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Vocational Orientation Education Management for Ethnic Minority Boarding School Students: A Case Study in Southern Vietnam

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Abstract. Vocational education is crucial in directing students toward suitable career trajectories while simultaneously cultivating vital skills, professional ingenuity, and motivation. In Vietnam's Southern region, ensuring equitable access to vocational education for ethnic minority students in boarding schools is a critical concern. This study examines the administration of vocational education in ethnic minority boarding schools (EMBSs), with the objective of identifying current strengths, highlighting significant deficiencies, and recommending sustainable, culturally attuned strategies for enhancement. A quantitative survey design was utilized to collect data from 672 participants across 21 EMBSs, comprising 252 administrators and educators. Three structured questionnaires were employed to assess critical aspects of vocational education management, with data analyzed via descriptive statistics and reliability assessment utilizing Cronbach's alpha. Results indicate robust performance in domains such as goal-setting, curriculum content, and financial planning. Nonetheless, considerable obstacles remain in the effective execution of activities, infrastructural constraints, and inadequate coordination among educational stakeholders. Moreover, contextual barriers—such as socioeconomic challenges and cultural diversity—significantly affect students' vocational engagement and outcomes. The research emphasizes the significance of equity-focused, localized educational policies and provides pragmatic recommendations to augment institutional capacity, refine career guidance practices, and

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facilitate inclusive human resource development in Vietnam's ethnic minority areas, thereby contributing to sustained educational reform.

Keywords: Boarding Schools; Education Management; Ethnic Minority Students; Southern Vietnam; Vocational Education

1. Introduction

Vocational education includes both formal and informal training aimed at developing career-related knowledge, skills, and attitudes in students (Parshukov et al., 2020; Truong, 2011). Designed and conducted by educators, these educational activities seek to furnish students with practical experience and constructive engagement across diverse subjects, aiding them in executing age-appropriate tasks (Ho et al., 2023; Zaichenko & Vinokurov, 2018). Career orientation and student streaming denote the structured guidance of students toward post-secondary options—university, vocational training, or immediate labor market entry—tailored to individual aptitudes, interests, and current labor market requirements (Cavalletti et al., 2021; Nguyen et al., 2020).

Effective career guidance aligns with students' personal strengths and fosters their creativity, motivation, and preparedness for the future (Bölükbaşı & Kırdök, 2019; Ho et al., 2022; Scalas & Fadda, 2019). Career-focused education management involves the strategic application of knowledge, skills, and attitudes to achieve vocational development goals (Nota et al., 2020). The processes and outcomes of this activity are essential metrics for assessing the efficacy of vocational education programs (Bui, 2020). Given that the prevailing educational environment significantly shapes the management of career education in secondary education (Germani et al., 2025; Prediger & Sawyer, 1986), it must therefore be culturally sensitive and deeply rooted in the lived experiences of ethnic minority students (Hardianto et al., 2022; Nguyen et al., 2025).

National regulations delineate career guidance and experiential learning in secondary schools into two distinct phases: (1) the basic education phase and (2) the career-oriented education phase. In 2018, the Ministry of Education and Training of Vietnam established a strategic objective that, by 2025, at least 45% of high school graduates should engage in college-level vocational education, with a minimum of 35% hailing from socioeconomically disadvantaged areas (Ministry of Education and Training Vietnam, 2018). This objective serves as a significant standard for evaluating the nation's dedication to inclusive educational advancement.

Amin et al. (2021) identify the principal objectives of vocational education as fostering career-oriented attitudes and equipping students with vital skills for informed decision-making. Similarly, Do (2018) underscores that the high school phase must focus on cultivating students' vocational skills. Indeed, vocational education has emerged as a strategic priority in global educational reform, with Creed et al. (2007) emphasizing the significance of self-efficacy and early work experiences in the career planning of high school students.

Boarding schools for ethnic minorities in Vietnam are crucial for educational access and equity, as they specifically assist students from marginalized communities. Presently, there are 315 such schools across the nation, accommodating more than 109,000 students. In Southern Vietnam, 21 boarding high schools cater to students predominantly from the Khmer, Cham, and Hoa ethnic minorities (Thieu & Nguyen, 2020). To meet the needs of these diverse learners, educational management practices in these institutions must innovate in both methodology and structure, aiding students in understanding and selecting appropriate career paths (Doan et al., 2025). Research shows that the combination of experiential learning and personal interests shapes career aspirations (Li et al., 2021; Yates & Bruce, 2017) and that counseling significantly influences students to follow particular vocational trajectories (Tang et al., 2018).

Nonetheless, obstacles remain in providing effective career-focused education in boarding schools for ethnic minorities. These encompass a deficiency of qualified educators proficient in vocational guidance (Le & Nguyen, 2021; Mai, 2016; Nguyen, 2023) and an absence of congruence with students' cultural and socioeconomic contexts (Do & Ha, 2021). This lack of cohesive management strategies and institutional frameworks has hindered the execution and assessment of vocational education programs (Le, 2018; Le, 2023; Iyer et al., 2021). Therefore, this study seeks to rectify these deficiencies by enhancing the organizational capacity of career-oriented educational initiatives in ethnic minority boarding schools, in accordance with the 2018 General Education Program of Vietnam. It broadly aids educational reform by providing flexible, evidence-based strategies applicable to other multi-ethnic or disadvantaged environments.

The research aims to: 1) evaluate the current implementation levels of career-oriented education and its administration in ethnic minority boarding schools in Southern Vietnam; 2) examine the contextual factors—policy, socioeconomic, and cultural—that affect vocational education outcomes in these institutions; and 3) formulate evidence-based recommendations for the efficient and equitable management of vocational education in accordance with Vietnam's 2018 educational reform objectives. The research theoretically integrates micro-level pedagogical practices with macro-level policy frameworks, offering a practical, theory-informed model specifically designed for Vietnam's ethnic minority educational contexts.

It specifically addresses the following theoretical deficiencies: (1) Insufficient integration of career development theory with educational management practices in schools serving ethnic minorities; (2) Restricted utilization of experiential learning theory in assessing vocational training results in rural and marginalized settings; and (3) Lack of a policy-aligned framework for equitable and culturally pertinent career education implementation in Vietnam. This study reports existing gaps in the literature by employing a multi-theoretical, policy-informed approach that informs both research and practice. The practical contribution consists of providing evidence-based recommendations to facilitate policy implementation under Vietnam's 2018 General Education Programme,

emphasizing equity, cultural inclusion, and lifelong learning for ethnic minority students. The insights obtained aim to inform national policy, direct educators, and empower local communities to develop more effective and inclusive vocational education systems.

2. Literature Review

2.1 Review Aspect 1 Research on Career-Oriented Education and Student Streaming in Secondary Schools

The seminal contributions to career counseling originate from Parsons (1909), who introduced a tripartite model for effective career decision-making: (1) self-awareness, encompassing abilities, interests, values, personality traits, and individual circumstances; (2) comprehension of professions, including job prerequisites, advancement prospects, remuneration, and working conditions; and (3) the alignment of personal attributes with occupational insights to facilitate informed and suitable career selections. In turn, Gaylor and Nicol (2016) demonstrated the importance of social cognitive theory and self-determination theory in influencing post-secondary students' comprehension of career orientation.

