

Research Article

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Managing the Quality Assurance of Education of Students on Ethnic Boarding Schools: A Case Study on the Mekong Delta, Vietnam

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Abstract

Background/purpose. The quality assurance of education plays a vital role in ensuring that students receive consistent, equitable, and effective learning experiences that meet national standards and support their holistic development. This study explores the management of educational quality assurance (QA) in ethnic minority boarding schools (EMBS) in Vietnam's Mekong Delta—a region where educational equity for marginalized ethnic communities remains a critical concern. The research uses the CIPO model (Context–Input–Process–Output) to assess how important factors affecting educational quality match with national QA standards and to find ways to improve education in a sustainable and culturally appropriate manner.

Materials/methods. Using a quantitative survey design, data were collected from 958 participants across 22 EMBS, comprising 328 school managers and teachers and 630 students. Four structured questionnaires were used to assess QA dimensions. Data analysis included basic descriptive statistics and reliability assessment through Cronbach's alpha to ensure consistency and validity.

Results. The findings reveal strengths in areas such as goal setting, curriculum content, and financial policy implementation. However, critical weaknesses were identified in instructional practices, infrastructure quality, assessment mechanisms, and feedback systems. Additionally, contextual challenges—particularly socioeconomic disadvantage and cultural misalignment—were found to influence student outcomes negatively.

Conclusion. The study illustrates the value of adopting localized and culturally sensitive QA frameworks, such as the CIPO model, to effectively address the unique needs of ethnic minority students. It provides evidence-based recommendations for policymakers and educators aiming to enhance institutional effectiveness, promote educational equity, and support inclusive human capital development in Vietnam's ethnically diverse regions.

1. Introduction

In the evolving global education landscape, the concept of QA has grown beyond its original focus on academic performance to encompass broader developmental outcomes. Today, education is viewed not only as a means of intellectual advancement but also as a transformative force that fosters ethical values, emotional intelligence, social responsibility, and life competencies (Fullan & Quinn, 2016; OECD, 2013; Schleicher, 2018). This holistic approach to learning reflects a global consensus—captured in UNESCO’s Incheon Declaration—that learners must be equipped to “learn to know, to do, to live together, and to be” (UNESCO, 2015). Consequently, QA frameworks must adapt to support inclusive, equitable, and human-centered education systems. Vietnam has embedded this vision within its national policy through the General Education Program (MOET, 2018), which promotes a learner-centered, competency-based model. This curriculum seeks to foster core values such as patriotism, honesty, creativity, and adaptability among Vietnamese students. However, while this transformation marks a critical shift toward progressive educational values, implementing it uniformly across diverse regions remains challenging. Specifically, ethnic minority regions—where disparities in infrastructure, language, and cultural orientation persist—face significant barriers to ensuring consistent educational quality and equity. EMBS were established to address these very disparities. Designed as specialized institutions serving students from remote and marginalized ethnic groups, EMBS aim to bridge the gap in access, opportunity, and achievement. As of 2020, EMBS serve over 109,000 students across 49 provinces (Thieu & Nguyen, 2020). These schools are particularly significant in regions like the Mekong Delta, which is home to diverse ethnic groups, including the Khmer, Cham, and Chinese populations (Nguyen et al., 2024). EMBS have become educational lifelines in these areas, playing a socio-political role in promoting upward mobility and preserving cultural identities.

Despite this crucial mandate, EMBS faces persistent and multifaceted challenges in delivering quality education. Existing research highlights widespread deficits in teacher training, instructional design, infrastructure, assessment systems, and alignment with labor market needs (Ahmed & Mesanovic, 2019; Mai, 2016; Nguyen, 2023; Scheerens, 2000). Teachers frequently lack the intercultural competence needed to engage ethnically diverse learners (Nguyen & Huynh, 2021), and curricula and textbooks often fail to reflect local languages, histories, or traditions. Assessment practices remain largely standardized and inflexible, failing to account for students' socio-cultural contexts or lived experiences (Kyriakides & Creemers, 2008; Nguyen & Pham, 2023). Structural inequalities—such as poor family literacy, economic hardship, and child labor—compound these issues, making the implementation of national education reforms particularly difficult in EMBS. Moreover, limited feedback loops and weak coordination between EMBS and vocational or tertiary education institutions have contributed to a mismatch between education and employability, further alienating students from their learning experiences. This creates a disconnect between what schools provide and what communities and labor markets require, thereby reducing the long-term impact of education in ethnic minority areas.

While these challenges have been documented in the literature, there is still a notable research gap: few empirical studies have systematically examined how quality assurance mechanisms are being managed and perceived within EMBS using a comprehensive and context-sensitive model. More specifically, existing scholarship tends to focus on isolated issues (e.g., teaching, infrastructure, or assessment) without integrating them into a cohesive QA framework or considering the dual perspectives of both students and administrators. This limits the field’s understanding of how QA operates in practice and how it might be improved in ways that are both culturally responsive and operationally feasible. This study addresses that gap by applying the CIPO model (Context–Input–Process–Output), a well-established analytical framework in school effectiveness research (Kyriakides & Creemers, 2008; Scheerens, 2000). The CIPO model allows for a structured evaluation of

educational performance by analyzing not only institutional inputs (resources, policies, and teacher competencies) and processes (teaching methods, assessments, and school leadership) but also the broader contextual environment and learning outcomes. Its integrated nature makes it particularly suitable for assessing schools operating in complex, multicultural, and resource-constrained settings like EMBS. The relevance of the CIPO model has been affirmed in both international and Vietnamese research. It has been successfully used to evaluate quality assurance in diverse educational contexts—including multicultural boarding schools (Ahmad, 2021; Hardianto et al., 2022) and mainstream Vietnamese education systems (Thai et al., 2023). However, it has not yet been applied specifically to the context of EMBS in Vietnam—nor used to evaluate QA practices from the combined viewpoints of students and school managers.

This study takes an important step in this direction. By drawing on survey data from both students and school managers, the research provides a holistic and stakeholder-driven understanding of how QA mechanisms function within EMBS in the Mekong Delta. Students offer invaluable insights into how educational practices are experienced on the ground, highlighting issues of engagement, inclusion, and relevance. School managers and administrators, on the other hand, bring a systemic perspective on curriculum implementation, teacher development, leadership strategies, and resource allocation. This dual approach ensures a multi-layered analysis that captures both the policy level and the lived educational realities.

The study pursues three main objectives:

1. To assess the extent to which the input, process, and output dimensions in EMBS align with national QA standards.
2. To investigate how contextual variables—such as policy support, socioeconomic conditions, and cultural diversity—influence the functioning of QA systems.
3. To generate evidence-based and context-sensitive recommendations for improving educational quality, equity, and institutional effectiveness in EMBS.

This study fills a crucial void in the current literature and, through the application of a rigorous framework, delivers meaningful contributions to both academic discourse and practical implementation. It strengthens understanding of localized QA mechanisms and highlights the importance of stakeholder inclusion in designing education strategies. Ultimately, this research aims to inform policymakers, educators, and community leaders seeking to enhance the educational experiences and long-term outcomes of Vietnam's ethnic minority students—and, by extension, similar populations in other multiethnic and disadvantaged settings.

