



© 2026 Yao. This article follows the  Open Access policy of CC BY NC under CCA license v 4.0.



Submitted: 04/07/2026 - Accepted: 23/07/2026 - Published: 28/09/2026

The "Language + Skill" Synergy: Adapting the Guizhou Vocational Education Model for Entrepreneurial Capacity Building in ASEAN

Xu Yao

China International Language and Culture College,
Krirk University, Bangkok 10220, Thailand
XUYao10220@outlook.com

DOI: 10.26417/g94jf53o

Abstract

Technical and vocational education and training systems in ASEAN are increasingly expected to produce not only employable workers but multilingual, digitally capable and entrepreneurial ones, yet there is little guidance on how a specific foreign model should be adapted to such varied national settings. This paper asks how the Guizhou "language + skill" vocational education model, which links language learning, technical training, industry partnership and international cooperation, can be adapted for entrepreneurial capacity building across ASEAN. Grounded in the policy-transfer and comparative-education literatures, the study employs a comparative policy-analysis design operationalised as an illustrative multi-criteria decision-making model. It first synthesises evidence on China-ASEAN vocational cooperation, Guizhou practice, ASEAN TVET priorities and entrepreneurship education; it then develops the Language-Skill-Enterprise (LSE) Capacity Model; and it finally applies an AHP-TOPSIS procedure to rank five implementation pathways. The ranking places enterprise order-class apprenticeship first and the offshore Guijiang Workshop second, with labour-market relevance, entrepreneurial formation, industry partnership and language-skill integration carrying the heaviest weights; sensitivity analysis indicates that the ordering is robust to moderate perturbation of those weights. Disaggregated cases of Vietnam, Indonesia and the Philippines show that the preferred pathway is context-dependent rather than uniform across ASEAN. The paper concludes that language contributes most to entrepreneurial capacity when it is embedded in work tasks and recognised credentials, and that adaptation should proceed as governed, incremental hybridisation, piloted and independently evaluated, rather than as wholesale export of a fixed curriculum.

Keywords: policy transfer; comparative education; TVET internationalisation; multi-criteria decision-making; order-class apprenticeship; micro-credentials; entrepreneurial self-efficacy

Introduction

Technical and vocational education and training is increasingly expected to do more than supply job-ready labour. In fast-changing regional economies, TVET systems are also asked to cultivate adaptable, multilingual, digitally capable, and entrepreneurial workers. This challenge is particularly important for ASEAN, where education systems, labour markets, small and medium-sized enterprises, cross-border investment, and youth employment transitions are deeply connected.

Recent China-ASEAN education cooperation provides a relevant context. China and ASEAN have expanded vocational education collaboration through joint training, vocational education alliances, Luban Workshops, modern artisan colleges, international industry colleges, and "Chinese + vocational skills" programmes. Xinhua reported in April 2024 that China and ASEAN had carried out student and teacher joint-training projects and built multiple vocational cooperation platforms in ASEAN (Xinhua, 2024). In Guizhou, vocational institutions have implemented training projects such as "Chinese + modern agriculture and animal husbandry", "HSK tutoring + e-commerce skills", and technical training for bridge construction, intelligent transport, and tourism-related skills for ASEAN students (China Vocational and Technical Education Network, 2024).

The "language + skill" model is not merely a language-training model. It attempts to combine linguistic competence, technical competence, industry standards, and cross-cultural practice. Reports on Guizhou vocational institutions show that students from Cambodia, Laos, Myanmar, Thailand, and other ASEAN contexts have participated in programmes combining Chinese-language training and technical instruction, including dual-certification arrangements with ASEAN partners (China Daily Hong Kong, 2025). This design is relevant because technical instruction, workplace safety, customer communication, cross-border e-commerce, equipment maintenance, supplier negotiation, and entrepreneurial opportunity recognition all require language-mediated action.

At the ASEAN level, the ASEAN TVET Council Work Plan 2021-2030 emphasizes labour-market orientation, business and industry participation, skills forecasting, digital readiness, flexible training, lifelong learning, recognition of prior learning, quality assurance, mutual recognition of skills, and harmonized TVET policies (ASEAN TVET Council, 2021). These priorities indicate that a Guizhou-ASEAN vocational education model should not be exported mechanically. It must be adapted through evidence-based decisions that consider local labour markets, ASEAN qualification

frameworks, language ecology, enterprise participation, digital readiness, cost, inclusiveness, and institutional risk.

This paper therefore asks three research questions:

RQ1: What are the core dimensions of a "language + skill" synergy model for entrepreneurial capacity building in ASEAN?

RQ2: Which adaptation pathways are most suitable for transferring Guizhou's vocational education experience to ASEAN contexts?

RQ3: How can policymakers and institutions use a decision-analytic model to prioritize investments and implementation sequences?

To answer these questions, the paper proposes the Language-Skill-Enterprise Capacity Model and applies an illustrative AHP-TOPSIS framework to rank alternative implementation pathways. The contribution is methodological and practical: it translates a broad vocational education cooperation idea into a decision-support tool for ASEAN-oriented programme design.

2. Literature Review

2.1 TVET, labour-market responsiveness, and entrepreneurial capacity

TVET systems are often evaluated by their ability to connect learners with labour-market needs. However, recent international discussions emphasize that TVET should also develop transferable skills, digital readiness, entrepreneurship, lifelong learning capacity, and resilience. UNESCO, the World Bank, and ILO have argued that many TVET systems in low- and middle-income countries remain misaligned with labour-market needs and face difficulties related to learners, teachers, and provider incentives (UNESCO, World Bank, & ILO, 2023). This problem is acute in regions where economies are shifting toward digital services, green industries, advanced manufacturing, cross-border logistics, tourism, agriculture modernization, and platform-based micro-enterprise. UNESCO's current strategy for the sector makes this widened expectation explicit, positioning TVET as an instrument of employment, entrepreneurship, and just digital and green transitions rather than of labour supply alone (UNESCO, 2022).

Entrepreneurial capacity in TVET can be understood as a combination of opportunity recognition, technical problem-solving, market judgment, self-efficacy, resource mobilization, risk awareness, digital marketing, financial literacy, and network-building. Entrepreneurship education research suggests that entrepreneurial intention and behaviour are influenced by attitude, perceived behavioural control, subjective norms, and self-efficacy (Ajzen, 1991; Bandura, 1997; Krueger et al., 2000). For vocational learners, entrepreneurship is especially connected to practical skills and local market opportunities. A welding student, hospitality trainee, e-commerce learner, modern agriculture trainee, or logistics technician may become entrepreneurial not by studying entrepreneurship abstractly, but by learning how

technical skills can be converted into products, services, maintenance contracts, online sales, or small-business models. Systematic reviews of entrepreneurship education nevertheless counsel caution. The field remains dominated by intention-based designs and short measurement horizons, so evidence on actual venture creation is thinner than the volume of publication implies (Liñán & Fayolle, 2015; Pittaway & Cope, 2007), and gains in attitudes and intentions may decay unless learning is sustained and situated (Fayolle & Gailly, 2015). This paper therefore treats entrepreneurial capacity as an outcome to be built through repeated work-embedded practice rather than through a discrete course. A recent meta-analysis restricted to pre-post designs with control groups reports only small average effects of entrepreneurship education on intention and self-efficacy, with programme duration among the stronger predictors of effect size (Martínez-Gregorio et al., 2021), which further supports a sustained, work-embedded design rather than a short standalone module.