Nguyen (2022) proposed that career-oriented education should emphasize three primary themes: the essential requirement for career education, its significance and goals, and the cooperative aspect of its execution. Nguyen (2010) also asserted that career education provides students with vital occupational knowledge and aids in making decisions aligned with their competencies and societal needs. Recent contributions to the topic (Howard & Richard, 2009; Migel, 2001) have provided an in-depth examination of career development principles and the pragmatic application of counseling theories, considering the changing social, economic, and cultural factors. Chen et al. (2021) highlighted the imperative for career counselors to implement adaptable and innovative strategies in response to labor market transformations while Dai and Davis (1998) examined the obstacles of career exploration in Chinese high schools, focusing on themes such as "career exploration," the "new college entrance examination," and "subject selection."

Career guidance and student streaming occur during both the basic education and vocational orientation phases (Ho et al., 2023), enabling students to explore professions, assess their suitability, and make informed decisions with the support of educators and family members (Nguyen, 2022; Pham & Nguyen, 2023). Recent studies (Le, 2025; Phi & Lam, 2022) have provided a thorough evaluation of the abilities and obstacles encountered by educators in providing effective career counseling, utilizing both legal and empirical methodologies. In this context, Do and Ha (2021) proposed a competency framework for career education, highlighting the importance of collaboration among schools, families, and society while Vu (2018) emphasized the essential function of technology educators in preparing students with career decision-making competencies rooted in personal and social contexts. According to Le (2023), this facilitates the more effective execution of vocational guidance strategies at the secondary level.

Nguyen et al. (2024) delineated three principal avenues for the provision of career-oriented education within ethnic minority boarding schools: (1) the incorporation of career guidance into cultural subject instruction, particularly in technology education; (2) the execution of organized career education activities; and (3) the utilization of extracurricular programs, media, and community organizations. Some recent studies (Kelly, 2004; Monika & Milena, 2020) have asserted that an inclusive and interactive learning environment fosters student engagement, promoting the exploration of individual talents and aspirations.

Gamboa et al. (2013) underscored the necessity of consistent academic and career counseling for all middle and high school students, whereas Plasman (2018) accentuated the significance of experiential learning in effective career education. In support of this, Nota et al. (2020) advocated for the creation of specialized counseling centers to aid post-secondary students in their career planning and decision-making processes.

2.2 Investigation into the Administration of Career-Focused Educational Initiatives for Secondary School Students

The administration of career-focused education in secondary schools necessitates a methodical and strategic approach to guarantee its efficacy. As such, Mulyasa (2003) underscored the importance of implementing four fundamental educational management functions: (1) planning educational activities; (2) organizing educational activities; (3) directing implementation; and (4) evaluating outcomes. These fundamental principles allow schools to create cohesive frameworks that foster intentional vocational guidance. Ho et al. (2024) contend that vocational education management should systematically and deliberately shape student behavior, directing learners toward specific educational objectives while overseeing their time, morale, and attitudes.

Moriyasu and Kobayashi (2022) present a three-step framework for vocational education, namely: (1) self-awareness ("Who are you?"); (2) goal identification ("Where are you going?"); and (3) strategy development ("How to get there?"). This model emphasizes the significance of self-reflection, objective formulation, and tactical execution. Consistent with this perspective, Kolb (2014) emphasized the significance of experiential learning, through which students obtain skills and knowledge via practical experiences that enhance academic and career planning. Nota et al. (2020) assert that career counseling and future-oriented planning enable students to actively influence their professional paths, assisting them in managing uncertainty and assuming responsibility for their futures.

Studies by Witko et al. (2005) and Shen (2021) further substantiate these viewpoints by identifying self-discovery, career exploration, and developmental planning as essential components of effective career education. These activities are essential for students' career management skills and facilitate their transition into adulthood. Sutherland et al. (2005) discovered that initiatives like career clubs and experiential career programs are essential for enhancing students' preparedness for the workforce and Plasman (2018) asserted that student involvement in career-oriented planning cultivates links between their current

academic endeavors and future ambitions, thereby augmenting motivation and clarity of purpose.

Importantly, the administration of vocational education initiatives must encompass professional development and shifts in attitude among educational personnel with Yates and Bruce (2017) asserting that effective vocational education in New Zealand necessitates (1) specialized training for educators, administrators, and career advisors, and (2) a redefinition of the perceptions regarding the function of career guidance. Sufficient resources and engaged student involvement must accompany these reforms for them to be effective. Tran et al. (2019) asserted that student collaboration is crucial, especially when career education is incorporated into experiential learning with Nguyen et al. (2025) arguing that incorporating vocational education into school-based experiential activities enhances learning efficacy and career outcomes.

In 2013, VVOB Viet Nam established a comprehensive model titled “Career Education through General Vocational Education Activities,” suitable for both lower and upper secondary education levels. This model comprises (1) a triadic guidance process (self-assessment, exploration, and strategic planning) and (2) the implementation of fundamental theoretical frameworks, including the career tree, systems theories, and structured career planning. In this matter, Truong (2011) observed that experiential learning significantly aids students in career planning, whereas Germani et al. (2025) emphasizes the advantageous impact of internships and extracurricular engagements.

These opportunities function as inherent career-guidance mechanisms while fostering autonomous decision-making and personal involvement in professional trajectories: effective management necessitates systematic engagement with occupational information and local contexts. Some studies emphasize the imperative for educational institutions to promote student engagement with conventional and traditional vocations, provide guidance on post-educational pathways, and ensure adherence to national educational standards (Pham & Nguyen, 2023; Phi & Lam, 2022). This entails providing prompt and pertinent information regarding vocational systems and student placement, thus assisting learners in making informed and significant decisions that align with both personal ambitions and societal requirements.

2.3 Determinants Influencing Career-Oriented Education for Students

Many studies have investigated the various factors that affect students' career aspirations and the efficacy of career-oriented education. High school students' career choices are influenced by the dynamic interplay of experiential learning activities, perceived career efficacy, outcome expectations, individual career interests, and the availability of supportive mentorship (Li et al. 2021; Tang & Newmeyer, 2018; Yates & Bruce, 2017). These mentoring activities significantly influence students' selection of suitable career paths, thereby enhancing their motivation and confidence in making decisions. Howard et al. (2009) investigated the significance of supportive relationships—particularly with family, educators, and peers—alongside internal factors including self-efficacy,

intrinsic motivation, and goal-setting behavior and researchers have identified these relationships and psychological factors as pivotal in both academic success and career decision-making (Koul et al., 2016). In a prior study, Prediger and Sawyer (1986) noted an increasing trend in the number of students obtaining career guidance support from educational institutions, encompassing access to counseling services, involvement in career planning activities, and active engagement with career-related issues.

Policy experts have also recognized various systemic and institutional factors that influence career-oriented education. Doan et al. (2025) and Yuen et al. (2019) contend that student attrition rates, the existence and caliber of mentoring systems, teacher readiness, and the equilibrium between vocational and academic pathways substantially influence the efficacy of career guidance in secondary education. Moreover, they underscore the significant influence that families - especially parental engagement - have in shaping students' career perceptions and choices.

Socioeconomic and demographic factors are also essential with Ali et al. (2012) asserting that students' economic backgrounds and demographic characteristics intricately connect to their career aspirations. Creed et al. (2007) and Bolat and Odacı (2017) emphasized the critical role of self-confidence and initial work experiences in enabling students to develop and pursue significant career trajectories: these formative experiences frequently act as catalysts for career exploration and long-term strategizing.

Moreover, some recent studies have revealed that parental educational attainment and students' geographic context (urban versus suburban) positively correlate with the enhancement of students' career readiness and vocational skills (Brown et al., 1999; Lee et al., 2021). The findings indicate that both home and community environments play a crucial role in influencing students' aspirations, values, and access to career-related opportunities. In summary, career-focused education is shaped by a wide range of psychological, social, institutional, and economic factors that must be collectively addressed to guarantee equitable and effective vocational guidance for high school students.