2. Literature Review

2.1. Quality Assurance in Education

The concept of education quality is multifaceted and context-dependent. At its core, quality education involves not just academic proficiency but the development of cognitive, emotional, and social competencies that enable individuals to thrive in their environments (Barrett et al., 2006; UNESCO, 2018). UNESCO (2005) defines quality education as that which ensures relevance, equity, efficiency, and effectiveness. Similarly, the MOET (2018) outlines educational goals not merely in terms of knowledge acquisition, but through the development of qualities such as patriotism, responsibility, creativity, and adaptability. Brophy (2004) emphasizes that quality education must be student-centered, supporting personal growth, motivation, and autonomy. The effectiveness of instruction, relevance of curriculum, inclusivity of classroom environments, and alignment with societal needs all contribute to a comprehensive understanding of quality in education. QA in education refers to the systematic processes, standards, and mechanisms designed to monitor,

evaluate, and improve the performance of educational institutions. It encompasses both internal quality assurance (IQA)—initiated by schools themselves—and external quality assurance (EQA)—carried out by state or accrediting agencies (Harvey & Green, 1993). QA ensures that teaching practices, learning environments, student outcomes, and management processes meet acceptable or desirable standards. The essence of quality assurance lies in managing learning activities effectively. They emphasize the importance of aligning educational inputs and processes with student outcomes. In the context of schooling, this includes transparent admissions policies, effective pedagogies, resource adequacy, and consistent evaluation.

2.2. The CIPO Model for Quality Assurance

The CIPO model provides a comprehensive and systemic framework for evaluating educational quality, as introduced by Scheerens (1990) and further elaborated in later works (Scheerens, 2000; 2004). It emphasizes the interconnectedness of contextual conditions, resource allocation, internal pedagogical processes, and student outcomes. This model is particularly relevant to EMBS in Vietnam, where education is deeply influenced by socio-economic and cultural disparities (Nguyen et al., 2024). Input factors, such as student readiness, teacher qualifications, and institutional resources, significantly shape the educational environment. Many EMBS face challenges related to limited teacher training in intercultural pedagogy (Dinh, 2013; Mai, 2016; Nguyen et al., 2023b), substandard infrastructure, and delayed or inadequate financial support (Do et al., 2020; Le, 2018). These limitations constrain the implementation of national educational reforms and reduce schools' capacity to meet diverse student needs.

Process components include curriculum alignment, instructional methods, and assessment practices. EMBS must incorporate culturally relevant curricula that reflect the linguistic and lived experiences of ethnic students (Nguyen et al., 2023b). However, large class sizes and rigid schedules often restrict the use of personalized, student-centered teaching (Thieu & Nguyen, 2020). Although collaborative and responsive teaching methods are widely promoted (Brophy, 2004; Tran et al., 2019), standardized assessments remain prevalent, frequently overlooking the value of context-based learning (Ahmed & Mesanovic, 2019). Output indicators include academic progression, career readiness, and student satisfaction—outcomes shaped by both school quality and socio-economic context (Iyer et al., 2021; Nguyen, 2010; 2019). Additionally, contextual factors such as poverty, cultural dissonance, and language barriers remain persistent obstacles (Baulch et al., 2002; Coleman, 2012; Nguyen & Hamid, 2017). Strengthening partnerships between schools, families, and communities has shown potential for improving educational ownership and quality (DePetrìs & Eames, 2017; Hardianto et al., 2022). In line with national changes (MOET, 2018) and global fairness guidelines (UNESCO, 2015), using the CIPO model helps EMBS create quality assurance systems that are based on evidence, flexible, and sensitive to cultural differences.

2.3. Quality Assurance of Education of Students in Schools

QA in education involves systematic policies and practices aimed at maintaining and enhancing student learning and institutional effectiveness (Huang, 2023). Beyond regulatory compliance, QA fosters continuous improvement in teaching, curriculum, and support services (Harvey & Green, 1993; Thai et al., 2023). Scheerens (2000) points out that there must be clear performance indicators covering academic outcomes, teaching quality, and equity. Research shows QA enhances student achievement when linked to classroom practices and leadership (Kyriakides & Creemers, 2008). Digital tools, including learning management systems (Ahmed & Mesanovic, 2019) and mobile AR (Isfaeni, 2022), further support QA processes.

In Vietnam, ensuring educational quality for ethnic minority students has become a growing priority, driven by long-standing disparities in access, achievement, and outcomes. Previous research studies (Do et al., 2020; Nguyen et al., 2023b) highlight how targeted quality assurance (QA) initiatives

in teacher training institutions have enhanced program design and inclusivity, leading to improved learning environments for minority learners. Broader QA efforts have also moved beyond academics to encompass holistic development. For example, initiatives supporting language preservation (Nguyen et al., 2023b), reproductive health awareness (Hung et al., 2019), and emotional well-being through behavioral screening demonstrate the multidimensional nature of QA in education. Aligning with global benchmarks such as UNESCO's Sustainable Development Goal 4, QA must ensure not only learning outcomes but also equity, relevance, and engagement (Barrett et al., 2006; UNESCO, 2005; 2015). In disadvantaged contexts, the role of extracurricular learning (Van Hung et al., 2019), vocational orientation (Do & Ha, 2021), and ongoing teacher development (Dinh, 2013; Nguyen & Dang, 2013) is central to maintaining quality. Approaches such as culturally responsive pedagogy (Nguyen & Huynh, 2021), experiential learning (Kolb & Kolb, 2009), and digital innovations (Kieu & Nguyen, 2023) have emerged as vital tools for bridging national standards (MOET, 2018) with local learning needs. Ultimately, QA should be viewed not as a static checklist but as a dynamic and inclusive system requiring sustained investment in human capital, infrastructure, and community collaboration (DePetris & Eames, 2017; Isfaeni, 2022).

Within this evolving QA landscape, the CIPO model has gained prominence as a structured, evidence-based framework for evaluating school effectiveness in Vietnam. Initially introduced by Scheerens (1990), the model analyzes how contextual conditions, resources, educational practices, and outcomes interact. Thai et al. (2023) applied this model to general education and found that localized CIPO-based audits improved strategic planning and alignment across schools. They argue that context-specific indicators—such as community involvement and teacher distribution—are especially important in rural and ethnic settings. Du et al. (2025) further used the model to evaluate Vietnam's Happy School Model (HSM), demonstrating that student outcomes are most influenced by school context and teaching processes. They recommend both policy-level reforms and school-level initiatives such as emotional learning and inclusive leadership. International studies reinforce the CIPO model's adaptability. In addition, Ahmad (2021) shows how teacher mentoring and participatory leadership in Southeast Asian Islamic schools improve instructional quality, while Hardianto et al. (2022) underscore the role of student support and moral education—key process factors—in school effectiveness. Together, these findings confirm the model's utility as a scalable and context-sensitive QA tool across diverse educational systems.

2.4. Potential Challenges in EMBS

EMBS in Vietnam's Mekong Delta face persistent challenges that undermine educational quality across input, process, and contextual dimensions. In terms of inputs, key challenges revolve around insufficient teacher preparation and substandard infrastructure. A large number of EMBS teachers are not adequately trained in multicultural pedagogy, limiting their capacity to support linguistically and culturally diverse learners (Nguyen & Pham, 2023). Moreover, many lack competencies in culturally responsive teaching, further reducing instructional effectiveness (Dinh, 2013). Physical infrastructure also remains problematic, with overcrowded dormitories, outdated libraries, and limited access to educational resources hindering the creation of a conducive learning environment (Pham, 2023; Thieu & Nguyen, 2020). These input-level shortcomings are compounded by process-related issues that continue to undermine quality assurance efforts. Many schools rely on rigid, outdated curricula that fail to reflect ethnic students' linguistic and cultural identities (Brophy, 1983; Nguyen & Pham, 2023). Teaching remains largely teacher-centered despite evidence from Brophy and Alleman (1991) supporting more active, student-centered learning. Nguyen and Hamid (2017) caution that subtractive schooling practices erode minority identity and hinder engagement. Large class sizes and the dual role of dormitories as academic spaces further strain learning and discipline (Hardianto et al., 2022). Standardized assessments, which inadequately capture context-specific growth, also disadvantage these learners (Cao Thi et al., 2023).