2.2 The "language + skill" logic

Language competence is often treated as a general education outcome, while vocational skills are treated as technical outcomes. The "language + skill" model challenges this separation. For ASEAN learners working with Chinese enterprises, Chinese-invested industrial parks, cross-border supply chains, tourism markets, e-commerce platforms, or regional infrastructure projects, language functions as a productive capability. It enables learners to understand equipment manuals, communicate with supervisors, negotiate with suppliers, serve customers, access digital platforms, and participate in workplace learning. Read through a situated-learning lens this is not incidental: vocational competence is acquired through legitimate participation in a community of practice, and language is the medium through which that participation is negotiated and progressively extended (Lave & Wenger, 1991).

Reviews of the field find that the effects of entrepreneurship education on entrepreneurial intention and self-efficacy are real but uneven, varying with pedagogy and context (Nabi et al., 2017; Valerio et al., 2014). Competence frameworks such as EntreComp likewise stress that entrepreneurial capability is built through applied, situated practice rather than abstract instruction (Bacigalupo et al., 2016), a claim consistent with workplace-learning theory, in which vocational competence is constituted through participation in authentic work activity (Billett, 2001). These findings motivate the industry-embedded emphasis of the model developed in this paper.

The Guizhou case demonstrates a practical version of this logic. Guizhou vocational institutions have connected language learning with e-commerce, agriculture, transportation, bridge construction, tourism, and enterprise training for ASEAN-related cooperation (China Vocational and Technical Education Network, 2024). However, language-skill integration must be localized. ASEAN countries have

different language environments, vocational qualification systems, industry structures, levels of Chinese enterprise presence, digital infrastructure, and entrepreneurship ecosystems. Therefore, the model requires adaptation rather than simple transfer.

2.3 Guizhou vocational education as an adaptable regional model

The Guizhou vocational education model relevant to this paper has four features. First, it uses China-ASEAN education cooperation platforms. The China-ASEAN Education Cooperation Week, held in Guizhou, provides an institutional channel for vocational education exchange, competitions, forums, and partnerships. Second, it emphasizes both "bringing in" and "going out" by training ASEAN students in China while exploring overseas vocational education projects, teacher training, and enterprise-linked programmes.

Third, it connects language, industry, and local development needs. Programmes such as "HSK + e-commerce" and technical training in transport or agricultural skills show that language is embedded in sector-specific skill acquisition. Fourth, it increasingly adopts a platform or workshop logic. The "Guijiang Workshop" initiative links vocational standards, capacity systems, and educational-cultural resources, creating a possible institutional form for overseas adaptation (Xinhua, 2025). These features make Guizhou a suitable case for exploring how a provincial vocational education model can support regional entrepreneurial capacity building. It should be stressed, however, that Guizhou is an instance of a wider national reform trajectory rather than a self-standing invention. Reviews of Chinese vocational education reform identify recurring priorities of teaching-practice integration, teacher capacity, and policy-driven restructuring (Zhao & Selvaratnam, 2024), while the school-enterprise cooperation on which order classes depend has itself been reformed repeatedly and unevenly since 1978 (Zhou & Xu, 2023). Any transfer therefore carries the unresolved tensions of the source system as well as its strengths.

2.4 The need for decision analysis

A key problem in adapting vocational education models is not whether cooperation is desirable, but which pathway should be prioritized under resource constraints. Policymakers may need to choose between sending ASEAN students to Guizhou, building offshore workshops, developing digital micro-credentials, co-designing enterprise order classes, or investing in trainer-of-trainers networks.

These alternatives involve multiple criteria: labour-market relevance, cost, scalability, quality assurance, language integration, entrepreneurial outcomes, industry partnership, inclusiveness, and risk. Such problems are suitable for multi-criteria decision-making methods. AHP can structure and weight decision criteria; TOPSIS can rank alternatives according to their distance from ideal and anti-ideal solutions; sensitivity analysis can test whether rankings are robust to weight changes (Hwang & Yoon, 1981; Saaty, 1980).

TOPSIS is adopted here for its transparency and its intuitive geometric logic of closeness to an ideal solution; related compromise methods such as VIKOR yield comparable rankings and could serve as robustness checks in empirical extensions (Opricovic & Tzeng, 2004). Surveys of the method's application across education, policy, and management domains confirm both its versatility and the sensitivity of its rankings to weighting and normalisation choices, which is why a sensitivity analysis is reported in Section 5.4 (Behzadian et al., 2012).

2.5 Theoretical framework: policy transfer and comparative education

Because this paper proposes moving a provincial Chinese vocational education practice into diverse ASEAN settings, it is grounded in the policy-transfer and comparative-education literatures, which supply the analytical vocabulary for studying how models travel across jurisdictions. Following Dolowitz and Marsh (2000), policy transfer is the process by which knowledge about policies, administrative arrangements, institutions, and ideas in one political setting is used to develop policies in another. Their framework directs attention to the actors involved (governments, enterprises, colleges, and transnational networks), the degree of transfer (copying, emulation, hybridisation, or inspiration), the objects transferred (goals, instruments, programmes, institutions, and ideas), and the constraints that produce uninformed, incomplete, or inappropriate transfer when a borrowed model is imported without regard to context. On this view, the Guizhou language-plus-skill model is treated not as a template to be copied, but as a source of ideas and instruments to be selectively emulated and hybridised with local ASEAN conditions.

Comparative education offers a complementary lens. Phillips and Ochs (2003) model cross-national policy borrowing as a four-stage process: cross-national attraction, decision, implementation, and internalisation or indigenisation. This sequence is useful here because it makes explicit that attraction to a foreign model in the first stage does not guarantee successful indigenisation in the fourth; a model admired abroad can still fail if it is not re-embedded in local labour markets, qualification systems, and language ecologies. Steiner-Khamsi (2004) further cautions that borrowing is often driven by the political and symbolic value of referencing a successful elsewhere rather than by evidence of local fit, which can lead to adoption of a model's rhetoric without its substance. Establishing that borrowing has in fact occurred, rather than asserting it retrospectively, is itself a recognised methodological difficulty in this literature and requires evidence of each stage of the process (Phillips & Ochs, 2004). Later work reframes the two decisive moments as reception, meaning why a foreign model becomes attractive in the borrowing system, and translation, meaning how it is reshaped once local actors take it up (Steiner-Khamsi, 2014); both are addressed in Sections 6.6 and 6.7.