2.4 Research Questions

In response to the identified challenges, this study seeks to evaluate the current state and enhance the effectiveness of career-oriented education in ethnic minority boarding schools across the Southern region of Vietnam. The study concentrates on pinpointing current strengths and weaknesses, evaluating the management framework of vocational education, and formulating evidence-based strategies for enhancement.

The study guides its objectives by asking the following core research questions:
1) To what degree and in what ways are career-oriented educational activities executed and administered in ethnic minority boarding schools in Vietnam?

2) What essential factors and strategies can improve the efficacy of these activities in accordance with the objectives of Vietnam's 2018 General Education Program?

3. Research Methods

3.1 Research Design

This research employs a quantitative survey methodology to systematically investigate the administration of career-oriented education in ethnic minority boarding schools in Southern Vietnam. The study focuses on two primary respondent groups—administrators/teachers and students—across designated schools to obtain insights regarding the implementation, management, and influencing factors of vocational education. The research is organized into three principal thematic elements: career-focused educational initiatives for students in boarding schools for ethnic minorities (G1), administration of career-focused education in these institutions (G2), and factors affecting the efficacy of career-oriented education (G3).

This design was chosen to guarantee the collection of standardized, comparable, and quantifiable data across a wide sample and facilitates the assessment of participants' perceptions, practices, and experiences concerning career-oriented education. Structured questionnaires were disseminated to administrators, educators, and students, establishing a foundation for comparative analysis among stakeholder groups. The data acquired from this survey were analyzed utilizing descriptive statistical methods, facilitating a clear evaluation of the current status, strengths, and challenges in the administration of vocational education in ethnic minority boarding schools.

3.2 Participants

This study utilized a convenience sampling technique, comprising 672 participants from 21 ethnic minority boarding schools in the southern Vietnamese provinces of An Giang, Kien Giang, Soc Trang, and Tra Vinh. The sample comprised 252 administrators and educators, with 57% identifying as male and 43% as female. Furthermore, 420 students engaged, with 59% identifying as male and 41% as female. Significantly, more than 98% of the student participants identified as members of ethnic minority groups, underscoring the study's emphasis.

Regarding qualifications, almost all administrators and educators satisfied the requisite training standards, with over 3% possessing a master's degree. The participants were selected with the aim to evaluate the present condition of career-oriented education management for the 2023–2025 academic years and data collection occurred via an online survey during the 2024–2025 academic year. The study rigorously followed ethical research protocols: all participants were apprised of the study's aims, their right to voluntary participation, and the option to withdraw at any time without consequences. To guarantee privacy and data protection, no personal or institutional identifiers were gathered, and anonymity was completely preserved during the research process.

3.3 Research Instrument

This study employed three structured scales to evaluate critical dimensions of career-oriented education in ethnic minority boarding schools: implementation, management, and influencing factors. Each scale corresponds with Vietnam's educational reform and vocational training objectives. Scale 1 (G1): Execution methodologies were used to evaluate four domains: objectives, content, methodologies, and delivery formats. Each domain comprised 4–5 indicators (e.g., "Assisting students in selecting careers aligned with their abilities and aspirations").

Responses were evaluated using a 5-point Likert scale ranging from 1 (no implementation) to 5 (complete implementation). Scale 2 (G2): Administrative procedures were utilized to oversee the planning, organization, direction, and evaluation of career education initiatives. Sample items comprised "Forecasting resources" and "Organizing career experiences within enterprises." Effectiveness was assessed utilizing a 5-point Likert scale ranging from 1 (not effective) to 5 (very effective). Scale 3 (G3): Determinants of influence were used to identify (1) local socioeconomic and cultural contexts, (2) institutional and policy support, and (3) students' career awareness. Included items are "Traditional norms in ethnic regions" and "Students' comprehension of labor market requirements." Responses utilized a 5-point Likert scale ranging from 1 (not important) to 5 (extremely important).

3.4 Data Analysis

All variables in this study were assessed using a 5-point Likert scale, intended to measure different levels of implementation, effectiveness, or influence, based on the specific construct being evaluated. Each item was assigned a numerical code ranging from 1 (minimum level) to 5 (maximum level). To maintain uniformity in interpretation, response categories were segmented into five equal intervals utilizing the formula $(\text{Maximum} - \text{Minimum}) / \text{Number of levels} = (5 - 1) / 5 = 0.8$. This produced the subsequent interpretive thresholds: Level 1: 1.0 - <1.8, Level 2: 1.8 - <2.6, Level 3: 2.6 - <3.4, Level 4: 3.4 - <4.2, and Level 5: 4.2 - 5.0. These thresholds enabled uniform interpretation of response patterns across all survey items and constructs.

Descriptive statistical methods, specifically mean scores and standard deviations, were utilized to analyze the data, summarizing participant responses and offering information about the perceived levels of implementation and effectiveness of career-oriented education and its management, along with contextual influences. The Cronbach's alpha coefficient was computed for each of the three scales (G1, G2, and G3) to evaluate the reliability of the instruments. A coefficient value of 0.70 or above was deemed acceptable, consistent with established standards in social science research, signifying that each scale demonstrated sufficient internal consistency. This step was crucial in validating the data's reliability and the consistency of responses within each construct.

4. Results

4.1 Current Situation of Student Streaming after High School Graduation in Ethnic Boarding Schools in the Southern Region

Table 1: Results of student placement after high school graduation in 21 ethnic boarding schools in the Southern region

Year	Number of Students Graduating	University Enrollment		Vocational School Enrollment		Entry into Labor Force	
		Quantity	Percentage	Quantity	Percentage	Quantity	Percentage
2022	1.995	1.580	79.10	291	14.60	124	6.30
2023	1.990	1.568	78.80	312	15.60	110	5.60
2024	1.950	1.586	81.30	288	14.70	76	4.00

Table 1 indicates a continual disparity in post-graduation trajectories among students from 21 ethnic minority boarding schools in Southern Vietnam. Between 2022 and 2024, university enrolment consistently averaged approximately 79.7%, whereas vocational school enrolment exhibited minor fluctuations, remaining low at 14.9%, significantly below the national target of 35–45% (Prime Minister of the Socialist Republic of Vietnam, 2018). Participation in the labor force decreased consistently, from 6.3% in 2022 to 4.0% in 2024. Although administrators typically perceived the implementation of career guidance as beneficial, student feedback indicated a disconnect between guidance initiatives and their actual decision-making experiences.

This disconnect is further illustrated by students' persistent preference for university education, partially driven by lenient admission standards (e.g., transcript-based entry) and prevailing notions of university prestige and economic mobility. The data reveal that vocational pathways are underutilized, not primarily due to unavailability, but rather because of institutional constraints in guidance provision, insufficient community involvement, and entrenched socio-cultural biases. Failure to critically address these perceptual discrepancies and structural impediments will render current reforms inadequate. These findings indicate an immediate necessity for policy enhancement, focused student assistance, and contextually relevant advocacy for vocational education in ethnic minority areas.