Contextual barriers compound these issues. Economic hardship (Baulch et al., 2002), cultural dissonance between home and school (DeJaeghere et al., 2015), and weak community-school collaboration (DePetris & Eames, 2017) reduce educational support. Moreover, national reforms (MOET, 2018) often lack local adaptation, limiting impact. Thai et al. (2023) emphasize the absence of tailored quality assurance frameworks for EMBS, impeding strategic development. To address these gaps, a systemic, localized approach is needed. The approach includes teacher training in cultural competence (Nguyen & Huynh, 2021), digital infrastructure investments (Isfaeni, 2022; Kieu & Nguyen, 2023), and community-based partnerships (DePetris & Eames, 2017). Embedding the CIPO model (Scheerens, 2000; Thai et al., 2023) can support sustained, context-sensitive quality assurance for these underserved schools.

2.5. Research Questions

In light of these challenges, this study seeks to evaluate and enhance the quality assurance practices of education in ethnic minority boarding schools in the Mekong Delta using the CIPO framework. It aims to diagnose current strengths and gaps, assess systemic management of learning quality, and propose data-driven strategies for improvement. The following key questions guide the research:

1. To what extent does quality assurance meet input management factors in student education from perspectives of school managers and teachers?
2. To what extent are process management factors for quality assurance in student education from the perspectives of school managers, teachers, and students?
3. To what extent are output management indicators of quality assurance in student education from the perspectives of school managers, teachers, and students?
4. How have contextual factors influenced the management of quality assurance in student education from the perspectives of school managers, teachers, and students?

3. Methodology

3.1. Research Design

This study employs a quantitative survey research design to systematically examine the management of educational quality assurance in ethnic minority boarding schools located in the Mekong Delta region of Vietnam. This methodological approach is well-established in educational research for its ability to generate standardized, large-scale data that capture stakeholders' perceptions, experiences, and institutional practices (Cohen et al., 2018; Creswell & Creswell, 2018). The sample includes three key stakeholder groups—school administrators, teachers, and students—whose perspectives are crucial for a comprehensive analysis of quality assurance mechanisms. The survey instrument was structured around four interrelated dimensions of quality management: input management, process management, output management, and contextual influences. This framework enabled the collection of quantifiable data suitable for generalization and comparative analysis across stakeholder roles and institutional functions. Descriptive statistical methods—such as frequency distributions, mean scores, and standard deviations—were applied to identify prevailing patterns and to evaluate the current implementation status of QA practices. The use of a quantitative approach is particularly appropriate in the context of educational management, where it facilitates the identification of systemic challenges and policy-practice gaps in complex organizational settings (Muijs, 2011).

3.2. Participants

This study employed a convenience sampling method to recruit 958 participants from 22 ethnic minority boarding schools across the Mekong Delta region of Vietnam, including 328 school managers and teachers and 630 students. Data collection was conducted during the 2024–2025 academic year via an online survey as part of a larger research project spanning from 2022 to 2025, aimed at examining the management of educational quality assurance. The sample displayed notable demographic diversity: over 60% of managers and teachers identified as female, while approximately 42% of student participants were female. Critically, more than 98% of students self-identified as members of ethnic minority groups, underscoring the cultural and contextual relevance of the study. Regarding professional qualifications, nearly all educators met national training standards, with over 2% holding master's degrees, indicating a relatively high level of formal expertise among school staff. The research adhered strictly to ethical guidelines as recommended by the British Educational Research Association (BERA, 2018). Participants were clearly informed of their voluntary involvement and right to withdraw at any time, and anonymity and confidentiality were rigorously ensured throughout the data collection process. No personal identifiers—such as names or school affiliations—were solicited, and all responses were securely managed to uphold ethical standards in educational research.

3.3. Instruments

The research utilized four structured questionnaires, each developed based on the CIPO model of educational quality management as proposed by Scheerens (2004). This model offers a comprehensive framework for assessing the multiple dimensions of school quality, including institutional context, resource input, instructional processes, and student outcomes.

Assessment of Input Management

The first measurement scale was developed to assess the management of input factors within ethnic minority boarding schools. This scale included 16 observed variables distributed across four essential domains: student quality, teacher quality, infrastructure, and financial resources. Each item was rated on a 5-point Likert scale, with responses ranging from 1 (not fully met) to 5 (fully met), reflecting the extent to which each element aligned with institutional expectations. The Student Quality Management domain (3 items) focused on the quality of student admissions, including assessments of initial learning ability and multilingual competencies, such as proficiency in Vietnamese, Khmer, and English. The Teaching Staff Quality Management domain (6 items) evaluated factors such as teachers' professional ethics, motivation for pedagogy, and their ability to communicate using students' ethnic languages—skills essential for culturally responsive teaching. The Management of Facilities and Teaching Equipment domain (3 items) examined the availability and condition of key learning spaces, including classrooms, dormitories, canteens, and recreational areas, as well as the effectiveness of equipment maintenance. Lastly, the Management of Financial Resources and Policies domain (4 items) looked at whether the school had enough money and how well it followed financial support rules, like scholarships and help for students from low-income families.

Assessment of Educational Process Management

The second measurement scale was designed to evaluate the management of educational processes in ethnic minority boarding schools, comprising 22 observed variables distributed across five key domains. Each item was rated on a 5-point Likert scale, ranging from 1 (not implemented at all) to 5 (fully implemented), to measure the extent to which specific educational practices were applied in daily school operations. The Management of Learning Objectives domain (3 items) assessed how effectively schools fostered student motivation, developed positive learning attitudes,

and facilitated the acquisition of both academic knowledge and technical skills. The Management of Learning Content domain (4 items) focused on the inclusion of culturally responsive materials, such as lessons conducted in ethnic minority languages and the integration of digital literacy skills. The Management of Learning Methods domain (4 items) evaluated students' engagement in cognitive strategies like analysis, synthesis, and prediction—skills essential for more profound understanding and critical thinking. The Management of Learning Organization Forms domain (7 items) looked at the variety of teaching methods available, including opportunities for independent study, hands-on learning experiences, and projects that link what they learn in class to real life in the community. Lastly, the Management of Assessment and Evaluation Activities domain (4 items) measured the implementation of alternative assessment strategies, such as self-assessment and peer feedback, that encourage student agency and reflective learning.

Assessment of Output Management

The third measurement scale focused on assessing the management of student learning outcomes in ethnic minority boarding schools, consisting of 7 observed variables grouped into two main components. Each item was rated on a 5-point Likert scale, ranging from 1 (not at all met) to 5 (fully met), to evaluate the degree to which outcome-related goals were achieved. The first domain, Management of Academic Pathways (3 items), assessed the effectiveness of schools in facilitating students' transitions to post-secondary education, including successful placements in universities, colleges, or vocational training institutions. This domain reflects the schools' capacity to support academic progression and align secondary education with future learning opportunities. The second domain, Management of Feedback Mechanisms (4 items), measured the quality and utilization of feedback from key stakeholders—such as higher education institutions, employers, and families—regarding students' preparedness, skill sets, and satisfaction with graduate outcomes. These feedback loops are critical for informing school improvements and aligning curricula with real-world demands, ensuring that the education delivered remains relevant, adaptive, and outcome-oriented.