Figure 1 situates the Guizhou-to-ASEAN adaptation within the four-stage policy-borrowing process and its associated transfer risks.

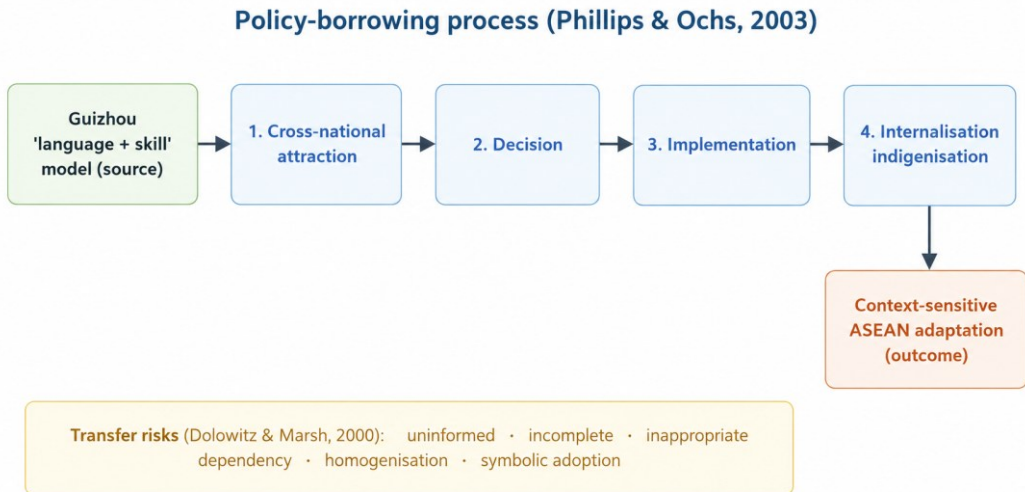


Figure 1. Policy transfer and borrowing process applied to the Guizhou-ASEAN case.

Taken together, these frameworks yield three commitments that guide the remainder of the paper. First, transfer is selective and adaptive rather than wholesale: the decision problem is which elements of the Guizhou model to borrow and how to reconfigure them, not whether to copy the model in full. Second, context is decisive: the same instrument, such as an order-class apprenticeship, can succeed in one ASEAN economy and fail in another depending on enterprise density, qualification recognition, and language ecology. Third, borrowing carries risks of dependency, homogenisation, and symbolic adoption that must be surfaced and governed rather than assumed away. The AHP-TOPSIS decision model developed below operationalises the first commitment; the country-differentiated analysis in Section 6.6 operationalises the second; and the critical appraisal in Section 6.7 addresses the third.

3. Conceptual Framework: The Language-Skill-Enterprise Capacity Model

This paper proposes the Language-Skill-Enterprise Capacity Model, abbreviated as LSE-Capacity Model. The model contains five interacting components:

1. **Language-for-work competence:** professional Chinese, local ASEAN language support, bilingual technical vocabulary, workplace communication, and intercultural pragmatics.
2. **Technical skill competence:** sector-specific skills in areas such as e-commerce, agriculture, tourism, logistics, transport, smart manufacturing, renewable energy, digital services, or equipment maintenance.

3. **Entrepreneurial competence:** opportunity recognition, business modelling, customer discovery, digital marketing, financial literacy, negotiation, risk assessment, and small-team project management.
4. **Industry-embedded learning:** order classes, internships, apprenticeships, teaching factories, enterprise mentors, real work tasks, and cross-border supply-chain exposure.
5. **Institutional support and recognition:** micro-credentials, dual certificates, credit transfer, qualification alignment, quality assurance, teacher development, and policy coordination.

The core proposition is that entrepreneurial capacity is strongest when language learning and vocational skills are integrated through industry-embedded tasks and supported by recognized credentials. This can be expressed as:

$$EC_i = f(L_i, S_i, E_i, I_i, Q_i)$$

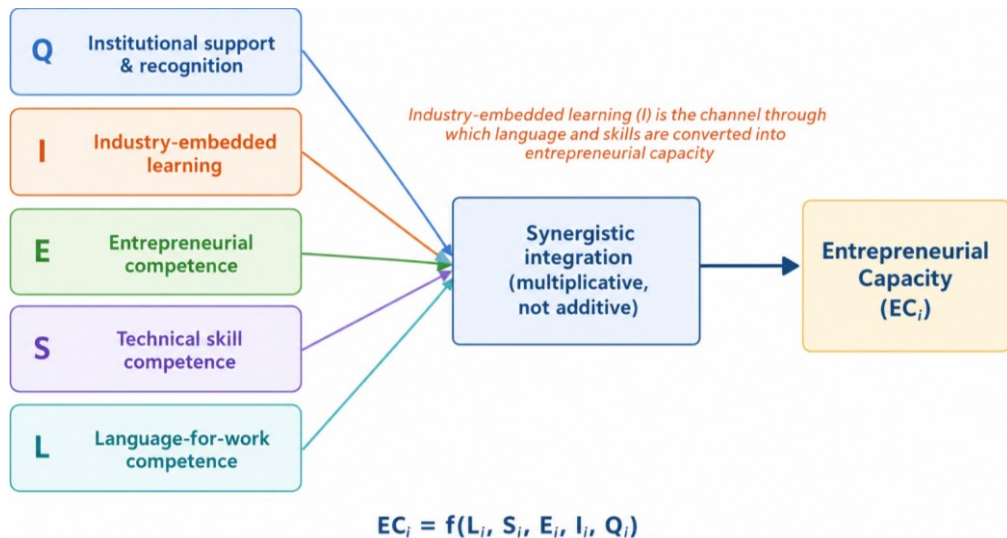


Figure 2. The Language-Skill-Enterprise (LSE) Capacity Model

Figure 2 depicts the LSE-Capacity Model and the synergistic relationship among its five components where EC_i is entrepreneurial capacity for programme i , L_i is language-for-work competence, S_i is technical skill competence, E_i is entrepreneurship learning, I_i is industry-embedded learning intensity, and Q_i is institutional quality and recognition.

The model assumes that the relationship is synergistic, not additive. Language competence has limited entrepreneurial value if it is not linked to technical work and market activity. Technical competence has limited cross-border value if learners cannot communicate in relevant workplace languages. Entrepreneurship education has limited practical value if it is separated from skills, customers, suppliers, and enterprise mentors.