4.2 Evaluating the Results of Implementing Career Orientation Education Activities for Students in Ethnic Minority Boarding Schools

Table 2: Results of implementing career orientation education activities for students of ethnic minority boarding schools

Components	Level of implementation					
	Student self-assessment			Assessment by administrators and teachers		
	Mean	SD	α	Mean	SD	α
Objectives of career orientation education activities	4.12	0.75	0.72	4.08	0.79	0.81
Content of career orientation education activities	4.28	0.71	0.82	4.19	0.74	0.79
Methods of career orientation education activities	3.45	0.72	0.76	3,35	0.80	0.72
Forms of career orientation education activities	3.75	0.81	0.82	3.72	0.81	0.75

Table 2 delineates the strengths and significant deficiencies in the execution of career-oriented education within ethnic minority boarding schools, as perceived by students and administrators/teachers. Both groups evaluated the objectives and content components favorably, indicating robust alignment with the 2018 General Education Curriculum's aim to assist students in correlating career choices with personal competencies and labor market demands. Students assigned the highest rating to career education content ($M = 4.28$), confirming the curriculum's pertinence and lucidity. Nonetheless, inconsistencies arise in the perceptions of pedagogical approaches and instructional modalities. The scores were significantly lower—students rated the methods at $M = 3.45$, while administrators rated them even lower at $M = 3.35$ —signifying deficiencies in pedagogical strategies.

Despite the effective organization of institutional goals, their execution lacks personalization and interactivity, as evidenced by the disparity. Both groups assessed delivery formats similarly (students $M = 3.75$; administrators $M = 3.72$), indicating inconsistency in extracurricular, media-based, and community-integrated career activities. These findings highlight a disparity between policy objectives and classroom realities, where standardized implementation may fail to address diverse student requirements. The findings necessitate a transition to a student-centered perspective, indicating robust alignment with the 2018 General Education Curriculum's aim to assist students in correlating career choices with personal competencies and labor adopting culturally pertinent and interactive approaches to enhance the efficacy and equity of career guidance in ethnic minority boarding institutions.

4.3 Evaluation of the Management of Career-Oriented Education Activities for Students in Ethnic Minority Boarding Schools

Table 3: Results of the evaluation of career-oriented education management for students in ethnic minority boarding schools

Components	Level of effectiveness					
	Student self-assessment			Assessment by administrators and teachers		
	Mean	SD	α	Mean	SD	α
Planning career orientation activities for students	3.76	0.68	0.71	3.84	0.82	0.80
Organizing career orientation activities for students	3.36	0.70	0.72	3.46	0.72	0.82
Directing career orientation activities for students	3.39	0.72	0.75	3.35	0.74	0.71
Monitoring and reviewing career orientation activities for students	3.72	0.80	0.82	3.79	0.80	0.75

Table 3 provides an assessment of career-oriented education management across four essential functions: planning, organizing, directing, and monitoring. Planning garnered the highest effectiveness ratings from both students ($M = 3.76$) and administrators ($M = 3.84$), indicating that schools have progressed in establishing strategic objectives and distributing resources. The slight discrepancy in perceptions suggests a disconnect between planning intentions and their clarity in communication or student experience. The organizing and directing functions garnered the lowest evaluations from both groups – students rated organization at $M = 3.36$ and direction at $M = 3.39$, whereas administrators assessed them marginally higher at $M = 3.46$ and $M = 3.35$, respectively.

This indicates a common apprehension regarding operational implementation, especially in staff collaboration and connecting students with practical experiences via business partnerships. Administrators recognize constraints on institutional capacity, whereas students may view guidance initiatives as disjointed or inadequately tailored. In contrast, monitoring and evaluation practices received favorable ratings (students $M = 3.72$; administrators $M = 3.79$), signifying the existence of feedback mechanisms and regular assessments. Nonetheless, these mechanisms may exhibit deficiencies in responsiveness or innovation. The findings indicate that although basic management frameworks are present, innovative leadership, enhanced partnerships, and professional development are crucial for improving career guidance effectiveness in ethnic minority settings.

4.4 Assessing Factors Influencing Career-Oriented Education for Students in Ethnic Minority Boarding Schools in the Southern Region of Vietnam

Table 4: Assessment of the current situation affecting career orientation education for students in ethnic minority boarding schools

Components	Student self-assessment			Assessment by administrators and teachers		
	Mean	SD	α	Mean	SD	α
Influence of socio-economic circumstances and customs in ethnic minority areas on career orientation activities for students in ethnic boarding schools	4.14	0.77	0.75	4.19	0.78	0.76
Influence of coordination among educational forces on career orientation activities for students in ethnic boarding schools	4.25	0.71	0.73	4.39	0.78	0.80
Influence of perceptions of the importance of career orientation activities for students in ethnic boarding schools	4.12	0.79	0.73	4.18	0.75	0.78

Table 4 delineates significant contextual and institutional factors influencing career-oriented education in the boarding schools of ethnic minorities in Southern Vietnam. Both students and administrators recognized inter-agency coordination as the paramount factor. Administrators assigned a higher rating ($M = 4.39$) compared to students ($M = 4.25$), indicating that although schools acknowledge the importance of robust partnerships with families, local authorities, and employers, students may perceive these connections less directly. This perceptual disparity indicates a necessity for enhanced visibility and student-focused stakeholder involvement, especially in providing practical exposure and direction. The impact of socioeconomic conditions and cultural customs received high ratings (students $M = 4.14$, administrators $M = 4.19$), reflecting a mutual recognition of how local traditions and restricted economic resources limit career aspirations and access.

However, neither group identified this as the foremost challenge, potentially indicating a normalization of structural constraints that necessitates more profound policy considerations. The perceptions regarding the significance of career-oriented education were closely aligned (student $M = 4.12$, administrator $M = 4.18$), indicating a general consensus on its value while suggesting possible discrepancies between recognized importance and actual implementation. These findings underscore the necessity of systemic, culturally attuned, and stakeholder-oriented strategies that transcend superficial coordination to achieve integrated, equity-centered reform in vocational guidance provision.

5. Discussion and Implications

5.1 Discussion

This study sought to investigate the execution, administration, and contextual factors influencing career-oriented education in ethnic minority boarding schools in Southern Vietnam. The study addresses three fundamental research questions: (1) the degree of implementation, (2) the efficacy of management, and (3) significant influencing factors. It not only corroborates previous findings but also enhances theoretical comprehension and highlights practical deficiencies that require policy and pedagogical intervention.

Research demonstrates that schools have achieved notable advancements in establishing objectives and integrating pertinent content into career education. Mean scores surpassing 4.0 in both student and administrator cohorts indicate a collective acknowledgment of the necessity to align career guidance with students' capabilities, ambitions, and socio-cultural contexts. This confirms the significance of explicit objectives in the design of career education, as articulated by Iyer et al. (2021), and demonstrates alignment with Vietnam's 2018 General Education Programme. Nonetheless, despite the presence of these structural components, a thorough analysis indicates that high-level alignment with policy does not inherently result in effective implementation at the classroom level.

Subpar evaluations of instructional methods and delivery formats reveal a continual disjunction between strategic objectives and implemented practices. Although there is robust support for content relevance, the comparatively low average scores for pedagogical practices—especially experiential learning—indicate a lack of active learning strategies, including workplace exposure, professional dialogues, and media integration. This aligns with findings by Tran et al. (2020), who underscore the necessity for diversification in pedagogical approaches, and Ho et al. (2023), who advocate for contextual adaptation tailored to student circumstances. The continued reliance on didactic methods diminishes the transformative capacity of vocational education, especially in contexts where students encounter intricate socioeconomic and cultural challenges.

Witko et al. (2005) contend that effective career guidance must confront limited success narratives, predominantly centered on university education. The results of this study confirm that such narratives are profoundly ingrained in both community and institutional perspectives. Students persist in viewing university education as the primary avenue for upward mobility, relegating vocational alternatives to an inferior status. Sutherland et al. (2005) assert that this perception is entrenched in cultural constructs of prestige, which are challenging to dismantle without structural and symbolic interventions. Le (2018) further emphasizes that altering such norms necessitates sustained and multi-tiered endeavors.