Assessment of Contextual Influences

The final measurement scale examined the contextual factors that influence educational quality in ethnic minority boarding schools, comprising 7 observed variables categorized into two domains. Using a 5-point Likert scale ranging from 1 (minimal influence) to 5 (very strong influence), the scale captured participants' perceptions of how external and internal contexts shape the educational experience. The first domain, Socio-Cultural and Economic Context (3 items), assessed the extent to which local customs, traditions, and socio-economic conditions affect student engagement, attendance, and active participation in learning. These factors reflect the broader realities students bring into the school environment, including linguistic challenges, family responsibilities, and cultural norms. The second domain, Supportive Learning Environment (4 items), focused on internal school efforts to create an inclusive atmosphere through indicators such as collaboration between schools and communities, the use of culturally responsive pedagogy, and the provision of emotional and social support tailored to the needs of ethnic minority students. Together, these contextual elements provide a comprehensive view of the external and internal influences that mediate the effectiveness of teaching and learning in EMBS settings.

3.4. Data Analysis

All observed variables in this study were measured using a 5-point Likert scale, with responses numerically coded from 1 (lowest agreement or implementation) to 5 (highest agreement or implementation). To facilitate the interpretation of these responses, the Likert scale was divided into five equal intervals using the formula $(\text{Maximum} - \text{Minimum}) / \text{Number of Categories} = (5 - 1) / 5 = 0.8$. Based on this computation, the following interpretive thresholds were established: Level 1: 1.00 – <1.80 (Very Low), Level 2: 1.80 – <2.60 (Low), Level 3: 2.60 – <3.40 (Moderate), Level 4: 3.40 – <4.20

(High), and Level 5: 4.20 – 5.00 (Very High). These levels reflect a graduated intensity of the construct being measured, allowing for consistent interpretation across domains such as input, process, output, and contextual factors. For statistical analysis, the study employed descriptive statistics, including means and standard deviations, to summarize the central tendencies and variability of participants' responses. To evaluate the internal consistency reliability of the scales, Cronbach's alpha coefficients were calculated for each instrument. In accordance with established psychometric standards, a Cronbach's alpha value of 0.70 or above was deemed acceptable (Nunnally & Bernstein, 1994), indicating that the instruments demonstrated satisfactory reliability in measuring the underlying constructs.

4. Results

4.1. Input Management of Ethnic Boarding Schools

Table 1 presents the results of the evaluation of input management based on responses from administrators and teachers. The data were derived from responses categorized into four key input domains: quality of students, quality of teaching staff, infrastructure and teaching equipment, and financial resources and policy implementation.

Table 1. Assessment of Input Management of Ethnic Boarding Schools

Input factors	Evaluation of administrators and teachers		
	Mean	SD	Alpha
Quality of recruited students.	3.48	0.70	0.78
Quality of teaching staff.	3.85	0.78	0.80
Facilities and teaching equipment.	3.42	0.72	0.75
Financial resources and implementation of policies.	4.15	0.81	0.79

The quality of admitted students was rated at a moderate level ($M = 3.48$, $SD = 0.70$; Cronbach's $\alpha = 0.78$). This score reflects challenges related to students' academic readiness and socio-cultural integration. Many students enter these schools with limited proficiency in Vietnamese and Khmer (the latter being a required second language), which impedes their ability to absorb lessons effectively. Additionally, the socio-economic backgrounds of students—most of whom come from remote and disadvantaged communities—pose further constraints, including limited parental support for education and the necessity for students to contribute to household livelihoods. These findings highlight the need for differentiated instructional approaches and support systems tailored to students' linguistic and cognitive profiles to achieve equitable educational outcomes and support long-term goals of developing human capital in ethnic minority regions.

The quality of the teaching staff received a relatively high rating ($M = 3.85$, $SD = 0.78$; $\alpha = 0.80$). However, this figure masks underlying issues related to continuous professional development. While most teachers meet national qualification standards, the study found that motivation for self-directed learning and engagement in professional growth remains limited. School-based activities aimed at enhancing pedagogical and research competencies are inconsistently implemented and often lack depth. Such results may be attributed to constrained financial resources, which are typically allocated to basic operational needs, leaving little capacity for incentivizing innovation or organizing targeted training programs. To address this, schools must cultivate a professional learning culture and establish resource-supported frameworks for teacher development.

In contrast, infrastructure and teaching equipment received a more modest evaluation ($M = 3.42$, $SD = 0.72$; $\alpha = 0.75$). Although ethnic minority boarding schools in the Mekong Delta are generally equipped with basic physical facilities—such as classrooms, dormitories, and outdoor spaces—the availability of specialized resources, including libraries, laboratories, multipurpose halls, and digital learning tools, remains insufficient. These limitations hinder the effective implementation of modern pedagogical strategies, particularly those outlined in the 2018 General Education Program, which emphasizes competency-based and technology-integrated instruction. The restricted investment in educational facilities is largely due to ongoing financial constraints, underscoring the urgency of a strategic infrastructure development plan aligned with curriculum reforms. The highest rating was assigned to financial resources and policy implementation ($M = 4.15$, $SD = 0.81$; $\alpha = 0.79$), suggesting strong support for policies that ensure equitable access to education for ethnic minority students. These include boarding provisions, tuition subsidies, and social welfare measures that help sustain participation in learning. However, while policy mechanisms are well-developed in form, further attention is needed to ensure that resource allocation is aligned not only with access but also with quality enhancement across all educational inputs.

4.2. Educational Process Management of Ethnic Boarding Schools

Table 2 presents the assessment results concerning the management of educational processes. The evaluation focused on five core components of instructional management: educational objectives, content, methods, learning organization, and assessment.

Table 2. Assessment of Educational Process Management of Ethnic Boarding Schools

Process factors	Student Self-Assessment			Evaluation of administrators and teachers		
	Mean	SD	Alpha	Mean	SD	Alpha
Managing the implementation of students' educational goals.	4.12	0.72	0.75	4.08	0.79	0.82
Managing the implementation of students' educational content.	4.28	0.79	0.89	4.26	0.81	0.83
Managing the implementation of students' educational methods.	3.30	0.68	0.72	3.32	0.82	0.78
Managing the implementation of students' educational organization forms.	3.38	0.66	0.72	3.36	0.72	0.73
Checking and evaluating students' educational activities.	3.66	0.80	0.79	3.68	0.78	0.72

The management of students' learning objectives received relatively high ratings from both groups, with students reporting $M = 4.12$ ($SD = 0.72$; $\alpha = 0.75$) and administrators/teachers reporting $M = 4.08$ ($SD = 0.79$; $\alpha = 0.82$). These results indicate a shared perception that learning goals—such as acquiring foundational knowledge, developing applicable skills, and achieving appropriate career orientation—are clearly defined and effectively implemented. The reliability coefficients suggest satisfactory internal consistency, especially among the administrator/teacher responses. The implementation of learning content yielded the highest mean scores across all components, with student self-assessments at $M = 4.28$ ($SD = 0.79$; $\alpha = 0.89$) and administrator/teacher evaluations at $M = 4.26$ ($SD = 0.81$; $\alpha = 0.83$). These findings show a strong focus on teaching content that combines

theory with real-world use, encourages thinking skills, and includes learning experiences that are relevant to different cultures. The high Cronbach's alpha values further support the reliability and coherence of responses in this domain. In contrast, the management of learning methods was rated considerably lower by both groups: students ($M = 3.30$, $SD = 0.68$; $\alpha = 0.72$) and administrators/teachers ($M = 3.32$, $SD = 0.82$; $\alpha = 0.78$). This study suggests that students in ethnic boarding schools face difficulties in applying learning strategies such as information collection (e.g., observation, reading, questioning) and cognitive processing (e.g., analysis, synthesis, comparison). The low ratings reflect a lack of confidence and proficiency in autonomous learning strategies, which are essential for competency-based education.

