

Internship as a Catalyst for Workforce Development: A Thematic Synthesis and the Case of “Passage to ASEAN”

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Abstract

Internships are widely promoted as a response to workforce skill gaps, yet they are often examined as isolated educational experiences rather than as components of regional workforce systems. This study addresses this gap by examining how internships can function as ecosystem-level mechanisms for workforce development. Drawing on a comprehensive literature review, the research proposes the Regional Internship Ecosystem Assessment Framework (RIEAF), which integrates institutional capacity, experiential design, and strategic outcomes through a continuous feedback loop. The framework is applied to a qualitative case study of Passage to ASEAN (P2A), using documentary analysis and 18 semi-structured interviews. The findings indicate that P2A supports professional identity formation, technological adaptability, and cross-border employability, demonstrating the potential of regional internship networks to generate meaningful workforce outcomes. However, the transition from student mobility to coordinated workforce deployment remains largely informal in the absence of coordinated institutional mechanisms. The study, therefore, highlights the need for system-level mechanisms that capture and validate internship project portfolios and graduate competencies, enabling coordinated talent deployment and long-term workforce sustainability.

Keywords: Internship Ecosystems, Graduate Employability, Industry–University Alignment, Workforce Development, Curriculum Responsiveness.

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1. Introduction

In an increasingly interconnected global economy, workforce development has shifted from a focus on static academic credentials to dynamic, practical adaptability. A persistent "skills gap" between higher education outcomes and industry expectations remains a systemic challenge, particularly as rapid technological advancements reshape traditional sectors [1]. This is especially evident in service and tourism-oriented economies, where the integration of smart technologies requires a workforce capable of navigating complex, tech-driven environments [2]. Consequently, higher education institutions are under pressure to move beyond passive

instruction toward experiential learning models that directly enhance employability.

Internships have emerged as a critical bridge in this ecosystem. Beyond merely acquiring technical proficiency, internships are fundamental mechanisms for fostering "transversal skills", such as problem-solving and adaptability, which are often underdeveloped in traditional classroom settings [3]. Moreover, the value of internships extends to the psychological dimension of professional growth. Recent research in the aviation service sector indicates that positive internship experiences are decisive in shaping a student's "professional identity," significantly influencing their motivation and attitude toward their future careers [4]. Furthermore, well-structured internship programs have

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proven effective in building diverse and inclusive workforces, providing equitable access to career pathways for students from varied backgrounds [5].

Despite the recognized value of practical training [6], much of the existing literature remains fragmented, often confined to specific national contexts or single disciplines like medicine. There is a lack of comprehensive frameworks that link domestic internship experiences to broader regional workforce strategies. As industries become more global, there is a critical need for educational systems that foster global citizenship and cross-cultural competence [7–11].

To address this gap, this study presents a comprehensive literature review, constructing a unified framework for understanding how internships catalyze workforce development. This framework is then applied to the case of "Passage to ASEAN" (P2A), a network of ASEAN universities. The P2A case study illustrates how regional internship mobility can transcend borders, creating a cohesive, skilled, and culturally agile workforce ready for the demands of the ASEAN Economic Community.

2. Thematic synthesis and framework development

To construct a comprehensive and theoretically grounded framework for regional workforce development, this study reviews relevant literature across multiple disciplines. Drawing upon "Human Capital Theory" to understand skill acquisition and "Institutional Theory" to analyze organizational capacity, we categorize the findings into four structural pillars: technological adaptation, professional socialization, institutional capacity, and strategic labor mobility.

2.1. Bridging the digital gap through experiential learning

The rapid acceleration of Industry 4.0 has created a profound disconnect between academic training and the digital agility required by modern economies. From the perspective of Human Capital Theory, the value of a graduate is increasingly defined by their ability to operate within complex technological systems. In the ASEAN service sector, the rise of "Smart Tourism" and machine learning applications demands a workforce capable of navigating data-driven ecosystems [2]. However, Adams et al. (2024) argue that traditional university curricula often suffer from a systemic latency period, failing to keep pace with these industrial innovations.