Thus, although schools may acknowledge the validity of vocational pathways in theory, their initiatives are limited by overarching cultural and systemic factors that prioritize academic routes. Incorporating real-world knowledge from

artisans, industry professionals, and community leaders into vocational instruction, as proposed by Ho et al. (2024), can enhance contextual learning and bolster the credibility of alternative career paths. The transition from theoretical to practical engagement is essential for establishing vocational education as a legitimate and esteemed option, rather than a secondary choice.

Career education administration was assessed from a management perspective through four fundamental functions: planning, organizing, directing, and evaluating. Planning and evaluation were regarded as comparatively effective ($M > 3.7$), whereas organizing and directing functions received lower ratings. This indicates that while strategic planning may exist, operational challenges, especially those necessitating inter-agency collaboration and innovation, persist. The pattern corroborates Nguyen et al. (2025), who contend that inclusive planning improves program quality but caution that implementation frequently suffers when dependent on disjointed or inadequately coordinated frameworks.

The directing function's low scores ($M \approx 3.35$) indicate a predominance of administrative leadership over pedagogical leadership. This aligns with Gaylor and Nicol (2016), who discovered that numerous schools regard vocational guidance as a compliance obligation rather than a cohesive educational initiative. The restricted utilization of data, inadequate strategic foresight, and absence of continuous training exacerbate leadership deficiencies. Vu (2018) and Phi and Lam (2022) similarly emphasize the deficiency in differentiated instruction and career counseling customized to individual student profiles—an issue particularly pronounced in ethnically diverse and economically disadvantaged contexts.

Furthermore, the results indicate a necessity for improved collaboration within educational ecosystems. Despite a high rating for stakeholder coordination, with students and administrators underscoring its significance ($M = 4.25-4.39$), the actual execution seems inconsistent. Gamboa et al. (2013) contend that collaborative initiatives among families, educational institutions, and community stakeholders are essential for effective career education; however, this study reveals that these partnerships are predominantly aspirational. The absence of structured mechanisms and insufficient incentives for collaboration impede systemic influence. Parshukov et al. (2020) and Li et al. (2021) emphasize that localized collaborations with enterprises and vocational institutions improve student engagement; however, this study indicates that these models have not been fully institutionalized within the Vietnamese ethnic minority context.

Access to information and transparency are essential elements of effective career management and academic literature increasingly acknowledges that timely and localized career-related information directly influences student engagement and decision-making (Ivzori et al., 2025; Le, 2018;). This study underscores that while students and administrators acknowledge the significance of career education, current delivery models may be deficient in market alignment and practical relevance. Pham (2023) contends that labor market intelligence should be

incorporated into school-level decision-making to promote informed and adaptive educational choices.

Contextual influences were found to be intricately connected to vocational education outcomes. Both groups recognized the impact of socioeconomic factors, cultural traditions, and attitudes toward the function of career guidance. Do and Ha (2021) observe that ethnic minority students frequently encounter obstacles including poverty, linguistic constraints, and limited parental education—elements that were corroborated in this study. These issues not only impede access to education but also influence students' confidence, aspirations, and preparedness for vocational pathways. The elevated ratings for stakeholder collaboration underscore the essential requirement for community-oriented, culturally attuned solutions that acknowledge these limitations and strive to surmount them via inclusive design.

Despite a consensus on the significance of these factors, implementation continues to be inconsistent. The concept of collective responsibility is theoretically acknowledged, yet its implementation within schools is unstructured. Yuen et al. (2019) and Doan et al. (2025) assert that multi-stakeholder collaboration must be institutionalized, endorsed, and incentivized. Similarly, Vu (2018) and Phi and Lam (2022) emphasize the deficiency of differentiated instruction and career counselling tailored to effectuate enduring transformation. Otherwise, mere acknowledgement will be inadequate. The perception of vocational education is equally significant. Despite favorable ratings of its importance by both students and administrators ($M \approx 4.12-4.18$), the enduring societal hierarchy that prioritizes academic achievement over skills-based learning diminishes these values.

Ali et al. (2012) and Bolat and Odacı (2017) contend that the image issue of vocational education can solely be remedied by improving its quality and societal acknowledgement. This encompasses enhancing outcomes, establishing transparent employment pathways, and highlighting successful vocational graduates. Educational institutions have advanced in cultivating culturally responsive atmospheres and the incorporation of group-oriented events, cultural performances, and festivals, as noted by Hardianto et al. (2022), has reinforced ethnic identity and fostered trust. This form of integration fortifies community-school connections and enhances student engagement. Emotional support also influences students' capacity to make career decisions. Iyer et al. (2021) and Le (2023) note that teachers' encouragement and mentoring are essential for assisting students in surmounting psychological and structural obstacles.

This study enhances existing research (Nota et al., 2020; Prediger & Sawyer, 1986) by elucidating the complex realities of vocational education within ethnic minority contexts. It emphasizes that effective career guidance cannot be accomplished solely through curriculum enhancement or policy modification. It necessitates a systemic approach that unites educators, families, communities, and policymakers within a culturally informed, data-driven, and context-sensitive framework. The evolution of vocational education into a respected,

pertinent, and equitable avenue necessitates sustained dedication and a sophisticated comprehension of institutional constraints and cultural dynamics. For Vietnam, investing in vocational education for ethnic minority students is both a policy necessity and a strategic method for attaining inclusive and sustainable national development.

5.2 Implications

This study's findings provide important recommendations which prioritize enhancing the quality, inclusivity, and contextual relevance of career-oriented education in boarding schools for ethnic minorities. As Vietnam progresses with the execution of its 2018 General Education Curriculum Reform (Ministry of Education and Training Vietnam, 2018)—which prioritizes competency-based education, student autonomy, and vocational readiness—these findings offer timely and practical guidance for policymakers and practitioners. However, despite significant advancements in defining explicit objectives and integrating pertinent content into career education, enduring challenges persist in pedagogy, coordination, and delivery methods. The ongoing reliance on didactic instruction, combined with limited experiential learning, hinders students' ability to effectively navigate career pathways.

This discovery aligns with findings by Le (2025) and Nguyen et al. (2025), who highlight persistent discrepancies between national policy objectives and their practical application in classrooms, especially in under-resourced or remote regions. This research underscores the necessity for pedagogical innovation that transcends theoretical frameworks to implement inclusive, student-centered vocational education as mandated by policy. Sutherland et al. (2005) and Pham and Nguyen (2023) assert that schools should adopt active, experiential learning methodologies, including project-based learning, workplace exposure, community involvement, and career simulations. These methods not only increase engagement but also cultivate the soft skills and adaptability necessary to change labor markets.

This study underscores the necessity for ongoing professional development for educators. Le (2023) advocates for peer-learning networks to facilitate the collaborative enhancement of career education methodologies among teachers. These networks offer a framework for disseminating contextual strategies, assessing impact, and promoting reflective practice. Additionally, school-based career counselling teams, consisting of trained educators, guidance counsellors, and community stakeholders, can provide continuous and tailored support for students in subject selection, life skills, and career planning.

