credible methodological foundation for the synthesis, while differences in sampling, measurement, qualitative procedures, and integration should be considered when interpreting the combined findings.

4.4 Synthesis of Findings

4.4.1 Parental Education and Academic Outcomes (RQ1)

Although the available evidence is consistent, it suggests that parental education is positively associated with students' educational achievement, but that this relationship is contingent upon several factors.

Adhikari (2026) observed a good positive correlation between parental education and students' academic performance. Pupils whose parents had a higher education level expressed greater academic achievement, motivation and access to learning resources. Parental involvement and supportive home environments were determined as important mediating factors.

The students with poor learning performance had more home-related than school-related factors, according to Khadka et al., 2022. The factors were found to be cultural factors (relative lack of predisposition for education and aspiration for different jobs) as well as family economic background and parental education.

Pant (2020) concluded that most of the low socioeconomic status students are not performing well academically. It had been identified that the education of children from low economic background was less interested by their parents.

4.4.2 Home Learning Environment (RQ2)

The evidence suggests HLE is both material and relational, and that it has an impact on student outcomes, both material and relational.

The study conducted by Koirala (2023) revealed that there were significant gaps between students' access to online learning and learning technologies. The students took part in online learning via computers or mobile devices, or self-study. There were also variations in the home study arrangements, such as the presence or absence of a separate room, or study in a common room.

Adhikari (2026) discovered supportive home environments to be important mediators between parental education and academic outcomes. The level of parental education was associated with the learning resources students reported to have access to, with those from more educated parents experiencing a higher level of access.

4.3 Parental Involvement (RQ2)

Dawadi (2020) presents a detailed evidence with regard to parental involvement in examination preparation. The quantitative survey showed that parents were very involved in the lives of the students and that most students said their parents supported their child in many ways.

The qualitative evidence showed a less desirable aspect, however. Some parents curtailed students' enjoyment and tightly managed their time while preparing for the exams. This makes it clear that parental involvement cannot be thought of as a simple quantity variable.

4.4.4 Integrated Mixed-Methods Synthesis

Integrated Quantitative Qualitative Findings Across Included Studies

Quantitative Evidence	Qualitative Explanation	Integrated Interpretation
Moderate positive relationship between parental education and students' academic outcomes (Adhikari, 2026)	Students and parents described how educated parents could provide academic guidance, learning resources, encouragement, and higher educational expectations.	Parental education functions as a form of educational capital, influencing students' access to learning support, resources, guidance, and educational expectations.
Lower academic performance among Indigenous students compared with other groups (Khadka et al., 2022)	Interviews highlighted cultural factors, educational aspirations, family circumstances, and home-related barriers affecting students' educational experiences.	Cultural and socioeconomic conditions may mediate the relationship between family background and academic achievement, indicating that educational disparities cannot be explained by parental education alone.
High levels of parental involvement in examination preparation among students preparing for the national EFL examination (Dawadi, 2020)	Students and parents reported that parents provided learning materials, guidance, encouragement, and monitoring, while excessive expectations could sometimes create academic pressure.	The quality and nature of parental involvement may be more important than its frequency or intensity; supportive involvement can facilitate learning, whereas excessive pressure may have negative consequences.
Differences in students' online participation and access to digital learning resources (Koirala, 2023)	Students reported unequal access to digital devices, reliable internet connectivity, and suitable spaces for studying at home.	Digital inequality can translate into learning inequality, with differences in household resources and home learning environments shaping students' opportunities for participation and engagement.

Source: Author's synthesis of quantitative and qualitative evidence from the five studies included in the systematic literature review.

The integrated evidence indicates that students' educational outcomes are shaped by multiple, interconnected family and home-level factors rather than by parental education alone. Parental education appears to contribute to students' educational capital by influencing academic guidance, expectations, learning resources, and support. However, the evidence also demonstrates that culture, socioeconomic circumstances, parental involvement, and digital access can strengthen

or constrain these effects. Thus, the findings support a multidimensional understanding of the home learning environment in which parental characteristics and household resources interact to influence students' educational opportunities and outcomes.

Important methodological note: Because this is a systematic review, make sure each statement in this table is directly supported by the actual findings of the five included papers. In particular, avoid describing a relationship as a "mediating effect" unless the original study actually tested mediation; "may mediate" or "may shape" is safer for a narrative mixed-methods synthesis.

5. Discussion

5.1 Parental Education and Academic Outcomes

The results indicate that the education of parents is more than just a demographic factor: it may be an educational and cultural resource (Bourdieu, 1986). This theoretical perspective is especially appropriate for the results of Adhikari (2026) who reported moderate positive correlation between parental education and students' outcome and Khadka et al. (2022) who reported that family economic status and parental education affect the performance of students.