Internships serve as a critical mechanism to bridge this gap by offering "customizable experiential learning." McInnes et al. demonstrate that high-quality placements allow students to access bleeding-edge technologies, such as high-performance computing, that are often financially unfeasible for standard university classrooms [5]. This exposure is not merely additive but transformative. Furthermore, Brandt et al. emphasize that internships must be flexible enough to support

diverse career outcomes. Their longitudinal analysis suggests that rigid training models fail to maximize human capital, whereas customizable pathways enable students to explore roles ranging from academia to non-profit sectors [12]. Recent evidence also suggests that even virtual internships, when structured with clear pedagogical goals, can successfully foster leadership and technical confidence in geographically dispersed teams, validating the efficacy of remote workforce preparation [13].

2.2. Professional socialization and identity transformation

Internships are not merely about technical skill transfer; they are psychological processes where students transition into "becoming" professionals. This phenomenon aligns with "Social Cognitive Career Theory", suggesting that self-efficacy is built through direct performance accomplishments. Empirical studies in aviation services indicate that the quality of the internship experience is the strongest predictor of a student's professional identity and intrinsic motivation [4]. For transfer students or those from underrepresented backgrounds, these programs provide essential social capital, helping them move from the periphery to the center of a professional community through established support networks [14,15].

Longitudinally, Cappas et al. 2025 found that early immersion in integrated care settings significantly defines long-term career trajectories. Their data reveals that graduates often return to serve in similar high-need environments, suggesting that professional identity formed during internships is sticky and enduring [16]. This socialization process is bidirectional; telementoring models like Project ECHO demonstrate that supporting preceptors (mentors) also enhances the confidence and effectiveness of the entire training ecosystem, creating a virtuous cycle of professional development [17].

2.3. Institutional capacity and sustainable networks

A sustainable workforce development model relies heavily on the internal capacity of educational institutions. Grounded in Institutional Theory, the legitimacy and effectiveness of an internship program depend on the organizational structures that support it [18–20]. To produce competent practitioners, Steinert et al. (2006) argue that faculty members themselves must undergo development to effectively teach the "transfer of training", the cognitive process of applying theoretical knowledge to practical contexts [21–23]. Without this, the academic-industry link remains fragile.

Moreover, the sustainability of these networks' hinges on balancing conflicting stakeholder interests. Studies posit that successful models must simultaneously satisfy the student's career goals, the university's academic standards, and the industry's talent needs [12]. Lee et al. describe this ecosystem

as "Sustainable Open Innovation," where university networks act not just as participants but as central orchestrators of global talent flows, managing resources and knowledge exchange across borders [24].

2.4. Strategic mobility and structural equalization

Finally, internships serve as a strategic lever for balancing human capital across regions, effectively addressing structural disparities in the labor market. Empirical data from Indonesia reveals that where a student intern is a strong predictor of where they will eventually practice. This suggests that placing students in specific regions is not just an educational decision but an effective method to resolve local workforce shortages [25]. This validates the broader hypothesis that internships function as powerful policy instruments for structural equalization and social equity [26].

Similarly, Sirili et al. (2025) emphasize that the "deployment phase", what happens after the internship, is crucial. Without a structured plan to retain these professionals, the goal of achieving a fair distribution in underserved regions remains unmet [27]. To bridge this gap, modern workforce systems are moving towards centralized data platforms. By connecting graduate skills directly to regional needs, these systems transform static alumni lists into active, accessible talent pools.

Furthermore, vocational internships play a vital role in leveling the playing field. By equipping students with transferable transversal skills, these programs narrow the employability gap between rural and urban populations [28]. Building on this logic, community-based workforce models demonstrate how targeted training can create sustainable employment pathways, thereby reducing regional inequality [29].

2.5. Role of feedback loops in internship ecosystems

The sustainability of workforce development ecosystems depends not only on skill formation but also on their capacity to learn from stakeholder feedback over time. From a human capital perspective, feedback mechanisms enable systems to remain responsive to evolving skill gaps rather than relying on static training models. Recent studies highlight that industry partners play an active evaluative role in this process,

often providing more accurate assessments of graduate competencies than self-reported student reflections [30].

At the ecosystem level, feedback loops function as institutional learning mechanisms. Insights from employers regarding recurring competency gaps, such as digital proficiency or professional communication, inform curriculum adjustment and governance decisions, helping bridge the persistent divide between academic preparation and workplace expectations [31]. Rather than serving as episodic evaluation tools, these feedback processes support continuous recalibration across institutional structures.

As internship models increasingly incorporate hybrid and virtual elements, feedback loops become even more critical in balancing flexibility with experiential depth. By integrating industry assessments into program design, ecosystems can adapt to shifting labor market demands while preserving the developmental benefits of immersive, practice-based learning [32].