Similarly, the organization of learning activities received modest evaluations: $M = 3.38$ ($SD = 0.66$; $\alpha = 0.72$) from students and $M = 3.36$ ($SD = 0.72$; $\alpha = 0.73$) from administrators/teachers. These results suggest limited engagement in self-directed learning formats such as independent study using media, experiential learning, and peer collaboration. The relatively low scores imply that students struggle with learning organization when teacher guidance is minimal, indicating a need for stronger scaffolding and more structured support in independent learning activities. The component on testing and assessment of learning outcomes showed moderate implementation, with student self-assessment at $M = 3.66$ ($SD = 0.80$; $\alpha = 0.79$) and administrator/teacher evaluation at $M = 3.68$ ($SD = 0.78$; $\alpha = 0.72$). Even though the scores are moderate, looking closely at the data shows that current methods usually follow strict exam rules instead of regular assessments that help develop skills. The absence of new ideas in how assessments are designed and the little involvement of students in self-assessment and peer feedback show a difference between what policies expect and what actually happens, especially for ethnic minority students who might need evaluation methods that are more culturally aware and flexible.

4.3. Output Management of Ethnic Boarding Schools

Table 3 presents the evaluation of output management, based on feedback from students (self-assessment) and school administrators/teachers. The analysis focuses on two key domains: post-secondary educational outcomes and the management of feedback from external educational institutions.

Table 3. Assessment of Output Management of Ethnic Boarding Schools

Output factors	Student Self-Assessment		Evaluation of administrators and teachers			
	Mean	SD	Mean	SD	Mean	SD
Managing student outcomes for university and college admissions, or high schools and vocational training institutions.	4.22	0.76	0.78	4.18	0.78	0.71
Managing feedback from educational institutions on student learning outcomes.	3.74	0.75	0.71	3.59	0.66	0.79

Concerning the management of student progression to post-secondary education—including university, college, high school, and vocational pathways—students reported a mean score of $M = 4.22$ ($SD = 0.76$; $\alpha = 0.78$), while administrators and teachers rated this domain similarly at $M = 4.18$ ($SD = 0.78$; $\alpha = 0.71$). These relatively high ratings suggest that schools have been moderately successful in guiding students toward continued education or vocational training. The results are

consistent with the broader trend of increased access to upper-secondary and tertiary education for ethnic minority students. However, the findings also show that there is a disconnect between where students are placed and the job opportunities available in their local areas, especially for vocational training related to the types of jobs in remote and ethnic minority communities. This misalignment highlights a missed opportunity in using ethnic boarding schools as a mechanism for localized human resource development.

The second domain, management of feedback received from educational institutions, received more moderate ratings. Students assessed this component with a mean score of $M = 3.74$ ($SD = 0.75$; $\alpha = 0.71$), while administrators and teachers offered a lower evaluation of $M = 3.59$ ($SD = 0.66$; $\alpha = 0.79$). These scores suggest that feedback loops between ethnic boarding schools and higher education or vocational institutions are underdeveloped. There remains a degree of hesitancy among some post-secondary institutions to admit students from ethnic minority backgrounds, reflecting concerns about their academic preparedness and adaptability. Reports indicate that many students encounter challenges in adjusting to new academic environments, particularly in terms of acquiring specialized disciplinary knowledge and adapting to independent learning methodologies. These transitional difficulties have, in some cases, resulted in student attrition, where individuals discontinue their studies and return to their local communities prematurely.

4.4. Contextual Influences of Ethnic Boarding Schools

Table 4 presents findings related to the contextual factors influencing educational quality, as perceived by both students (self-assessment) and school administrators/teachers. The assessment focused on two primary domains: (1) the socio-economic, cultural, and customary environment of ethnic minority communities and (2) the coordination and support provided by various educational stakeholders.

Table 4. Assessment of Contextual Influences of Ethnic Boarding Schools

Context factors	Student Self-Assessment		Evaluation of administrators and teachers			
	Mean	SD	Mean	SD	Mean	SD
The impact of the economic, social and customs and practices in ethnic minority areas on the learning activities of students in ethnic boarding schools.	4.02	0.76	0.72	4.08	0.77	0.78
The impact of the coordination of educational forces on the learning activities of students in ethnic boarding schools.	4.14	0.75	0.73	4.29	0.72	0.79

The impact of economic, social, and cultural customs on students' learning activities was rated moderately to strongly by both groups, with students reporting $M = 4.02$ ($SD = 0.76$; $\alpha = 0.72$) and administrators/teachers reporting $M = 4.08$ ($SD = 0.77$; $\alpha = 0.78$). These results suggest that environmental and familial conditions—such as low educational attainment among parents, economic hardship, parents working away from home, and limited proficiency in Vietnamese—present significant barriers to the academic engagement of ethnic minority students, particularly those from the Khmer community. Additionally, the modest educational aspirations within some communities contribute to reduced emphasis on academic achievement, further complicating efforts to sustain learning motivation and outcomes. In contrast, the impact of coordinated educational

support systems received higher scores: students rated this factor at $M = 4.14$ ($SD = 0.75$; $\alpha = 0.73$), while administrators and teachers reported $M = 4.29$ ($SD = 0.72$; $\alpha = 0.79$). These results underscore the positive influence of school-led initiatives aimed at fostering inclusive, culturally respectful learning environments. Ethnic boarding schools in the region have made concerted efforts to integrate cultural identity into school life, such as promoting participation in traditional festivals and collective cultural activities—especially valued by Khmer students. Moreover, the timely interventions and emotional support offered by teachers during academic or personal challenges appear to play a crucial role in building trust and engagement among students.

5. Discussion and Implications

5.1. Discussion

This study applied the CIPPO model to examine how educational QA is managed in EMBS across the Mekong Delta, Vietnam. Through a structured analysis of stakeholder perceptions—particularly from students, teachers, and administrators—the study offers an integrated assessment of how educational inputs, processes, outputs, and contextual factors align with national standards and local realities. The findings reveal both notable strengths and persistent challenges, reinforcing the need for more nuanced, culturally informed, and systemically embedded QA mechanisms in EMBS.

Input Management

The study found that EMBS generally perform moderately well in terms of input management, with financial support and policy frameworks receiving the most positive evaluations. This is consistent with earlier studies showing that Vietnam's educational equity policies—such as tuition waivers, boarding subsidies, and scholarship programs—play a critical role in expanding access for ethnic minority students (Le, 2018; Nguyen, 2010). However, the study also uncovered ongoing deficits in student readiness, particularly in areas such as academic background, Vietnamese language proficiency, and socioeconomic support. These findings mirror the observations of Dinh (2013) and Do et al. (2020), who identified socioeconomic disadvantage and linguistic barriers as key obstacles to effective learning in ethnic minority regions. The issue of teacher quality emerged as a central concern. While many educators meet formal qualification standards, their ability to deliver culturally responsive pedagogy remains limited—largely due to the lack of training in intercultural education (Nguyen & Huynh, 2021). This shortfall aligns with Brophy's (1983) assertion that equity in education requires an understanding of students' cultural and linguistic contexts. Teachers' inability to connect with students' lived experiences diminishes engagement and hinders the implementation of the competency-based General Education Curriculum (MOET, 2018). Moreover, widespread infrastructure deficiencies—such as inadequate digital technology, overcrowded dormitories, and insufficient library resources—further constrain effective teaching and learning (Mai, 2016; Nguyen & Pham, 2023). These conditions indicate that, while input resources may exist in policy, their quality and contextual relevance require critical reexamination.