4. Methodology

4.1 Research design

This study employs a comparative policy-analysis design operationalised through a multi-criteria decision-making (MCDM) framework. The approach is best characterised as theory-informed, illustrative decision analysis rather than empirical hypothesis-testing: its purpose is to structure an ill-defined transfer problem into explicit criteria, alternatives, and a transparent ranking logic that decision-makers can later populate with primary data. This design is appropriate for three reasons. First, the research questions are prescriptive and comparative, asking which adaptation pathway should be prioritised under resource constraints, and MCDM methods are purpose-built for ranking alternatives against weighted criteria. Second, a comparative policy-analysis frame connects the decision model to the policy-transfer and comparative-education theory set out in Section 2.5, ensuring that the criteria reflect the actors, objects, and contextual constraints those theories identify. Third, because primary expert data are not yet available, an explicitly illustrative model allows the logic to be scrutinised and reused before empirical elicitation, a limitation acknowledged in Sections 5 and 9. The method includes four steps:

1. **Context synthesis.** Evidence from Guizhou vocational education cooperation, China-ASEAN vocational cooperation, ASEAN TVET priorities, and entrepreneurship education literature is synthesized.
2. **Criteria construction.** Eight decision criteria are developed to evaluate alternative adaptation pathways.
3. **Alternative design.** Five implementation alternatives are formulated based on current cooperation patterns and feasible TVET delivery modes.
4. **Illustrative AHP-TOPSIS analysis.** Criteria weights and alternative ratings are used to demonstrate how decision-makers can rank implementation pathways. The numerical values are illustrative and should be replaced by expert elicitation in empirical applications.

4.2 Decision criteria

The following eight criteria are proposed to evaluate adaptation alternatives:

Table 1. Decision criteria for adapting the Guizhou vocational education model in ASEAN

Code	Criterion	Meaning
C1	Labour-market relevance	Alignment with ASEAN industry demand, SME needs, and employment/self-employment opportunities
C2	Language-skill integration	Degree to which language learning is embedded in technical and entrepreneurial tasks

Code	Criterion	Meaning
C3	Entrepreneurial formation	Ability to develop opportunity recognition, self-efficacy, business modelling, and venture practice
C4	Local adaptability and inclusion	Fit with local language ecology, learner background, access, gender inclusion, and community needs
C5	Industry partnership	Intensity of enterprise participation, mentorship, internships, and order-class mechanisms
C6	Scalability and cost-efficiency	Ability to expand across regions at reasonable cost
C7	Quality assurance and recognition	Credential recognition, standards alignment, assessment validity, and institutional credibility
C8	Risk governance	Ability to manage political, cultural, financial, operational, and sustainability risks

4.3 Adaptation alternatives

Five alternatives are evaluated:

Table 2. Adaptation alternatives

Code	Alternative	Description
A1	Guizhou-based immersion college	ASEAN students study in Guizhou institutions, receiving Chinese-language training, technical instruction, cultural experience, and enterprise visits.
A2	Offshore Guijiang Workshop	Guizhou institutions and ASEAN partners co-build local training hubs that deliver bilingual skills programmes, entrepreneurship modules, and micro-credentials.
A3	Enterprise order-class apprenticeship	Guizhou institutions, ASEAN colleges, and Chinese/ASEAN enterprises jointly run order classes, apprenticeships, teaching factories, and enterprise mentor programmes.
A4	Digital micro-credential platform	Online or blended short courses provide Chinese-for-work, technical modules, entrepreneurship bootcamps, and digital badges.
A5	Trainer-of-trainers and standards network	Guizhou and ASEAN institutions jointly train teachers, align curriculum standards, develop bilingual teaching materials, and support mutual recognition.

4.4 TOPSIS procedure

The TOPSIS method follows six steps. First, construct the decision matrix:

$$X = [x_{ij}], \quad i = 1, \dots, m; \quad j = 1, \dots, n$$

where x_{ij} is the performance score of alternative i on criterion j . Second, normalize the matrix:

$$r_{ij} = x_{ij} / \sqrt{\sum_i x_{ij}^2}$$

Third, calculate the weighted normalized matrix:

$$v_{ij} = w_j r_{ij}$$

Fourth, identify the positive ideal solution A^+ and negative ideal solution A^- . Fifth, calculate distance from ideal and anti-ideal solutions:

$$D_{i+} = \sqrt{\sum_j (v_{ij} - v_{j+})^2}$$

$$D_{i-} = \sqrt{\sum_j (v_{ij} - v_{j-})^2}$$

Finally, calculate the closeness coefficient:

$$CC_i = D_{i-} / (D_{i+} + D_{i-})$$

The alternative with the highest CC_i is ranked first.

5. Illustrative Application

5.1 Criteria weights

The illustrative weights are shown in Table 3. These weights reflect the paper's theoretical assumption that labour-market relevance, entrepreneurial formation, industry partnership, and language-skill integration are the most important criteria for ASEAN adaptation. Figure 3 visualises the criteria weights reported in Table 3.

Table 3. Illustrative criteria weights

Criterion	Weight
C1 Labour-market relevance	0.18
C2 Language-skill integration	0.14
C3 Entrepreneurial formation	0.16
C4 Local adaptability and inclusion	0.12
C5 Industry partnership	0.15
C6 Scalability and cost-efficiency	0.09
C7 Quality assurance and recognition	0.10
C8 Risk governance	0.06
Total	1.00

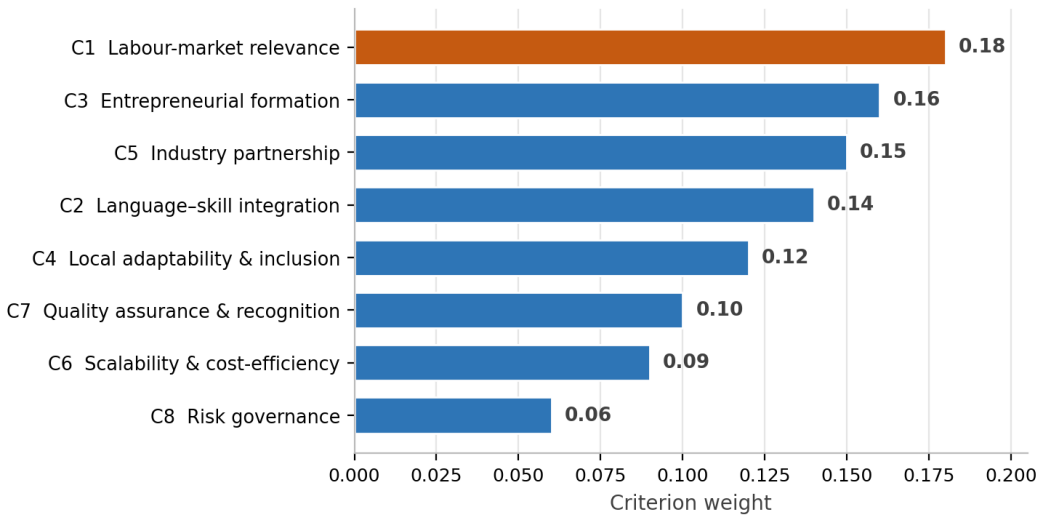


Figure 3. Illustrative criteria weights.

5.2 Illustrative decision matrix

All criteria are benefit criteria, rated from 1 to 5. Alternative codes follow Table 2. The ratings in Table 4 are illustrative and can be replaced by expert-panel or field-survey data. Figure 4 presents the resulting TOPSIS ranking of the five adaptation pathways.