Taken together, Human Capital Theory explains how feedback informs employability outcomes (Layer 3), Institutional Theory clarifies how such insights are absorbed into governance and alliance capacity (Layer 1), and Social Cognitive Career Theory illuminates how feedback shapes professional identity and self-efficacy within experiential learning environments (Layer 2). These complementary perspectives jointly underpin the integrative logic of the Regional Internship Ecosystem Assessment Framework (RIEAF).

2.6. The regional internship ecosystem assessment framework (RIEAF)

Bringing together socialization, institutional capacity, and technology, informed by the need for systemic feedback outlined in Section 2, this study proposes the Regional Internship Ecosystem Assessment Framework (RIEAF). The framework is built on a circular logic in which long-term sustainability depends on alumni returning to strengthen the ecosystem they once benefited from [33].

Unlike traditional internship models that emphasize individual skill acquisition, RIEAF conceptualizes internships as ecosystem-level mechanisms. Its primary theoretical contribution lies in integrating Human Capital Theory with Institutional Theory through a dynamic feedback loop, shifting the analytical focus from short-term employability to long-term regional workforce sustainability. The RIEAF is structured into three layers connected by a strategic feedback loop:

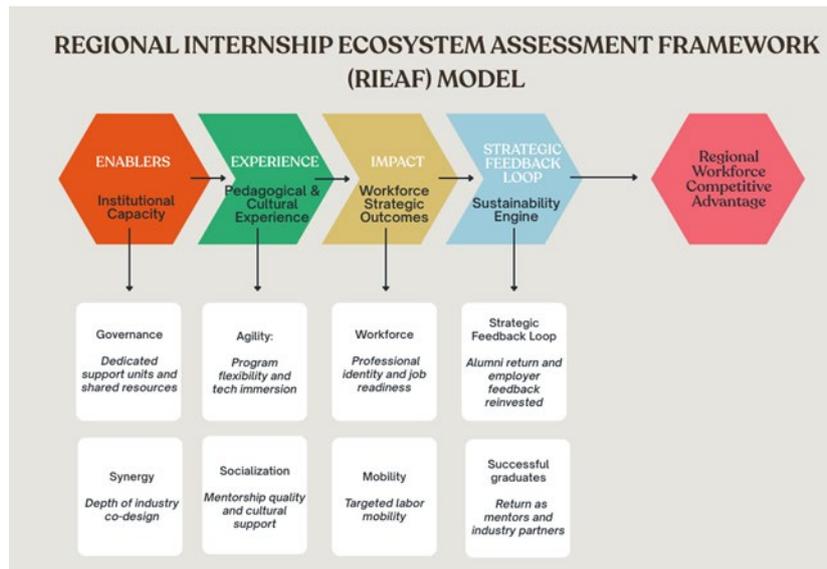


Figure 1. A regional internship ecosystem model for workforce advantage (by authors)

Guided by the above theoretical synthesis and the RIEAF, this study addresses the following qualitative research question through an in-depth case analysis of Passage to ASEAN (P2A), a regional ASEAN initiative:

“How do regional internship ecosystems transform student mobility into sustainable workforce outcomes, and what mechanisms enable this process?”.

3. Methodology

This study adopts a qualitative multi-method design, combining documentary analysis with semi-structured in-depth interviews to enable data triangulation and enhance analytical depth. This approach is well suited to examining complex, context-dependent processes within regional workforce ecosystems.

Secondary data analysis focused on two sources: the legal framework of the ASEAN Charter (Annex 2) and the Passage to ASEAN (P2A) Activity Report: Annual General Meeting & Strategic Vision 2025 (2020–2025) [22]. These documents established an institutional baseline for assessing governance structures and alliance capacity. Primary data were collected through semi-structured interviews with two participant groups: (1) key informants from the P2A Secretariat, who provided insight into governance and industry-linkage strategies; and (2) student participants in cross-border mobility programs, whose experiences informed analysis of technological adaptation and cultural immersion, dimensions increasingly emphasized in recent workforce development literature.

Data collection followed the principle of data saturation. Consistent with established qualitative

standards suggesting that saturation in purposive samples is often achieved within approximately twelve interviews, the study conducted eighteen in-depth interviews (three senior managers and fifteen students) [34]. Data collection concluded when no new thematic patterns emerged in the final interviews, supporting the credibility of the findings [35].