Process Management

In terms of process management, the study found significant discrepancies between policy intent and actual classroom practice. Learning goals and curriculum content were generally rated as compliant with national standards. However, the delivery of instruction, classroom interaction, and student engagement practices remain problematic. The dominance of teacher-centered pedagogies, noted in this study, supports earlier critiques by Brophy and Alleman (1991) and Nguyen and Hamid (2017), who found that such methods are ill-suited to the needs of minority learners. Although the MOET (2018) emphasizes competency-based, experiential, and learner-centered education, these practices have yet to be widely adopted in EMBS classrooms.

Furthermore, the findings indicate limited opportunities for active learning and student autonomy, which are critical components of deep learning (Kolb & Kolb, 2009). This lack of hands-on, inquiry-based learning contradicts the pedagogical shift envisioned by national reform efforts and contributes to low levels of student motivation and critical thinking. Likewise, the persistence of summative, exam-focused assessments, rather than formative and context-sensitive evaluations, undermines educational inclusivity. This aligns with Kyriakides and Creemers' (2008) recommendation that effective QA systems should include multi-level assessments responsive to both instructional quality and student progress. Without assessment reform, EMBS risk reinforcing achievement gaps rather than closing them.

Output Management

Regarding output management, findings reveal encouraging signs of progress. Participants reported improved transitions to upper secondary education, vocational training, and employment. These outcomes suggest that state-supported initiatives—including financial assistance, preferential policies, and bridging programs—have had a measurable impact on student advancement (Do et al., 2020; MOET, 2018). However, the study also exposed a significant shortcoming: the absence of feedback loops from post-secondary institutions and employers. This disconnect weakens the ability of EMBS to adapt their programs to labor market needs, a concern echoed by Ahmed and Mesanovic (2019), who criticize the limited relevance of education to real-world competencies. Iyer et al. (2021) similarly emphasize that employer engagement in quality assurance is essential for aligning education with economic realities. Moreover, Thai et al. (2023) highlight the underdevelopment of internal QA mechanisms in EMBS, which reduces institutional responsiveness to both student outcomes and stakeholder feedback. As a result, even when access improves, EMBS may still fall short of preparing students for sustained success in a dynamic economy.

Contextual Factors

The influence of contextual factors on QA in EMBS is particularly complex. On the negative side, the study confirmed that poverty, parental illiteracy, and child labor significantly impede educational engagement—factors long recognized in Vietnamese education research (Baulch et al., 2002; Nguyen & Hamid, 2017). These socio-economic constraints are compounded by linguistic obstacles, particularly for Khmer and Cham students, whose limited Vietnamese proficiency contributes to both academic underperformance and social alienation (DeJaeghere et al., 2015; Giacchino-Baker, 2007). The resultant cultural dissonance between students' home environments and school expectations frequently leads to disengagement and diminished self-identity (Nguyen & Hamid, 2017). The study also revealed encouraging evidence of context-responsive practices within EMBS. Collaboration among administrators, teachers, and local communities—such as involving elders in school events, celebrating cultural festivals, and offering bilingual instruction—demonstrates growing institutional sensitivity to students' lived realities. These findings reinforce the theoretical principles of culturally relevant pedagogy (Ladson-Billings, 1995) and support DePetrìs and Eames' (2017) argument that meaningful school-community partnerships enhance both inclusion and learning outcomes. By integrating local cultural knowledge into curriculum and pedagogy, EMBS are beginning to challenge the one-size-fits-all model of schooling. These practices signal a shift toward transformative educational models that reconcile national academic expectations with local identity and values. They show that, when given institutional support, EMBS can become not only access providers but also agents of cultural affirmation and social cohesion in marginalized communities.

The findings of this study emphasize the importance of a comprehensive, culturally responsive, and contextually grounded approach to quality assurance in EMBS. While national policy frameworks and financial support mechanisms have improved access, significant gaps remain in teacher preparation, pedagogical practice, infrastructure, assessment, and feedback systems. The CIPO

model proved effective in revealing both the systemic strengths and structural weaknesses across educational quality domains. Crucially, the study highlights that contextual factors must not be treated as background variables but as integral to educational design and evaluation. To achieve the goals of fair and high-quality education for Vietnam's ethnic minorities, policymakers, educators, and school leaders need to go beyond just following rules and instead focus on creating quality assurance systems that adapt to local needs and respect the voices of the community, cultural identity, and long-term growth.

5.2. Implications

This study presents concrete and feasible recommendations for practitioners aiming to improve educational quality in EMBS in Vietnam. First, localized professional development should be implemented to build teachers' intercultural competencies and pedagogical adaptability (Brophy, 2004; Nguyen & Huynh, 2021). Culturally responsive instruction that incorporates students' ethnic languages, traditions, and lived experiences enhances engagement and learning outcomes. Second, schools must invest in infrastructure development—particularly digital tools, libraries, and flexible learning environments—to support the competency-based General Education Curriculum (MOET, 2018). Addressing infrastructure gaps (Do et al., 2020; Mai, 2016) enables teachers to adopt innovative, student-centered teaching practices. Third, fostering collaboration with vocational and higher education institutions can bridge the school-to-work gap by informing curriculum updates and offering practical pathways for students (Ahmed & Mesanovic, 2019; Iyer et al., 2021). Fourth, assessment systems should change to use tools that are more focused on ongoing feedback and are suitable for different cultures, which will help track student progress accurately and allow for teaching that responds to their needs.

To sustain these efforts, the CIPO model should be applied in a culturally grounded and context-sensitive manner (Nguyen et al., 2024; Scheerens, 2000; 2016). Establishing teacher mentoring networks can further enhance capacity through peer collaboration in multilingual and intercultural pedagogy (Ladson-Billings, 1995; Nguyen & Huynh, 2021). Community involvement—particularly of parents, elders, and local organizations—should be institutionalized to ensure curricular and extracurricular relevance (DePetrìs & Eames, 2017). The integration of digital modalities such as mobile learning and blended instruction can help overcome access limitations and promote innovation in remote areas (Isfaeni, 2022; Kieu & Nguyen, 2023). Creating feedback loops with employers and tertiary institutions will align educational outcomes with labor market expectations (Ahmed & Mesanovic, 2019; Iyer et al., 2021). Finally, elevating student voice within QA processes can cultivate inclusive, responsive, and learner-centered school environments (Kolb & Kolb, 2009).

6. Conclusion

This study examined the management of educational quality assurance in EMBS in Vietnam's Mekong Delta using the CIPO model. The findings revealed that while schools benefit from strong policy support and equitable financial resources, substantial challenges remain in instructional practices, student readiness, infrastructure, and assessment systems. Input factors such as teacher qualifications and basic facilities were generally adequate but lacked depth in terms of cultural responsiveness and technological modernization. Process management showed a dichotomy—learning objectives and content were clearly structured, yet instructional methods and assessment practices lagged behind, with limited student autonomy and engagement. Output management highlighted some success in student transition to higher education or vocational pathways, though weak feedback mechanisms hinder schools' ability to adjust curricula based on external demands. Contextual influences, including poverty, linguistic barriers, and cultural disconnects, posed significant constraints, but schools demonstrated promising efforts in community coordination and cultural integration. This study contributes a structured and context-sensitive lens for evaluating

quality assurance in education systems serving marginalized communities. It supports previous research that calls for a complete and culturally inclusive way to assess school quality and provides specific evidence related to Vietnam, where EMBS are crucial for improving fairness and opportunities for advancement. The study also emphasizes the value of aligning curriculum, pedagogy, and assessment with students' lived realities to close achievement gaps and support long-term human capital development.