Table 4. Illustrative decision matrix

Alt.	C1	C2	C3	C4	C5	C6	C7	C8
A1	4	5	3	2	3	2	4	3
A2	4	4	4	5	4	3	4	4
A3	5	3	5	4	5	3	3	3
A4	3	3	3	5	2	5	2	4
A5	3	4	4	4	3	4	5	5

5.3 TOPSIS ranking

Table 5. TOPSIS ranking of adaptation pathways

Rank	Alternative	TOPSIS closeness coefficient
1	A3 Enterprise order-class apprenticeship	0.630
2	A2 Offshore Guijiang Workshop	0.600
3	A5 Trainer-of-trainers and standards network	0.486
4	A1 Guizhou-based immersion college	0.383
5	A4 Digital micro-credential platform	0.358

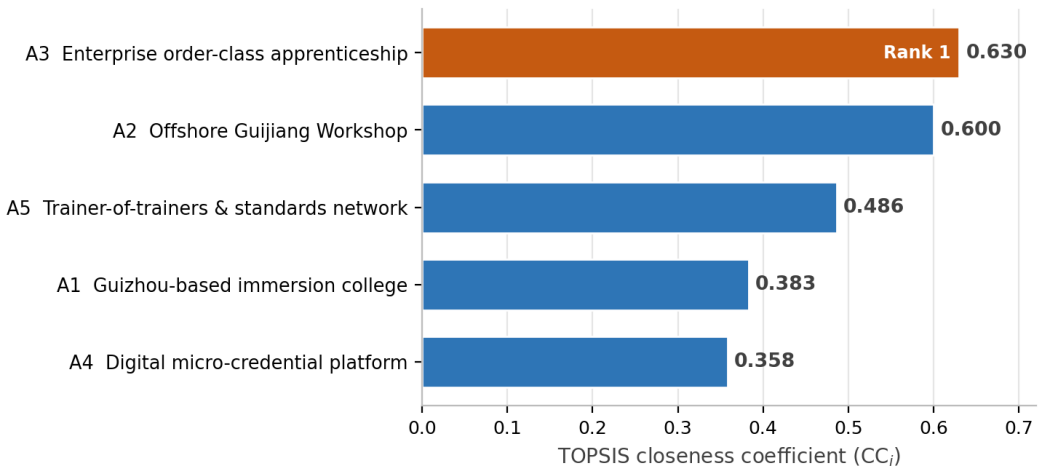


Figure 4. TOPSIS ranking of adaptation pathways (closeness coefficients).

The ranking indicates that the enterprise order-class apprenticeship model is the strongest pathway when the objective is entrepreneurial capacity building. It performs well because it directly connects learners with enterprise demand, real tasks, customer needs, production/service processes, and workplace mentors. It also offers a strong basis for entrepreneurial learning because learners can observe how firms identify problems, control costs, manage customers, and convert technical capability into business value.

The offshore Guijiang Workshop model ranks second. Its advantage lies in local adaptability and institutional presence. Unlike Guizhou-based immersion, it reduces relocation barriers for ASEAN learners and can be embedded in local colleges, industrial parks, or community training centres. It also provides a visible platform for bilingual curriculum, micro-credentials, and enterprise collaboration.

The trainer-of-trainers and standards network ranks third. Although it may not produce immediate learner-level entrepreneurial outcomes, it is important for sustainability, teacher capacity, curriculum alignment, and recognition of skills. It should therefore function as a supporting infrastructure for A2 and A3. The Guizhou-based immersion college is valuable for intensive language acquisition and cultural understanding, but it is less scalable and may have lower local adaptability if used alone. The digital micro-credential platform is scalable and inclusive, but its entrepreneurial impact may be weaker unless paired with mentors, enterprise tasks, offline practice, and assessment.

5.4 Sensitivity analysis

A simple sensitivity analysis was conducted by perturbing all criterion weights by +/- 20% and normalizing the results. In 10,000 simulated runs, A3 remained first in about 92.7% of scenarios, while A2 ranked first in about 7.3% of scenarios. A5 remained

consistently third. This suggests that the priority order is reasonably robust under moderate changes in weights.

6. Discussion

6.1 Why enterprise order-class apprenticeship is the strongest pathway

The central insight is that entrepreneurial capacity is best developed through situated learning. Entrepreneurship cannot be reduced to business-plan writing. For vocational learners, entrepreneurial learning occurs when they understand how a technical skill solves a real market problem. Enterprise order-class apprenticeships expose learners to production schedules, customer complaints, logistics constraints, maintenance needs, quality control, pricing, inventory, and service models. These experiences are directly relevant to venture creation and self-employment. This reading is consistent with effectuation theory, in which entrepreneurial action begins from the means, identity, and networks an actor already controls rather than from a pre-specified goal (Sarasvathy, 2001); an order-class apprenticeship is precisely a mechanism for enlarging the means and networks available to a vocational learner.

For ASEAN adaptation, the order-class model can be localized in sectors where Chinese and ASEAN enterprises already cooperate. Examples include cross-border e-commerce, agricultural processing, smart logistics, tourism services, renewable energy maintenance, electric vehicle service, construction technology, and equipment operation. Language modules should be designed around these sectors. For instance, e-commerce learners should study Chinese for product description, online customer service, livestream selling, supplier negotiation, and platform rules. Logistics learners should study Chinese for shipping documents, warehouse coordination, customs terms, and safety instructions.

6.2 Why the offshore workshop should complement apprenticeship

The offshore Guijiang Workshop model is strategically important because it allows the Guizhou model to be localized. A workshop can combine classrooms, simulation rooms, digital platforms, local enterprise tasks, and bilingual teaching materials. It can also connect multiple stakeholders: Guizhou institutions, ASEAN vocational colleges, enterprises, local governments, industry associations, and certification bodies.

However, an offshore workshop should not become a symbolic overseas campus. Its value depends on whether it can support real entrepreneurial learning. Therefore, each workshop should include a sector-specific bilingual curriculum, enterprise mentors from both Chinese and ASEAN firms, student venture or project studios, micro-credential assessment, local SME challenge projects, and incubation support for graduates.

6.3 Repositioning language as entrepreneurial infrastructure

Language learning in this model is not only a communication skill. It is entrepreneurial infrastructure. It allows learners to access suppliers, equipment

knowledge, manuals, customers, digital platforms, and cross-border networks. A learner who can communicate across Chinese and local ASEAN business environments may identify opportunities that monolingual learners cannot see.

This means that curriculum designers should move from "general Chinese course + technical course" to task-integrated bilingual modules. Examples are shown in Table 6.