Interview transcripts were analyzed using a hybrid thematic analysis approach. An initial deductive coding framework was developed based on the theoretical synthesis, encompassing institutional capacity, experiential design, strategic outcomes, and feedback mechanisms. This was complemented by inductive coding to capture emergent themes not fully anticipated by existing theory. To strengthen analytical rigor, coding proceeded in two iterative rounds. In the first round, transcripts were independently coded and refined until thematic convergence was achieved. In the second round, representative excerpts were systematically mapped onto the RIEAF layers, ensuring coherence between empirical evidence and the proposed conceptual framework.

It is important to note that the empirical scope of this qualitative study is intentionally confined to ecosystem governance and student experiential learning. Although industry actors represent a significant dimension of the broader RIEAF framework, their perspectives were not included in this initial phase of data collection. This methodological boundary was established to enable a deeper examination of institutional orchestration processes and student identity formation within the regional mobility ecosystem.

Consequently, findings related to industry linkages reflect the strategic positioning of the governance body and

the perceived experiences of students, rather than direct accounts from industry stakeholders.

4. Case Study Evaluation: Passage to ASEAN (P2A)

Passage to ASEAN (P2A), established in 2012, is a non-profit network that connects more than 150 higher education institutions across Southeast Asia. The network aims to promote student mobility, strengthen intercultural understanding, and enhance practical skills in response to the integration of the ASEAN Economic Community (AEC).

This case was selected for two key reasons. First, rather than operating through bilateral exchange agreements, P2A functions as a well-established multilateral network, offering a suitable setting to explore ecosystem-level governance (Layer 1 of the RIEAF). Second, it supports a wide range of mobility formats, from virtual exchanges to immersive cross-border internships, thereby creating a rich context for examining experiential learning processes and regional workforce development outcomes.

Following the development of the Regional Internship Ecosystem Assessment Framework (RIEAF), this section applies the framework to evaluate Passage to ASEAN (P2A). The analysis draws on secondary data from the P2A 2025 Activity Report [22] and primary qualitative data from 18 in-depth interviews. Data saturation was reached at the twelfth interview, consistent with qualitative research standards [34].

4.1. Enablers, a stratified ecosystem under “one vision”

At the governance level (Layer 1), P2A demonstrates strong institutional capacity as a regional orchestrator. Operating under Annex 2 of the ASEAN Charter and comprising approximately 150 member institutions, P2A coordinates a stratified ecosystem of mobility programs. These range from short observational initiatives, such as the P2A Journey across Indonesia, the Philippines, Singapore, Thailand, and Vietnam, to intensive three- to six-month internships in major economic hubs including Thailand, Hong Kong, and Singapore [22].

From the perspective of the P2A Secretariat, this layered design is intentional. As one senior manager explained:

“We structure the ecosystem so that students can enter at different levels of intensity, but all programs remain aligned under a single governance framework and strategic vision.” (Participant #1, program manager A)

Student participants confirmed that the primary value of these programs lies not in site visits themselves, but in the strategic dialogue they enable. Many highlighted mentoring and high-level discussions with industry leaders as experiences largely absent from formal curricula:

“The most valuable part wasn’t just seeing the factories, but the strategic conversations with regional managers.” (Participants #11, #15, #17)

“They treated us as future colleagues, not just students.” (Participants #4, #12, #16, #18)

For several students, these interactions shaped longer-term career aspirations within the regional labor market:

“Those discussions about ASEAN supply chain shifts shaped my own career planning.” (Participants #12, #16, #18)

In addition to industry access, both cohorts emphasized the role of institutional support structures in sustaining engagement during high-intensity programs. From a governance perspective, clear coordination mechanisms were viewed as essential:

“Because students are moving across borders, we put strong emphasis on clear points of contact. They need to know exactly who is responsible academically and administratively at every stage.” (Participant #2, program manager B)

From an academic perspective, P2A aligns with Lee et al.’s (2025) sustainable open innovation model, which positions university networks as effective knowledge brokers within regional systems. However, while the breadth of exposure across programs is substantial, the depth of industry co-design remains uneven. Consistent with [36,37], meaningful workforce development requires industry partners to move beyond showcasing practices toward actively engaging students with real-world problems. This limitation was particularly visible in shorter programs, where students expressed a desire to move beyond what some described as “industrial tourism” toward problem-solving experiences more comparable to the rigor of long-term internships.