7. Recommendations

Several limitations should be acknowledged. First, the study employed a quantitative design, which, while effective for identifying patterns, did not capture the nuanced experiences and voices of stakeholders in depth. Future research could incorporate qualitative methods such as interviews or classroom observations to enrich understanding. Second, the focus on one region—the Mekong Delta—limits generalizability across Vietnam's diverse ethnic landscapes. Comparative studies across regions and ethnic groups would offer a more comprehensive national picture. Finally, longitudinal data would be valuable to track changes over time and evaluate the sustainability of quality assurance interventions.

Declarations

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References

- Ahmad, Z. (2021). Quality assurance cadre of assisted teachers at Miftahul Ulum Lumajang Islamic Boarding School. *Southeast Asian Journal of Islamic Education Management*, 2(1), 86–94. <https://doi.org/10.21154/sajiem.v2i1.46>
- Ahmed, K., & Mesanovic, M. (2019). Learning management systems and student performance. *International Journal for e-Learning Security*, 8(1), 582–591. <https://doi.org/10.20533/ijels.2046.4568.2019.0073>
- Barrett, A. M., Chawla-Duggan, R., Lowe, J., Nikel, J., & Ukpo, E. (2006). *The concept of quality in education: A review of the "international" literature on the concept of quality in education*. EdQual.
- Baulch, B., Haughton, D., Haughton, J., & Truong, C. (2002). *Ethnic minority development in Vietnam: A socioeconomic perspective*. World Bank.
- British Educational Research Association [BERA]. (2018). *Ethical Guidelines for Educational Research* (4th ed.). <https://www.bera.ac.uk/publication/ethical-guidelines-for-educational-research-2018>

- Brophy, J. (1983). Classroom organization and management. *The Elementary School Journal*, 83(4), 265–285. <https://doi.org/10.1086/461318>
- Brophy, J. (2004). *Motivating students to learn* (2nd ed.). Routledge. <https://doi.org/10.4324/9781410610218>
- Brophy, J., & Alleman, J. (1991). Activities as instructional tools: A framework for analysis and evaluation. *Educational Researcher*, 20(4), 9–23. <https://doi.org/10.3102/0013189X020004009>
- Cao Thi, H., Le, T. A., Tran Ngoc, B., & Phan Thi Phuong, T. (2023). Factors affecting the numeracy skills of students from mountainous ethnic minority regions in Vietnam: Learners’ perspectives. *Cogent Education*, 10(1). <https://doi.org/10.1080/2331186X.2023.2202121>
- Cohen, L., Manion, L., & Morrison, K. (2018). *Research Methods in Education* (8th ed.). Routledge. <https://doi.org/10.4324/9781315456539>
- Coleman, M. V. (2012). *Educational disparities of ethnic minorities in Lao PDR with comparative cases from Vietnam, Cambodia, and Thailand* [Master’s thesis, Lund University]. Centre for East and South-East Asian Studies. <https://lup.lub.lu.se/luur/download?func=downloadFile&recordId=3021600&fileId=3911679>
- Creswell, J. W., & Creswell, J. D. (2018). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (5th ed.). SAGE.
- Dang, H. A. (2006). *Does ethnicity make a difference in school progress?* University of Minnesota.
- DeJaeghere, J., Wu, X., & Vu, L. (2015). Ethnicity and education in China and Vietnam: Discursive formations of inequality. *Compare: A Journal of Comparative and International Education*, 45(1), 118–140. <https://doi.org/10.1080/03057925.2013.841034>
- DePetrìs, T., & Eames, C. (2017). A collaborative community education model: Developing effective school-community partnerships. *Australian Journal of Environmental Education*, 33(3), 171–188. <https://doi.org/10.1017/ae.2017.26>
- Dinh, D. H. (2013). Initial identification of teaching capabilities – a component of ethnic boarding-school teachers’ personality. *Journal of Science, Ho Chi Minh City University of Education*, 42, 66–72. <https://journal.hcmue.edu.vn/index.php/hcmuejos/article/view/857>
- Do, H. D., & Ha, T. N. (2021). The factors affecting the vocational guidance activities oriented to the education program for ethnic semi-boarding secondary in Dien Bien Dong district, Dien Bien province. *Scientific Journal of Announcement University*, 7(20), 123–130. <https://doi.org/10.51453/2354-1431/2021/493>
- Do, H. T. H., Nguyen, N. D., Mai, A. N., Phung, D. M., Vu, N. D., Nguyen, H. D., Tran, D. M., & Phung, T. M. T. (2020). Ensuring basic education for ethnic minority groups in Vietnam. *Management Science Letters*, 10(9), 1963–1970. <https://doi.org/10.5267/j.msl.2020.4.029>
- Du, N. T., Dang, T. V., & Le, L. T. T. (2025). Applying CIPO indicators to examine the implementation of a happy school model in Vietnam. *International Journal of Innovative Research and Scientific Studies*, 8(2), 1903–1914. <https://doi.org/10.53894/ijirss.v8i2.5582>
- Fullan, M., & Quinn, J. (2016). *Coherence: The Right Drivers in Action for Schools, Districts, and Systems*. Corwin Press.
- Giacchino-Baker, R. (2007). Educating ethnic minorities in Vietnam. *Kappa Delta Pi Record*, 43(4), 168–173. <https://doi.org/10.1080/00228958.2007.10516476>

- Hardianto, H., Setyanto, E., & Wulandari, A. (2022). Management of students in Islamic boarding schools. *International E-Journal of Educational Studies*, 6(12), 124–135. <https://doi.org/10.31458/iejes.1102102>
- Harvey, L., & Green, D. (1993). Defining quality. *Assessment & Evaluation in Higher Education*, 18(1), 9–34. <https://doi.org/10.1080/0260293930180102>
- Huang, L., Zhang, W., Jiang, H., & Wang, J. L. (2023). The Teaching Quality Evaluation of Chinese-Foreign Cooperation in Running Schools from the Perspective of Education for Sustainable Development. *Sustainability*, 15(3), 1975. <https://doi.org/10.3390/su15031975>
- Hung, M. V., Khoa, D. V., Tinh, H. Q., Thuy, T. H., & Hung, N. P. (2019). Extra-curricular activities improved reproductive health knowledge of ethnic minority high school students in Vietnam. *Journal of Family & Reproductive Health*, 13(2), 80–84. <https://doi.org/10.18502/jfrh.v13i2.1913>
- Isfaeni, H. (2022). The application of mobile augmented reality to improve learning outcomes in senior high schools. *International Journal of Information and Education Technology*, 12(7), 691–695. <https://doi.org/10.18178/ijiet.2022.12.7.1672>
- Iyer, P., Rolleston, C., & Huong, V. T. T. (2021). Equitable, quality education for ethnic minority students? A case of “positive deviance” in Vietnam. *Comparative Education Review*, 65(3), 467–492. <https://www.journals.uchicago.edu/doi/abs/10.1086/714962>
- Kieu, P. T., & Nguyen, C. T. (2023). Exploiting the digital environment to teach informatics in the direction of developing self-directed learning competency for high school students in Vietnam. *International Journal of Information and Education Technology*, 13(8), 1192–1198. <https://doi.org/10.18178/ijiet.2023.13.8.1920>
- Kolb, A. Y., & Kolb, D. A. (2009). Experiential learning theory: A dynamic, holistic approach to management learning, education and development. In S. J. Armstrong & C. V. Fukami (Eds.), *The SAGE handbook of management learning, education and development* (pp. 42–68). SAGE. <https://doi.org/10.4135/9780857021038.n3>
- Kyriakides, L., & Creemers, B. P. M. (2008). Using a multidimensional approach to measure the impact of classroom-level factors upon student achievement: A study testing the validity of the dynamic model. *School Effectiveness and School Improvement*, 19(2), 183–205. <https://doi.org/10.1080/09243450802047873>
- Ladson-Billings, G. (1995). Toward a Theory of Culturally Relevant Pedagogy. *American Educational Research Journal*, 32(3), 465–491. <https://doi.org/10.3102/00028312032003465>
- Le, V. L. (2018). Policies on support of general education for ethnic minorities in Vietnam in the current context. *American Journal of Educational Research*, 6(12), 1678–1687. <https://doi.org/10.12691/education-6-12-14>
- Mai, T. Y. L. (2016). The reality of developing high school teaching staffs of the Khmers in the Mekong Delta. *Dong Thap University Journal of Science*, 22, 22–25. <https://doi.org/10.52714/dthu.22.10.2016.390>
- Ministry of Education and Training [MOET]. (2018). *General education program (Issued with Circular No. 32/2018/TT-BGDĐT dated December 26, 2018)*. Vietnam Education Publishing House.
- Muijs, D. (2011). *Doing Quantitative Research in Education with SPSS* (2nd ed.). SAGE.