Table 6. Examples of task-integrated bilingual entrepreneurship modules

Sector	Language-skill integration task	Entrepreneurial capacity outcome
E-commerce	Write bilingual product pages and respond to customers	Digital sales and customer discovery
Agriculture	Explain processing standards and negotiate with buyers	Value-chain upgrading
Tourism	Design bilingual tour scripts and service packages	Service innovation
Logistics	Prepare bilingual shipping and warehouse documents	Cross-border operations
Equipment maintenance	Read manuals and communicate repair plans	Technical service entrepreneurship
Renewable energy	Explain installation and safety procedures	Green enterprise services

6.4 Quality assurance and recognition

ASEAN adaptation requires credible credentials. The ASEAN TVET Council Work Plan emphasizes quality assurance, recognition of prior learning, mutual recognition of skills, and harmonization of TVET frameworks (ASEAN TVET Council, 2021). Therefore, Guizhou-ASEAN programmes should avoid informal training that lacks recognition. Instead, they should develop stackable micro-credentials, dual certificates, credit transfer pathways, and shared assessment rubrics. International evidence on alternative credentials indicates that micro-credentials acquire labour-market value only when their learning outcomes, assessment methods, and quality assurance are transparent enough for employers and awarding bodies to interpret (Kato et al., 2020). In the ASEAN case the natural anchor for that transparency is the ASEAN Qualifications Reference Framework and the national referencing process attached to it, which allows a bilingual micro-credential to be positioned against an agreed level descriptor rather than left as an institutional artefact (ASEAN Secretariat, 2020).

A practical model is a three-level credential system. Level 1 is a task certificate, where learners complete a short bilingual work task, such as product listing, equipment inspection, or customer-service simulation. Level 2 is an occupational module certificate, where learners complete a cluster of tasks, such as e-commerce operation, agricultural processing, or logistics coordination. Level 3 is an entrepreneurship

project certificate, where learners complete a market-based project, including business model, prototype or service, customer validation, financial plan, and reflection.

6.5 Policy implications

For Guizhou policymakers, the results imply that vocational education internationalization should be linked to enterprise internationalization. The model should follow the principle of "education follows industry, skills serve enterprise, and entrepreneurship serves local development." For ASEAN policymakers, the model provides a way to strengthen TVET without importing a foreign curriculum wholesale. ASEAN partners can localize sectors, language balance, certification, teacher training, and enterprise participation.

For vocational institutions, the model implies that international cooperation offices, language departments, technical departments, entrepreneurship centres, and enterprise partners must work together. A fragmented institutional structure will weaken the synergy. For enterprises, the model offers a talent pipeline and a local supplier-development mechanism. Firms should participate not only as employers, but also as co-designers of tasks, mentors, assessors, and incubator partners.

6.6 Country-differentiated adaptation: illustrative cases of Vietnam, Indonesia, and the Philippines

The preceding analysis, like much writing on China-ASEAN cooperation, risks treating ASEAN as a single market. It is not. ASEAN's member states differ sharply in industrial structure, Chinese-enterprise presence, TVET governance, qualification recognition, and language ecology, and the policy-transfer literature warns that ignoring such differences is a principal cause of failed borrowing (Dolowitz & Marsh, 2000; Phillips & Ochs, 2003). To make the adaptation argument concrete, this section disaggregates the analysis through three contrasting cases, chosen because they span different manufacturing intensities, archipelagic versus contiguous geographies, and distinct colonial-linguistic legacies (UNESCO-UNEVOC International Centre, n.d.). The cases are illustrative rather than exhaustive; the aim is to show how the same model would be reconfigured, not to rank the countries.

Vietnam combines a rapidly industrialising, export-oriented manufacturing base with dense East Asian and Chinese investment in electronics, textiles, and cross-border logistics, and a national TVET system undergoing reform toward closer enterprise linkage. These conditions make Vietnam the strongest candidate for the top-ranked enterprise order-class apprenticeship pathway (A3): enterprise density supplies the real work tasks on which situated entrepreneurial learning depends, and Chinese-language-for-work has direct labour-market value inside Chinese-invested industrial parks. In Phillips and Ochs's (2003) terms, attraction and decision are relatively straightforward; the binding constraint is internalisation, that is, aligning bilingual

micro-credentials with Vietnam's national qualifications framework so that they carry recognised value.

Indonesia presents a contrasting archipelagic geography, a very large and heterogeneous youth population, a services- and resource-heavy economy, and pronounced regional disparities in digital infrastructure and teacher supply. Here the offshore Guijiang Workshop (A2), complemented by the digital micro-credential platform (A4), is likely to fit better than intensive immersion, because relocation to China is costly for most learners and provision must reach dispersed islands. Language balance also shifts: Bahasa Indonesia and English dominate much cross-border commerce, so Chinese-for-work should be positioned as one option among several rather than the default. The principal policy-transfer risk is dependency, namely building workshops that rely on a small pool of visiting Guizhou trainers, which points to early investment in the trainer-of-trainers network (A5).

The Philippines is distinctive for its strong English-medium tradition, an established competency-based TVET system administered by TESDA, and a labour market heavily shaped by overseas employment and business-process outsourcing. Chinese-enterprise presence is comparatively thinner and more politically sensitive than in Vietnam. Consequently, the language component of the model cannot assume Chinese primacy; the synergy is better realised by embedding language-for-work, including but not limited to Chinese, within TESDA's existing competency standards and stackable-credential architecture. The comparative-education caution against symbolic borrowing (Steiner-Khamsi, 2004) is especially pertinent here: a Guizhou-branded programme that did not map onto TESDA recognition would risk adoption in name only.

Table 8. Country-differentiated adaptation of the LSE-Capacity Model (illustrative)

Dimension	Vietnam	Indonesia	Philippines
Economic and industrial base	Export manufacturing, electronics, cross-border logistics	Services and resources; large, dispersed domestic market	Services, business-process outsourcing, overseas employment
Chinese-enterprise linkage	High (industrial parks and supply chains)	Moderate and regionally uneven	Thinner and more politically sensitive
Dominant work languages	Vietnamese; Chinese within invested firms	Bahasa Indonesia; English	English; Filipino
TVET governance anchor	National qualifications framework under active reform	Dispersed provision; marked regional disparities	TESDA competency-based, stackable-credential system

Dimension	Vietnam	Indonesia	Philippines
Best-fit pathway(s)	A3 enterprise order-class apprenticeship	A2 offshore workshop plus A4 digital micro-credentials	Embed A3 and A5 within TESDA competency standards
Principal policy-transfer risk	Weak recognition of bilingual micro-credentials	Dependency on a small pool of visiting trainers	Symbolic or brand-only adoption without local mapping

Table 8 summarises how the model's emphasis shifts across the three cases. The point is analytical rather than merely descriptive: the ranking produced in Section 5 is contingent on context. Where enterprise density is high and Chinese-investment linkage is strong, as in Vietnam, the apprenticeship pathway dominates; where geography and infrastructure are dispersed, as in Indonesia, workshop-plus-digital provision is more feasible; and where an English-medium, competency-based system already exists, as in the Philippines, the model must be embedded in local recognition structures rather than exported as a brand. A single ASEAN adaptation strategy is therefore inappropriate, and the contribution of the LSE-Capacity Model is precisely that it can be re-weighted for each national context.