4.2. Experience, “one identity” and the safety net

P2A demonstrates particular strength at Layer 2 by operationalizing its core philosophy, “One Vision, One Identity,” as a mechanism of professional and cultural socialization. Through initiatives such as the ASEAN–Korea Youth Network Workshop, student participants described a clear shift in self-concept as they engaged in collaborative problem-solving across national and cultural boundaries. As several students reflected:

“Working on the crisis management case study with peers from Vietnam and Thailand was eye-opening.” (Participants #5, #6, #14)

Others emphasized that the value of the experience lay not in consensus, but in the process of negotiating differences:

“We argued, we negotiated, and finally we aligned.” (Participants #4, #7, #8, #16)

Through this process, participants reported developing a shared sense of regional belonging that extended beyond symbolic discourse:

“That experience taught me that ‘ASEAN identity’ isn’t just a slogan, it’s the ability to find common ground in a diverse room.” (Participants #4, #7, #8, #16)

Alongside socialization, the evaluation highlights the importance of balancing rigor with structured support.

Long-term internships within P2A are intentionally high-intensity. Consistent with Wang et al. (2024) [38], host universities mitigated this pressure by providing dormitories, dedicated mentors, and continuous academic oversight. As one participant explained:

“The workload was intense, sometimes overwhelming. But we were never abandoned. The mentors acted as a safety net, allowing us to push our professional limits without breaking.” (Participants #9, #10, #11).

These findings strongly support Wang’s (2025) argument that immersive experiences are central to professional identity formation [4]. P2A’s effectiveness lies in its deliberate combination of high challenge and high support, which fosters growth while preventing burnout. Moreover, while Qian et al. (2026) caution that transfer students may experience isolation in the absence of structured cultural bridges, P2A’s buddy system and mentorship model appear to mitigate this risk, positioning professional socialization as a core strength of the ecosystem [39].

Furthermore, regarding technological adaptability, a core component of the RIEAF, participants noted that the hybrid nature of P2A projects necessitated rapid familiarization with cross-border digital collaboration. Students reported that working in geographically dispersed teams forced them to quickly adapt to cloud-based project management tools and data-sharing platforms.

As one participant noted, ‘Managing our project across three time zones taught us as much about digital agility and virtual collaboration as it did about the actual case study’ (Participant #6, #9, #10).

This suggests that even in non-STEM internships, the way regional mobility programs are structured naturally fosters technological socialization. This is particularly evident in ASEAN, where emerging economies are increasingly forming dynamic hubs of innovation and intense platform competition [40].

4.3. Impact, from resilience to leadership

At Layer 3 (Strategic Outcomes), the findings indicate that program intensity plays a decisive role in building workforce resilience and accelerating leadership readiness. Through its hybrid mobility model, P2A mobilized 225 students across 41 project teams in 2025 [22]. For students who adapted successfully to this high-pressure environment, engagement with industry partners frequently translated into concrete employment outcomes following the internship.

Interview data illustrate how internship mobility evolved into tangible career advancement. Several student participants reported being offered positions directly after

project evaluations, often without formal application processes:

“HRM offered me a position on the spot.” (Participants #9, #10, #11, #18).

Others emphasized that verified project portfolios, rather than certificates, functioned as decisive recruitment signals:

“I never actually applied for the job. Toward the end of my rotation, management offered me a permanent contract directly.” (Participants #9, #10, #11).

Collectively, participants described a progression from initial exposure to deep professional and cultural immersion, enabling a seamless transition from student to staff roles. These findings align with prior research suggesting that high-intensity, project-based internships increasingly function as de facto recruitment pathways, particularly when strategic placements predict future work locations [4,5].

However, not all experiences were uniformly positive. Some students highlighted the strain associated with high performance expectations, while others pointed to structural uncertainty after completion:

“While the internship was transformative, there was no clear pathway after it ended. Employment outcomes felt dependent on individual initiative rather institutional coordination” (Participant #13).

Despite this gap, alumni engagement revealed an emerging feedback dynamic within the ecosystem:

“After returning home, I stayed involved because I felt responsible for the next cohort and wanted to stay connected with industry partners.” (Participant #12).

From a governance perspective, this informal feedback loop remains under-institutionalized. As one senior manager acknowledged:

“At the alliance level, we currently lack a centralized mechanism to systematically capture graduates’ project outcomes and translate them into coordinated placement decisions.” (Participant #2, program manager B).