- Nguyen, C. D., & Huynh, T. N. (2021). Teacher agency in culturally responsive teaching: Learning to teach ethnic minority students in the Central Highlands of Vietnam. *Educational Review*, 75(4), 719–743. <https://doi.org/10.1080/00131911.2021.1974346>
- Nguyen, N. T. (2010). Issues of vocational education for minority students in the Western Highlands. *Journal of Science, Ho Chi Minh City University of Education*, 23, 130–133. <https://journal.hcmue.edu.vn/index.php/hcmuejos/article/view/1656>
- Nguyen, Q. L., Cao, T. K., Phung, V. H., Le, T. T. H., Nguyen, V. Q., & Nguyen, T. B. (2023a). Factors influencing ethnic minority students' programme development capacity: Case study at pedagogical universities in Vietnam. *International Journal of Learning, Teaching and Educational Research*, 22(8), 301–324. <https://doi.org/10.26803/ijlter.22.8.17>
- Nguyen, T. H. (2023). Current status of teachers at Bu Gia Map Ethnic Boarding Secondary and High School, Binh Phuoc province. *Dong Thap University Journal of Science*, 12(02S), 86–95. <https://doi.org/10.52714/dthu.12.02S.2023.1086>
- Nguyen, T. H. T., Le, H. T. T., & Ha, L. K. T. (2023b). Preserving the mother tongue of ethnic minority students through experiential activities in primary schools: An exploratory study in the Northern Mountainous Region of Vietnam. *International Journal of Learning, Teaching and Educational Research*, 22(8), 272–286. <https://doi.org/10.26803/ijlter.22.8.15>
- Nguyen, T. T. H., & Dang, Q. B. (2013). *Management of ethnic boarding schools*. Culture - Information Publishing House.
- Nguyen, T. T. T., & Hamid, M. O. (2017). Subtractive schooling and identity: A case study of ethnic minority students in Vietnam. *Journal of Language, Identity & Education*, 16(3), 142–156. <https://doi.org/10.1080/15348458.2017.1286990>
- Nguyen, V. D., & Pham, T. B. T. (2023). Currently managing student learning activities based on competencies in schools universal ethnic boarding in Binh Phuoc province. *Dong Thap University Journal of Science*, 12(03S), 257–267. <https://doi.org/10.52714/dthu.12.03S.2023.1166>
- Nguyen, V. D., Tran, D. N., Pham, H. Q., & Duong, T. H. (2024). A comprehensive review of management activities of ethnic minority boarding schools in Vietnam. *Education Magazine*, 24(11), 1–7. <https://tcgd.tapchigiaoduc.edu.vn/index.php/tapchi/article/view/1895>
- Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric Theory* (3rd ed.). McGraw-Hill.
- Organisation for Economic Co-operation and Development [OECD]. (2013). *Synergies for Better Learning: An International Perspective on Evaluation and Assessment*. OECD Publishing. <https://doi.org/10.1787/9789264190658-en>
- Pham, H. L. (2023). Education in Khmer ethnic minority areas at An Giang Ethnic Boarding High School. *Dong Thap University Journal of Science*, 12(04S), 221–230. <https://doi.org/10.52714/dthu.12.04S.2023.1209>
- Scheerens, J. (1990). School effectiveness research and the development of process indicators of school functioning. *School Effectiveness and School Improvement*, 1(1), 61–80. <https://doi.org/10.1080/0924345900010106>
- Scheerens, J. (2000). *Improving school effectiveness*. United Nations Educational, Scientific and Cultural Organization.

- Scheerens, J. (2004). Review of school and instructional effectiveness research. *EFA Global Monitoring Report 2005, The Quality Imperative*. <http://unesdoc.unesco.org/images/0014/001466/146695e.pdf>
- Scheerens, J. (2016). *Educational effectiveness and ineffectiveness: A critical review of the knowledge base*. Springer. <https://doi.org/10.1007/978-94-017-7459-8>
- Schleicher, A. (2018). *World Class: How to Build a 21st-Century School System, Strong Performers and Successful Reformers in Education*. OECD Publishing. <https://doi.org/10.1787/9789264300002-en>
- Thai, V. T., Dau, A. T., & Tran, T. L. (2023). Developing and implementing a quality assurance model for general education. *Journal of Education*, 23(8), 1–7. <https://tcgd.tapchigiaoduc.edu.vn/index.php/tapchi/article/view/690>
- Thieu, V. N., & Nguyen, P. H. (2020). Predicting the number of teachers and students at ethnic minority boarding schools in the Mekong Delta region, Vietnam. *International Journal of Education and Research*, 8(8), 81–90. <https://www.ijern.com/journal/2020/August-2020/06.pdf>
- Tran, V. D., Nguyen, T. M. L., Nguyen, V. D., Chau, S., & Doan, M. N. (2019). Does cooperative learning may enhance the use of students' learning strategies? *International Journal of Higher Education*, 8(4), 79–88. <https://doi.org/10.5430/ijhe.v8n4p79>
- United Nations Educational, Scientific and Cultural Organization [UNESCO]. (2005). *Guidelines for quality provision in cross-border higher education*. United Nations Educational, Scientific and Cultural Organization. <https://unesdoc.unesco.org/ark:/48223/pf0000389910>
- United Nations Educational, Scientific and Cultural Organization [UNESCO]. (2015). *Education 2030: Incheon Declaration and Framework for Action for the implementation of Sustainable Development Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all*. United Nations Educational, Scientific and Cultural Organization. <https://unesdoc.unesco.org/ark:/48223/pf0000245656>
- United Nations Educational, Scientific and Cultural Organization [UNESCO]. (2018). *The Future of Education and Skills: Education 2030*. United Nations Educational, Scientific and Cultural Organization. <https://www.oecd.org/education/2030-project/>
- Van Hung, M., Van Khoa, D., Tinh, H. Q., Thuy, T. H., & Hung, N. P. (2019). Extra-curricular activities improved reproductive health knowledge of ethnic minority high school students in Vietnam. *Journal of Family & Reproductive Health*, 13(2), 80–84. <https://doi.org/10.18502/jfrh.v13i2.1913>

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