6.7 Critical appraisal: limitations of the Guizhou model and the risks of policy transfer

The analysis so far has treated the Guizhou model as a promising source of ideas. A balanced assessment must also acknowledge its limitations in its home context and the risks that arise when it is transferred. Three home-context caveats deserve emphasis. First, much of the available evidence on Guizhou's language-plus-skill programmes is descriptive and programme-generated rather than independently evaluated; reported successes have rarely been subjected to rigorous outcome measurement, so the model's effectiveness even at home remains partly asserted rather than demonstrated. Second, the model has developed within a specific institutional environment of strong state coordination, government-to-government education platforms, and state-linked enterprise participation that cannot be assumed in ASEAN settings with different state capacity and public-private relations. Third, the model's reliance on Chinese-language acquisition reflects the gravitational pull of Chinese investment; where that pull is weaker, the language rationale is correspondingly weaker.

The policy-transfer literature identifies several failure modes that apply directly. Dolowitz and Marsh (2000) distinguish uninformed transfer, which borrows without sufficient knowledge of how a model works; incomplete transfer, which imports surface features but not the enabling institutions; and inappropriate transfer, which ignores contextual differences. Each is a live risk for a Guizhou-ASEAN programme: order-class apprenticeships copied without the enterprise-mentor and quality-assurance infrastructure that make them work would be incomplete, while

workshops established for symbolic visibility rather than a learning function would be inappropriate. Two further risks are salient. Dependency arises when local provision cannot function without continuing Chinese staffing, materials, or funding; homogenisation arises when a single imported curriculum crowds out locally developed vocational pathways that are better matched to domestic labour markets. There is also a political-economy dimension, since transnational education cooperation is not neutral and partner governments may weigh geopolitical considerations alongside educational ones. A systematic review of TVET system governance likewise concludes that outcomes depend less on curriculum content than on how responsibilities are distributed among the state, providers, and employers and on the strength of the institutions coordinating them (Mende et al., 2025); on that reading, the transferable element of the Guizhou model is its coordination architecture, which is precisely the part most difficult to reproduce abroad.

These caveats do not defeat the proposal, but they reframe it. They imply that adaptation should be incremental and evaluated, beginning with small piloted order classes whose outcomes are independently measured, as set out in Section 7; that transfer should be hybrid rather than wholesale, retaining local ownership of curriculum and certification; and that the trainer-of-trainers and standards network (A5), although ranked third on immediate entrepreneurial impact, is in fact the principal safeguard against dependency and symbolic adoption and should therefore be sequenced early. In short, the model is best understood not as an exportable solution but as a negotiated, context-sensitive process of policy borrowing whose risks must be actively governed.

7. Implementation Roadmap

A phased roadmap is proposed for institutional and policy implementation.

7.1 Phase 1: Diagnostic alignment

Institutions should conduct labour-market and learner-needs analysis in the target ASEAN country. The diagnostic should identify priority sectors, enterprise demand, learner language levels, available teachers, digital access, qualification requirements, and entrepreneurship support resources.

7.2 Phase 2: Co-design of curriculum

Guizhou and ASEAN partners should co-design bilingual task modules. Each module should include technical skill outcomes, language-for-work outcomes, entrepreneurial competence outcomes, enterprise task scenarios, assessment rubrics, and micro-credential requirements.

7.3 Phase 3: Pilot order-class apprenticeship

The first pilot should focus on one or two sectors with clear enterprise demand. A recommended pilot size is 30-60 learners per sector, with at least three enterprise

partners and two institutional partners. The pilot should include workplace learning, venture simulation, and bilingual assessment.

7.4 Phase 4: Build offshore workshop capacity

After pilot validation, partners can establish an offshore Guijiang Workshop. The workshop should include training equipment, bilingual teaching materials, local teacher development, enterprise mentor pools, digital learning resources, and incubation support.

7.5 Phase 5: Scale through trainer-of-trainers and standards network

Scaling should occur through teacher training, shared standards, digital resources, quality assurance, and regional communities of practice. The trainer-of-trainers network can help avoid dependence on a small number of Guizhou teachers.

7.6 Phase 6: Evaluation and continuous improvement

Evaluation should track employment, self-employment, income change, venture creation, technical certification, language proficiency, employer satisfaction, learner self-efficacy, and programme sustainability.

8. Evaluation Indicators

The indicators in Table 7 are proposed for future empirical studies and programme monitoring.

Table 7. Evaluation indicators for future empirical research

Dimension	Indicator
Language competence	Professional vocabulary test, workplace communication assessment, bilingual task performance
Technical competence	Skills test, enterprise task completion, certification pass rate
Entrepreneurial competence	Opportunity-recognition score, business model quality, financial literacy test, entrepreneurial self-efficacy
Employment outcome	Job placement, apprenticeship completion, promotion, employer satisfaction
Entrepreneurship outcome	Micro-venture creation, sales prototype, customer validation, participation in incubation
Inclusion	Female participation, rural learner participation, affordability, access to digital resources
Institutional quality	Teacher training completion, curriculum alignment, credit recognition, QA audit
Sustainability	Enterprise co-funding, repeated enrolment, partner retention, local teacher replacement rate

9. Limitations and Future Research

This paper is a conceptual and illustrative decision-analytic study. Its main limitation is that the TOPSIS scores are not based on primary expert survey data. Future research should collect data from Guizhou vocational institutions, ASEAN partner

colleges, enterprises, policymakers, teachers, and learners. A Delphi process can refine criteria; AHP can generate expert-derived weights; DEMATEL can identify causal relationships among criteria; TOPSIS, VIKOR, or PROMETHEE can rank alternatives; and longitudinal tracking can evaluate actual entrepreneurial outcomes.

Future studies should also compare country-specific adaptation. The model may differ between Cambodia, Laos, Thailand, Malaysia, Indonesia, and Vietnam because their industrial structures, language environments, Chinese enterprise presence, and TVET qualification systems differ. In addition, future research should test whether language-skill integration improves entrepreneurial self-efficacy more effectively than language-only or skills-only training.

10. Conclusion

This paper argues that the Guizhou vocational education model can contribute to ASEAN entrepreneurial capacity building when adapted as a language-skill-enterprise synergy rather than exported as a fixed curriculum. The proposed LSE-Capacity Model shows that language competence, technical competence, entrepreneurship education, industry-embedded learning, and institutional recognition must be integrated.

The illustrative AHP-TOPSIS analysis suggests that enterprise order-class apprenticeship is the strongest implementation pathway, followed by offshore Guijiang Workshop and trainer-of-trainers standards network. The results highlight that entrepreneurial capacity is most likely to emerge when learners engage in real work tasks, communicate across languages, understand market problems, and receive recognized credentials.

For policymakers and vocational institutions, the practical implication is clear: the future of China-ASEAN vocational education cooperation should move from exchange-based cooperation to decision-supported capacity building. A well-designed "language + skill" model can help ASEAN learners become not only employable workers, but also multilingual technical entrepreneurs capable of serving local development and cross-border economic cooperation.