Nota et al. (2020) emphasize the significance of multidisciplinary teams for fostering student agency and enhancing long-term outcomes. The role of ecosystem collaboration is equally vital: educational institutions cannot fulfil the intricate vocational requirements of students independently. This study demonstrates that effective career education relies on enduring collaborations with local enterprises, traditional craft communities, vocational training institutions, and governmental agencies. Community engagement not only

contextualizes education but also enhances its significance and sustainability. VVOB Vietnam (2013) and Moriyasu and Kobayashi (2022) assert that engaging local stakeholders enables schools to synchronize curriculum with cultural and economic contexts, while a lack of formal education or knowledge of labor also exposes students to authentic role models and career trajectories. Parental involvement is equally essential. According to Howard et al. (2009) and Do and Ha (2021), the congruence between school guidance and familial expectations is crucial for student achievement. Nevertheless, numerous parents from ethnic minorities possess limited formal education or knowledge of labor markets. Consequently, educational institutions must actively adopt inclusive communication strategies to foster trust and promote collective accountability.

To maximize impact, career education should not be regarded as an isolated initiative but rather integrated throughout all subjects and school activities. Vu (2018) and Yuen et al. (2019) assert that the incorporation of career guidance within fundamental academic disciplines improves relevance and student engagement. For example, literature, science, or social studies lessons may encompass discussions regarding career applications, skill trajectories, and future planning. Furthermore, career information systems and labor market databases ought to be utilized to educate students about emerging employment trends, available pathways, and regional opportunities, especially in the southern region (Thieu & Nguyen, 2020). As labor markets transform, educational institutions must prepare students for career adaptability, a significant focus in global educational discussions (Chen et al., 2021; Nota et al., 2020).

Educational institutions must augment the visibility and perceived significance of vocational pathways and events like career days, skill competitions, and student-led exploration initiatives can transform the perception of vocational education. These events, combined with significant interaction between students and professionals, cultivate dynamic environments where students actively participate in shaping their futures (Bui, 2020; Gamboa et al., 2013; Shen, 2021). Moreover, accessible databases of vocational institutions, training programs, and learner support services (Nguyen et al., 2020) enable students to make informed and confident decisions.

In addition to practical strategies, this study emphasizes vocational education as an issue of social equity and cultural significance. Educational strategies must be customized to reflect the actual experiences of ethnically diverse students, considering the interaction between geography, identity, and systemic obstacles. Ensuring that all students, irrespective of their background, have access to significant career opportunities is a national necessity and a moral obligation. This study theoretically enhances discourse by refining and contextualizing existing vocational education models rather than simply applying pedagogical and equity-centered approaches. It integrates career education within the ethnic, cultural, and policy-specific contexts of Vietnam, revealing the shortcomings of traditional, urban-focused theories. It advocates for a comprehensive, multi-tiered model of career education for ethnic minority students that integrates

theory with practice, policy with pedagogy, and educational institutions with the community. This model prioritizes culturally responsive equity-centered pedagogy, equity-centered stakeholder collaboration, and equity-centered management, significantly enhancing Vietnam's educational reforms and global perspectives on inclusive vocational education.

6. Conclusion

This study analyzed the present condition, management strategies, and influencing factors of career-oriented education in ethnic minority boarding schools in Southern Vietnam, in accordance with the 2018 General Education Program. The principal findings illustrate a complex scenario. Schools have made substantial advancements in defining the objectives and content of vocational education, ensuring alignment with national curricular standards and labor market requirements. Both students and educators indicated strong consensus regarding the significance and lucidity of vocational objectives and subject matter, especially concerning the comprehension of traditional and contemporary professions.

Conversely, the study revealed ongoing challenges in implementation methods and forms, such as insufficient experiential learning, weak collaboration with local industries, and inadequate integration of vocational activities into wider educational and cultural frameworks. The management of vocational education was assessed as moderately effective, exhibiting significant strengths in planning and evaluation, yet demonstrating deficiencies in organizational execution and instructional leadership.

Moreover, contextual factors, including socioeconomic conditions, cultural traditions, and insufficient parental involvement, persist in influencing and occasionally obstructing students' career orientation pathways. The findings augment and elaborate on existing literature by providing specific, contextually relevant insights into the operation of vocational education in under-resourced, culturally diverse environments. The study enhances national discourse on educational reform by emphasizing the necessity of incorporating career guidance into subject instruction, extracurricular activities, and collaborative school initiatives.

Furthermore, it underscores the imperative of transcending policy rhetoric to formulate pragmatic, localized strategies that honor the cultural identity and socioeconomic conditions of ethnic minority communities. This study emphasizes vocational education in Vietnam's ethnic minority boarding schools as a catalyst for equity, social mobility, and development. Success, however, is contingent upon efficient management, adequate funding, and cultural pertinence. It advocates for integrated curricula and community involvement, providing a framework for inclusive human resource development in underserved areas.

7. Limitations

This study offers significant insights into the execution and administration of career-oriented education in ethnic minority boarding schools in Southern Vietnam. Nevertheless, various limitations necessitate consideration and should guide the trajectory of future research. The study used a purely descriptive quantitative design, which constrains its explanatory capacity and hinders the identification of causal relationships among variables. Future research ought to employ analytical or experimental designs to enhance comprehension of the mechanisms affecting vocational education outcomes. The utilization of convenience sampling engenders concerns regarding selection bias and constrains the generalizability of results. Utilizing random or stratified sampling methods in future research would enhance the data's representativeness. Third, relying solely on self-reported data could potentially introduce response bias or expose participants' varying interpretations of the assessed constructs.

To address this, future research should employ triangulation methods, integrating self-reports with observational data or administrative records. The study was confined to 21 schools within a singular region, thereby limiting its generalizability to wider populations. Future research should broaden the geographic scope to encompass schools in Northern and Central Vietnam or perform comparative analyses across various ethnic and socioeconomic contexts. The lack of qualitative data, including interviews or focus groups, restricts the depth of understanding regarding the lived experiences, values, and challenges of stakeholders. Future research should employ mixed-methods approaches, combining quantitative surveys with qualitative narratives from students, educators, parents, and community leaders.

Author Contributions

All authors contributed equally to conceptualization, methodology, data curation, formal analysis, visualization, writing original draft, review and editing. All authors have read and agreed to the published version of the manuscript.

Conflict of Interest

The authors have no conflicts of interest to declare. There is also no financial interest to report. The author certifies that the submission is original work and is not under review at any other publication.

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Ethics Statements

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Data Availability Statement

The authors acknowledge that data supporting the findings of this study are available from the contact author upon reasonable request.

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9. References

- Ali, S. R., Yang, L.-Y., Button, C. J., & McCoy, T. T. H. (2011). Career Education Programming in Three Diverse High Schools: A Critical Psychology-Case Study Research Approach. *Journal of Career Development, 39*(4), 357-385. <https://doi.org/10.1177/0894845311398131>
- Amin, Z. N., Kurniawan, K., Nusantoro, E., & Amin, J. (2021). Rasch Model Analysis: Measuring Psychometric Properties of Career Orientation Scale for High School Students. *Proceedings of the 11th Annual International Conference on Industrial Engineering and Operations Management Singapore, March 7-11, 2021*, 3508-3514. <https://www.ieomsociety.org/singapore2021/papers/628.pdf>
- Bolat, N., & Odacı, H. (2017). High school final year students' career decision-making self-efficacy, attachment styles and gender role orientations. *Current Psychology, 36*(2), 252-259. <https://doi.org/10.1007/s12144-016-9409-3>
- Bölükbaşı, A., & Kırdök, O. (2019). The Mediating Role of Future Orientation in the Relationship between Career Adaptability and Life Satisfaction in High School Students. *Education and Science, 44*(200), 77-91. <https://doi.org/10.15390/EB.2019.8090>
- Brown, C., Darden, E. E., Shelton, M. L., & Dipoto, M. C. (1999). Career exploration and self-efficacy of high school students: are there urban/suburban differences? *Journal of Career Assessment, 7*(3), 227-237. <https://doi.org/10.1177/106907279900700303>
- Bui, V. H. (2020). Vocational Guidance Education and Streaming High School Students Based on Labor Market Orientation. *International Journal of Innovation, Creativity and Change, 13* (7), 1478-1490. https://www.ijicc.net/images/vol_13/Iss_7/13775_Hung_2020_E_R.pdf
- Cavalletti, B., Corsi, M., Persico, L., & di Bella, E. (2021). Public university orientation for high-school students. A quasi-experimental assessment of the efficiency gains from nudging better career choices. *Socio-Economic Planning Sciences, 73*, 100945. <https://doi.org/10.1016/j.seps.2020.100945>