Parents who have more education experience may know more about what is expected at school, the exam system, what subjects are required, and how to get on to higher education. This may enable them to be more likely to offer guidance related to education. Adhikari (2026) concluded that the academic achievement of the students was better, their learning motivation was high and they had access to good learning materials when they had an educated father.

The home learning environment provides an important context through which family characteristics may influence students' learning and academic outcomes.

The evidence lends credence to the proposition that HLE is an important mechanism linking family characteristics with student outcomes:

Parental Education → Educational Expectations → Parental Support → HLE → Student Engagement and Academic Outcomes.

This interpretation is similar to Davis-Kean (2005) who found the indirect role of parental expectations and the home environment. Koirala (2023) has shown that during COVID-19, HLE has assumed a vital role.

5.2 Parental Involvement: Supportive vs. Controlling

One of the main conclusions of the review is that there's a difference between supportive and controlling parent participation. This is corroborated by international research (Pomerantz et al., 2007; Tan et al., 2020) and is especially pertinent in the context of Nepal.

Indeed, the findings of the study of Dawadi (2020) indicate the clear distinction that qualitative data shows that some students saw parents' involvement as supportive while others saw it as pressuring.

5.3 Human Capital Development and Sustainable Educational Development

The findings are of relevance to Sustainable Development Goal 4 (SDG 4) namely inclusive and equitable quality education (UNESCO, 2020). Equality in education cannot only be based on the proportion of children enrolled in school or attending. Students may be on the same roll, but attending a school with very different learning environments at home.

5.4 Research Gaps

The review reveals a number of key areas for further development:

1. Limited Mixed-Methods Evidence: Five studies were identified that meet the inclusion criteria, however, the amount of mixed-methods evidence is still small.
2. Geographic Concentration: There are evidences available in selected areas only: Kathmandu, Lalbandi, Pokhara and Kailali.

3. Limited Longitudinal Evidence: There is a need for longitudinal mixed-methods research to identify the relationships between changes in family circumstances and changes in academic outcomes over time.

4. Digital Home Learning: Digital education is growing in importance and should be given more focus to digital access in the home.

6. Policy and Practice implications

6.1 Implement strategies to enhance Parent Education Programs.

Practical help and advice for parents on setting up study routines, reading habits, tracking progress, assisting homework, and communicating with teachers should be given in schools.

6.2 Support Disadvantaged Homes

Extra support for students who do not have books, digital devices, Internet access or appropriate study areas should be provided in the school setting.

6.3 Encourage Involvement with Supportive rather than Controlling

Parents should be encouraged to give guidance and emotional support but not too much examination pressure.

6.4 Strengthen School–Family Partnerships

Ongoing communication between school and home can assist parents to become aware of curriculum expectations and student's needs.

6.5 Address Digital Inequality

Access to devices, internet connection, electricity and digital literacy should be part of current HLE for educational policy.

7. Strengths and Limitations

7.1 Strengths

The highlight of this review is its methodological specificity which is limited to primary empirical mixed-method studies. The systematic search of various databases (NepJOL) makes it comprehensive. PRISMA 2020 is an improvement in transparency of the use of mixed methods, and MMAT offers the right approach to analyzing mixed-methods evidence.

7.2 Limitations

With the application of the strict mixed methods criterion, the number of studies included is significantly reduced. The studies vary in sample size, geographic location, outcome and methodology, making it difficult to make statistical comparisons. There may be evidence not available. There is a lack of longitudinal studies to allow for causal relationships to be drawn.

8. Conclusion

The current systematic review is based on mixed method studies that explore the relationship between parental education, home learning environment, parental involvement and academic outcomes for secondary school students living in Nepal. Available evidence from five mixed-methods studies suggests that parental education contributes positively to students' academic outcomes, but in a context of a more general family learning system.

A family context is found to be a significant route where family characteristics might impact learning, the home learning environment. The evidence from the mixed methods shows that there is a supportive and possibly controlling aspect to parental involvement. Successful involvement is not just about getting parents more involved, it is about the kinds, quality, and suitability of parents' involvement.

The main message is that parental education should not be viewed as an educational outcome in itself, but rather as a part of a family education resource system. The quality and equity of HLE can

offer a pragmatic way of enhancing student learning and in turn, sustainable educational development and human capital in Nepal.

Conflicts of Interest The author declares no conflict of interest. This research was conducted independently without financial, political or personal relationship that could inappropriately influence the study's findings or interpretations.

Author Contributions I declare that this manuscript is my original work. I am solely responsible for the conceptualization, methodology, data collection, analysis, interpretation, and writing of this manuscript. The author approved the final version of the manuscript.