Declarations

Data availability: All data supporting the findings of this study, namely the illustrative criteria weights and decision matrix, are contained within the article (Tables 3 and 4). No primary dataset was generated or analysed in this conceptual study.

Conflict of interest: The author declares that there is no conflict of interest.

Funding: This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

References

- [1] Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- [2] ASEAN Secretariat. (2020). *ASEAN qualifications reference framework: Referencing guidelines*. ASEAN Secretariat.
- [3] ASEAN TVET Council. (2021). *ASEAN TVET Council Work Plan 2021–2030*.
- [4] Bacigalupo, M., Kampylis, P., Punie, Y., & Van den Brande, G. (2016). *EntreComp: The entrepreneurship competence framework*. Publications Office of the European Union. <https://doi.org/10.2791/593884>
- [5] Bandura, A. (1997). *Self-efficacy: The exercise of control*. W. H. Freeman.
- [6] Behzadian, M., Otaghsara, S. K., Yazdani, M., & Ignatius, J. (2012). A state-of-the-art survey of TOPSIS applications. *Expert Systems with Applications*, 39(17), 13051–13069. <https://doi.org/10.1016/j.eswa.2012.05.056>
- [7] Billett, S. (2001). *Learning in the workplace: Strategies for effective practice*. Allen & Unwin.
- [8] China Daily Hong Kong. (2025). *Educational bonds with ASEAN strengthened*.
- [9] China Vocational and Technical Education Network. (2024). *Report on Guizhou vocational education cooperation programmes for China–ASEAN vocational training*.
- [10] Dolowitz, D. P., & Marsh, D. (2000). Learning from abroad: The role of policy transfer in contemporary policy-making. *Governance*, 13(1), 5–23. <https://doi.org/10.1111/0952-1895.00121>
- [11] Fayolle, A., & Gailly, B. (2015). The impact of entrepreneurship education on entrepreneurial attitudes and intention: Hysteresis and persistence. *Journal of Small Business Management*, 53(1), 75–93. <https://doi.org/10.1111/jsbm.12065>
- [12] Hwang, C. L., & Yoon, K. (1981). *Multiple attribute decision making: Methods and applications*. Springer.
- [13] Kato, S., Galán-Muros, V., & Weko, T. (2020). *The emergence of alternative credentials* (OECD Education Working Paper No. 216). OECD Publishing. <https://doi.org/10.1787/b741f39e-en>
- [14] Krueger, N. F., Reilly, M. D., & Carsrud, A. L. (2000). Competing models of entrepreneurial intentions. *Journal of Business Venturing*, 15(5–6), 411–432. [https://doi.org/10.1016/S0883-9026\(98\)00033-0](https://doi.org/10.1016/S0883-9026(98)00033-0)
- [15] Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511815355>
- [16] Liñán, F., & Fayolle, A. (2015). A systematic literature review on entrepreneurial intentions: Citation, thematic analyses, and research agenda. *International Entrepreneurship and Management Journal*, 11(4), 907–933. <https://doi.org/10.1007/s11365-015-0356-5>

- [17] Martínez-Gregorio, S., Badenes-Ribera, L., & Oliver, A. (2021). Effect of entrepreneurship education on entrepreneurship intention and related outcomes in educational contexts: A meta-analysis. *The International Journal of Management Education*, 19(3), Article 100545. <https://doi.org/10.1016/j.ijme.2021.100545>
- [18] Mende, C., Oswald-Egg, M. E., & Caves, K. (2025). Vocational education and training (VET) system governance: A systematic literature review. *Journal of Vocational Education & Training*, 77(5), 1419–1453. <https://doi.org/10.1080/13636820.2025.2461586>
- [19] Nabi, G., Liñán, F., Fayolle, A., Krueger, N., & Walmsley, A. (2017). The impact of entrepreneurship education in higher education: A systematic review and research agenda. *Academy of Management Learning & Education*, 16(2), 277–299. <https://doi.org/10.5465/amle.2015.0026>
- [20] Opricovic, S., & Tzeng, G. H. (2004). Compromise solution by MCDM methods: A comparative analysis of VIKOR and TOPSIS. *European Journal of Operational Research*, 156(2), 445–455. [https://doi.org/10.1016/S0377-2217\(03\)00020-1](https://doi.org/10.1016/S0377-2217(03)00020-1)
- [21] Phillips, D., & Ochs, K. (2003). Processes of policy borrowing in education: Some explanatory and analytical devices. *Comparative Education*, 39(4), 451–461. <https://doi.org/10.1080/0305006032000162020>
- [22] Phillips, D., & Ochs, K. (2004). Researching policy borrowing: Some methodological challenges in comparative education. *British Educational Research Journal*, 30(6), 773–784. <https://doi.org/10.1080/0141192042000279495>
- [23] Pittaway, L., & Cope, J. (2007). Entrepreneurship education: A systematic review of the evidence. *International Small Business Journal*, 25(5), 479–510. <https://doi.org/10.1177/0266242607080656>
- [24] Saaty, T. L. (1980). *The analytic hierarchy process*. McGraw-Hill.
- [25] Sarasvathy, S. D. (2001). Causation and effectuation: Toward a theoretical shift from economic inevitability to entrepreneurial contingency. *Academy of Management Review*, 26(2), 243–263. <https://doi.org/10.5465/amr.2001.4378020>
- [26] Steiner-Khamsi, G. (Ed.). (2004). *Lessons from elsewhere: The politics of educational borrowing and lending*. Teachers College Press.
- [27] Steiner-Khamsi, G. (2014). Cross-national policy borrowing: Understanding reception and translation. *Asia Pacific Journal of Education*, 34(2), 153–167. <https://doi.org/10.1080/02188791.2013.875649>
- [28] UNESCO. (2022). *Transforming technical and vocational education and training for successful and just transitions: UNESCO strategy 2022–2029*. UNESCO.
- [29] UNESCO-UNEVOC International Centre. (n.d.). *TVET country profiles*. UNESCO.
- [30] UNESCO, World Bank, & ILO. (2023). *Building better formal TVET systems: Principles and practice in low- and middle-income countries*. UNESCO.
- [31] Valerio, A., Parton, B., & Robb, A. (2014). *Entrepreneurship education and training programs around the world: Dimensions for success*. World Bank.

- [32] Xinhua. (2024). *China and ASEAN strengthen vocational education cooperation.*
- [33] Xinhua. (2025). *Guijiang Workshop innovates China–ASEAN education cooperation.*
- [34] Zhao, D., & Selvaratnam, D. P. (2024). A systematic literature review on the reform of vocational education in China. *Cogent Education*, 11(1), Article 2343525. <https://doi.org/10.1080/2331186X.2024.2343525>
- [35] Zhou, Y., & Xu, G. (2023). Vocational school–enterprise cooperation in China: A review of policy reforms, 1978–2022. *ECNU Review of Education*, 6(3), 433–450. <https://doi.org/10.1177/20965311231167895>