- Chen, H., Liu, F., Wen, Y., Ling, L., Chen, S., Ling, H., & Gu, X. (2021). Career Exploration of High School Students: Status Quo, Challenges, and Coping Model. *Frontiers in Psychology*, 12, 672303. <https://doi.org/10.3389/fpsyg.2021.672303>
- Creed, P. A., Patton, W., & Prideaux, L. A. (2007). Predicting change over time in career planning and career exploration for high school students. *Journal of Adolescence*, 30(3), 377-392. <https://doi.org/10.1016/j.adolescence.2006.04.003>
- Dai, D. Y., & Davis, J. K. (1998). Field Dependence, Academic Achievement, and Career Orientations: A Study of Chinese High School Students. *Gifted and Talented International*, 13(1), 34-39. <https://doi.org/10.1080/15332276.01.11672875>
- 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 Tan Trao University*, 7(20). <https://doi.org/10.51453/2354-1431/2021/493>
- Do, T. B. L. (2018). Current status of student classification after secondary schools in the development of human resources to meet the demands of social-economic development. *Vietnam Journal of Educational Sciences*, 08, 32-36. <http://vjes.vnies.edu.vn/en/no-8-august-2018>
- Doan, H. T. T., Vo, H. T., Nguyen, C. T., & Le, N. H. (2025). Impact of Factors Influencing the STEM Career-Oriented Subjects Choice of Vietnamese High School Students. *Journal of Education and Learning (EduLearn)*, 19(4), 1805-1813. <https://doi.org/10.11591/edulearn.v19i4.23859>
- Gamboa, V., Paixão, M. P., & De Jesus, S. N. (2013). Internship quality predicts career exploration of high school students. *Journal of Vocational Behavior*, 83(1), 78-87. <https://doi.org/10.1016/j.jvb.2013.02.009>
- Gaylor, L., & Nicol, J. J. (2016). Experiential high school career education, self-efficacy, and motivation. *Canadian Journal of Education/Revue canadienne de l'éducation*, 39(2), 1-24. <https://www.jstor.org/stable/canajeducrevucan.39.2.06>
- Germani, S., Marini, M., & Stanzione, I. (2025). The Role of Internship Programs in Fostering School-to-Work Transitions in Secondary Schools: Paths for Transversal Skills and Orientation (PCTOs). *Journal of Adolescence*, 97(7), 1738-1748. <https://doi.org/10.1002/jad.12531>
- 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>
- Ho, V. T., Nguyen, V. D., & Lu, T. H. Y. (2024). *Textbook on career orientation and entrepreneurship management in education and training*. Vietnam Education Publishing House.
- Ho, V. T., Nguyen, V. D., Nguyen, V. T., Nguyen, L. V. N., & Tran, N. H. (2022). Career orientation and student streaming after secondary and high school education in Vietnam in the new context of human resource development. *International Journal of Early Childhood Special Education*, 14(2), 1088-1101. https://www.int-jecse.net/media/article_pdfs/1088-1101.pdf
- Ho, V. T., Tran, H. H., Nguyen, V. D., & Nguyen, V. T. (2023). Investigating and Implementing a Student Vocational Education Model for Educational Innovation. *Journal of Education and e-Learning Research*, 10(2), 194-200. <https://doi.org/10.20448/jeelr.v10i2.4516>
- Howard, K. A., Ferrari, L., Nota, L., Solberg, V. S. H., & Soresi, S. (2009). The relation of cultural context and social relationships to career development in middle school. *Journal of Vocational Behavior*, 75(2), 100-108. <https://doi.org/10.1016/j.jvb.2009.06.013>

- Ivzori, Y., Sachs, D., Reiter, S., & Schreuer, N. (2025). School-to-work transition program for at-risk youths: Cultural adaptation. *WORK*, 81(2), 2618-2630. <https://doi.org/10.1177/10519815241311176>
- 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>
- Kolb, D. A. (2014). *Experiential learning: Experience as the source of learning and development*. FT Press. <https://byvn.net/cgKs>
- Koul, R., Lerdpornkulrat, T., & Poondej, C. (2016). Influence of perceived parenting styles on goal orientations and career aspirations of high school science students in Thailand. *International Education Journal: Comparative Perspectives*, 15(4), 56-65. <https://openjournals.library.sydney.edu.au/IEJ/article/view/10406>
- Le, D. P. (2023). Research on the vocational education competence framework of current high school teachers. *Vietnam Journal of Educational Sciences*, 19(8), 8-13. <http://vjes.vnies.edu.vn/en/research-vocational-education-competence-framework-current-high-school-teachers>
- Le, D. P. (2025). The current status of career counseling skills for high school teachers in Phu Tho. *Vietnam Journal of Educational Sciences*, 21(2), 94-103. <http://vjes.vnies.edu.vn/en/current-status-career-counseling-skills-high-school-teachers-phu-tho>
- Le, H. D., & Nguyen, Q. T. (2021). Some measures to improve the quality of education in ethnic minority boarding schools in Ca Mau province. *Vietnam Journal of Education*, 513, 45-51. <https://tcgd.tapchigiaoduc.edu.vn/index.php/tapchi/article/view/275/71>
- Le, V. L. (2018). Policies on Support of General Education for Ethnic Minorities in Vietnam in the Current Content. *American Journal of Educational Research*, 6(12), 1678-1687. <https://doi.org/10.12691/education-6-12-14>
- Lee, Y., Lee, G., Kim, J., & Lee, M. (2021). Equity in career development of high school students in South Korea: The role of school career education. *Education Sciences*, 11(1), 20. <https://doi.org/10.3390/educsci11010020>
- Li, J., Mau, W. C. J., Chen, S. J., Lin, T. C., & Lin, T. Y. (2021). A qualitative exploration of STEM career development of high school students in Taiwan. *Journal of Career Development*, 48(2), 120-134. <https://doi.org/10.1177/0894845319830525>
- 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>
- Migel, J. (2001). *Counseling in Careers Guidance*. Open University Press.
- Ministry of Education and Training Vietnam. (2018). *General Education Program - Comprehensive Program (issued with Circular No. 32/2018/TT-BGDĐT dated December 26, 2018 of the Minister of Education and Training)*. <https://luatvietnam.vn/giao-duc/thong-tu-32-2018-tt-bgdtt-ban-hanh-chuong-trinh-giao-duc-pho-thong-moi-169745-d1.html>
- Monika, M., & Milena, I. G. (2020). The use of textbooks in the teaching-learning process. In A. Lopivec, J. Batič & E. Kranjec (Eds.), *New Horizons in Subject-Specific Education: Research Aspects of Subject-Specific Didactics*. Univerzitetna založba Univerze v Mariboru.
- Moriyasu, R., & Kobayashi, T. (2022). Impact of career education on high school students' occupational choice: Evidence from a cluster-randomized controlled trial. *Japan and the World Economy*, 63, 101146. <https://doi.org/10.1016/j.japwor.2022.101146>
- Nguyen, H. D. (2022). Vocational education management and the current situation of vocational education management at Olympia Inter-level School, Hanoi. *Vietnam*