ABOUT THE AUTHOR(s) Sudarshan Adhikari is a PhD student at the Faculty of Humanities and Social Sciences, Pokhara University, Nepal. His area and study of interest is education and development

References

- Adhikari, S. (2026). The correlation between parental education and student outcomes in Nepal: Sustainable development in education from the student perspective. *Asian Journal of Humanities and Social Sciences*, 3(1). <https://doi.org/10.3126/ajhss.v3i1.92772>
- Becker, G. S. (1993). *Human capital: A theoretical and empirical analysis, with special reference to education* (3rd ed.). University of Chicago Press.
- Bourdieu, P. (1986). The forms of capital. In J. G. Richardson (Ed.), *Handbook of theory and research for the sociology of education* (pp. 241–258). Greenwood.
- Castro, M., Expósito-Casas, E., López-Martín, E., Lizasoain, L., Navarro-Asencio, E., & Gaviria, J. L. (2015). Parental involvement on student academic achievement: A meta analysis. *Educational Research Review*, 14, 33–46.
- Coleman, J. S. (1988). Social capital in the creation of human capital. *American Journal of Sociology*, 94, S95–S120.
- Creswell, J. W., & Plano Clark, V. L. (2018). *Designing and conducting mixed methods research* (3rd ed.). SAGE.
- Davis-Kean, P. E. (2005). The influence of parent education and family income on child achievement: The indirect role of parental expectations and the home environment. *Developmental Psychology*, 41(2), 294–306.
- Dawadi, S. (2020). Parental involvement in national EFL test preparation. *RELC Journal*, 51(3), 427–439.
- Epstein, J. L. (2011). *School, family, and community partnerships: Preparing educators and improving schools* (2nd ed.). Westview Press.
- Fan, X., & Chen, M. (2001). Parental involvement and students' academic achievement: A meta analysis. *Educational Psychology Review*, 13(1), 1–22.
- Hill, N. E., & Tyson, D. F. (2009). Parental involvement in middle school: A meta-analytic assessment of the strategies that promote achievement. *Developmental Psychology*, 45(3), 740–763.
- Hong, Q. N., Fàbregues, S., Bartlett, G., Boardman, F., Cargo, M., Dagenais, P., Gagnon, M. P., Griffiths, F., Nicolau, B., O' Cathain, A., Rousseau, M. C., & Vedel, I. (2018). The Mixed Methods Appraisal Tool (MMAT) version 2018 for information professionals and researchers. *Education for Information*, 34(4), 285–291.
- Hornby, G., & Lafaele, R. (2011). Barriers to parental involvement in education: An explanatory model. *Educational Review*, 63(1), 37–52.
- Khadka, J., Adhikari, K. P., & Dahal, N. (2022). The learning performance of Indigenous students in Nepali private schools: A mixed-methods study. *International Journal of Instruction*, 15(4), 987–1010.
- Koirala, M. P. (2023). Learning engagement of children during the COVID-19 period in Lalbandi Municipality: A mixed method. *Tribhuvan University Journal*, 38(2), 69–82.
- Ministry of Education, Science and Technology. (2021). *Education sector plan 2022–2030*. Government of Nepal.
- Nag, S., Vagh, S. B., Dulay, K. M., Snowling, M., Donolato, E., & Melby-Lervåg, M. (2024). Home learning environments and children's language and literacy skills: A meta-analytic review of studies conducted in low- and middle-income countries. *Psychological Bulletin*, 150(2), 132–153.
- Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., ... Moher, D. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *BMJ*, 372, n71. <https://doi.org/10.1136/bmj.n71>
- Pant, K. R. (2020). Influences of parental socio-economic status on academic achievement: A case study of rural communities in Kailali, Nepal. *Contemporary Research: An Interdisciplinary Academic Journal*, 4(1), 95–109.

21. Pomerantz, E. M., Moorman, E. A., & Litwack, S. D. (2007). The how, whom, and why of parents' involvement in children's academic lives: More is not always better. *Review of Educational Research*, 77(3), 373–410.
22. Sirin, S. R. (2005). Socioeconomic status and academic achievement: A meta-analytic review of research. *Review of Educational Research*, 75(3), 417–453.
23. Tan, C. Y., Lyu, M., & Peng, B. (2020). Academic benefits from parental involvement are stratified by parental socioeconomic status: A meta-analysis. *Parenting*, 20(4), 241–287.
24. UNESCO. (2020). *Global education monitoring report 2020: Inclusion and education—All means all*. UNESCO.
25. World Bank. (2018). *World development report 2018: Learning to realize education's promise*. World Bank.