- Journal of Education*, 22(6), 59-64.
<https://tcgd.tapchigiaoduc.edu.vn/index.php/tapchi/article/view/377>
- Nguyen, N. T. (2010). Issues of vocational education for ethnic minority students in the Central Highlands. *Ho Chi Minh City University of Education Journal of Science*, 23, 130-133. [https://doi.org/10.54607/hcmue.js.0.23.1656\(2010\)](https://doi.org/10.54607/hcmue.js.0.23.1656(2010))
- Nguyen, T. H. (2023). Current situation of teaching staff in ethnic boarding junior and senior high school of Bu Gia Map, Binh Phuoc Province. *Dong Thap University Journal of Science*, 12(02S), 86-95. <https://doi.org/10.52714/dthu.12.02S.2023.1086>
- Nguyen, V. D., Tran, D. N., Pham, H. Q., & Duong, T. H. (2024). An overview of the management of learning activities of students in ethnic boarding schools in Vietnam. *Vietnam Journal of Education*, 24(11), 1-7. <https://tcgd.tapchigiaoduc.edu.vn/index.php/tapchi/article/view/1895>
- Nguyen, V. D., Tran, D. N., Tran, V. D., Trung, D., & Duong, T. H. (2025). Integrating local educational content into experiential activities for students of ethnic boarding schools in Vietnam. *Multidisciplinary Science Journal*, 7(11), 2025501. <https://doi.org/10.31893/multiscience.2025501>
- Nota, L., Soresi, S., Di Maggio, I., Santilli, S., & Ginevra, M. C. (2020). *Sustainable development, career counselling and career education*. Springer. <https://doi.org/10.1007/978-3-030-60046-4>
- Parshukov, A., Brill, A., & Krolivetskaya, S. (2020). Professional orientation of students as the basis of future labour motivation. *E3S Web of Conferences*. 164, 12012. <https://doi.org/10.1051/e3sconf/202016412012>
- Parsons, F. (1909). *Choosing a vocation*. Houghton, Mifflin and Company.
- Pham, H. L. (2023). Khmer education at An Giang Ethnic Minority Boarding High School. *Dong Thap University Journal of Science*, 12(04S), 221-230. <https://doi.org/10.52714/dthu.12.04S.2023.1209>
- Pham, T. H., & Nguyen, T. H. (2023). Developing career-oriented competencies in high school students through biology teaching. *Vietnam Journal of Educational Sciences*, 19(1), 44-50. <http://vjes.vnies.edu.vn/en/developing-career-oriented-competencies-high-school-students-through-biology-teaching>
- Phi, D. K., & Lam, T. D. (2022). Current status of career guidance management according to the 2018 general education program in secondary schools: A case study in Lang Giang district, Bac Giang province. *Vietnam Journal of Education*, 22(1), 28-34. <https://tcgd.tapchigiaoduc.edu.vn/index.php/tapchi/article/view/317>
- Plasman, J. S. (2018). Career/education plans and student engagement in secondary school. *American Journal of Education*, 124(2), 217-246. <https://www.journals.uchicago.edu/doi/abs/10.1086/695608>
- Prediger, D. J., & Sawyer, R. L. (1986). Ten years of career development: A nationwide study of high school students. *Journal of Counseling & Development*, 65(1), 45-49. <https://doi.org/10.1002/j.1556-6676.1986.tb01228.x>
- Prime Minister of the Socialist Republic of Vietnam. (2018). *Decision No. 552/QĐ-TTg dated May 14, 2018 of the Prime Minister: Approving the Project "Career education and student orientation in general education for the period 2018 - 2025"*. <https://vanban.chinhphu.vn/default.aspx?pageid=27160&docid=193710>
- Scalas, L. F., & Fadda, D. (2019). The Weight of Expectancy-Value and Achievement Goals on Scientific Career Interest and Math Achievement. *International Association for Development of the Information Society*. <https://files.eric.ed.gov/fulltext/ED608750.pdf>
- Shen, Q. (2021). The importance of integrating career planning education into high school curriculum. In *2021 4th International Conference on Humanities Education and Social Sciences (ICHES 2021)* (pp. 2115-2120). Atlantis Press. <https://doi.org/10.2991/assehr.k.211220.364>

- Sutherland, D., Levine, K., & Barth, B. (2005). Investigating the impact of a career education program on school engagement. *Canadian Journal of Urban Research*, 14(1), 131-157. <https://www.jstor.org/stable/44321018>
- Tang, M., Pan, W., & Newmeyer, M. D. (2018). Factors Influencing High School Students' Career Aspirations. *Professional School Counseling*, 11(5). <https://doi.org/10.1177/2156759X0801100502>
- Thieu, V. N., & Nguyen, P. H. (2020). Predicting the number of teachers and students at the 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, N. H., Truong, T. D., Dinh, H. V. T., Do, L. H. T., Tran, T. A. T., & Phan, M. H. T. (2020). Significance of Teacher Professional Development in Response to the Current General Education Reforms in Vietnam: Perceptions of School Principals and Teachers. *Problems of Education in the 21st Century*, 78(3), 449-464. <https://dx.doi.org/10.33225/pec/20.78.449>
- 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>
- Truong, H. Q. T. (2011). High School Career Education: Policy and Practice. *Canadian Journal of Educational Administration and Policy*, 123, 1-28. <https://journalhosting.ucalgary.ca/index.php/cjeap/article/view/42820>
- Vu, C. T. (2018). Proposal for a Career Education Competency Framework for Technology Teachers in High Schools. *Vietnam Journal of Education*, 437(1), 43-49. <https://thuvienso.net/upload/library/600515/preview/de-xuat-khung-nang-luc-giao-duc-huong-nghiep-cho-giao-vien-mon-cong-nghe-o-truong-pho-thong-600515.pdf>
- VVOB Viet Nam. (2013). *Vocational education through general vocational education activities*. Vietnam: Hanoi National University Publishing House. https://vietnam.vvob.org/sites/vietnam/files/cg_through_egp_v0.0.pdf
- Witko, K., Bernes, K. B., Magnusson, K., & Bardick, A. D. (2005). Senior high school career planning: What students want. *The Journal of Educational Enquiry*, 6(1), 34-49. <https://ojs.unisa.edu.au/index.php/EDEQ/article/view/500>
- Yates, A., & Bruce, M. (2017). The future of career education in New Zealand secondary schools: A review of the literature. *Australian Journal of Career Development*, 26(2), 62-70. <https://doi.org/10.1177/1038416217700421>
- Yates, A., & Bruce, M. (2017). The future of career education in New Zealand secondary schools: A review of the literature. *Australian Journal of Career Development*, 26(2), 62-70. <https://doi.org/10.1177/1038416217700421>
- Yuen, M., Yau, F. S., Tsui, J. Y., Shao, S. S., Tsang, J. C., & Lee, B. S. (2019). Career education and vocational training in Hong Kong: Implications for school-based career counselling. *International Journal for the Advancement of Counselling*, 41, 449-467. <https://doi.org/10.1007/s10447-018-9361-z>
- Zaichenko, N. A., & Vinokurov, M. V. (2018). Academic Capital and the Career Orientations of High School Students. *Russian Education & Society*, 60(2), 187-201. <https://doi.org/10.1080/10609393.2018.1451193>