Together, these findings confirm that P2A facilitates the redistribution of human capital through strategic mobility [40], while also revealing a systemic limitation. In the absence of a formal deployment mechanism and shared data infrastructure, responsibility for translating mobility into employment is effectively shifted to individuals, rather than being supported through coordinated institutional processes [27,40].

5. Discussion

The evaluation reveals that P2A currently excels as a "regional connector," successfully mobilizing member institutions to create a shared space for cultural and skill exchange. However, to maximize its impact, the alliance must evolve from simply involving schools to orchestrating a systemic workforce pipeline.

5.1. The human capital success

From a human capital perspective, P2A's stratified model, integrating the broad exposure of the P2A Journey with the deep immersion of Hybrid Mobility and Internships, successfully operationalizes adaptability as a central workforce capability. This progression from passive observation to active "expert consultations" corroborates [5] finding that high-intensity engagement accelerates the acquisition of complex skills. Crucially, the direct recruitment of interns in competitive hubs like Hong Kong validates the accumulation of "transnational human capital", confirming that cross-border mobility is a decisive signal of employability in the global labor market [42].

5.2. Institutional strength - "one vision" Anchor

Institutionally, P2A empirically validates Lee et al. (2025) theory on the orchestrating power of network [24]. The operationalization of the "One Vision, One Identity" mandate demonstrates that shared institutional values function as a critical psychological safety net, mitigating the cognitive load of high-performance internships. This finding extends Steinert (2006) framework on faculty support by positioning the network itself as a stabilizing "macro-institution" in educational mobility contexts [21]. In this role, the network standardizes the mentorship structures that scaffold individual micro-interactions, ensuring student resilience across borders Cappas et al. (2025) [16].

5.3. Systematizing success

Within the RIEAF, Institutional Capacity (Layer 1) constitutes a critical institutional asset by enabling coordinated governance and resource sharing across member institutions. The experiential design of high-intensity, culturally immersive internships (Layer 2) introduces relative scarcity in practice, as such programs are difficult to replicate at scale without deep institutional trust. Strategic outcomes such as professional identity formation, transnational mobility, and verified project portfolios (Layer 3) are largely difficult to reproduce across contexts, as they emerge from path-dependent learning trajectories. Finally, the strategic feedback loop functions as the organizing mechanism that allows the ecosystem to continuously redeploy talent and sustain its institutional capacity over time.

While the current model produces exceptional individual success stories driven by personal resilience, an opportunity exists to institutionalize these outcomes. As Putri et al. (2021) suggest, strategic mobility achieves maximum impact when it is replicable rather than episodic. Therefore, the logical evolution for P2A is to transition from a network that facilitates movement to an ecosystem that orchestrates deployment, ensuring that the "mobility intent" generated is captured and directed systematically [25].

6. Implications

6.1. Theoretical implications

This study advances workforce development literature by linking Institutional Theory and Human Capital Theory in three key ways. First, it reframes human capital in integrated economies as transnational mobility competence, the ability to transfer professional identity and performance across borders, empirically reflected in the adaptability of P2A interns [4,42]. Second, the findings extend Hong (2025) framework by showing that university networks can move beyond administrative coordination to function as labor market intermediaries, contributing to the shaping of regional employment dynamics [28]. Third, the study confirms that professional identity formation is most effective in high-rigor environments when paired with strong mentorship, supporting experiential learning theories that emphasize the reciprocal relationship between challenge and support [16,17].

6.2. Practical implications

From a practical perspective, P2A leadership could treat alumni not simply as program completers but as a strategic regional talent pool, with performance metrics gradually shifting toward regional retention and post-program employment outcomes rather than mobility counts alone. Higher education institutions are encouraged to formally recognize high-intensity, short-term mobility programs as credit-bearing capstone experiences, as initiatives structured around expert consultations can deliver professional value comparable to traditional semester-long internships. Such recognition may also include formal credit articulation mechanisms, allowing high-intensity mobility experiences to contribute meaningfully to degree progression rather than remaining peripheral activities. At the policy level, the P2A certification framework offers a promising reference model for an ASEAN Skills Passport; by leveraging its rigorous assessment standards, policymakers could, in the longer term, explore mechanisms to streamline work authorization processes for certified graduates and strengthen regional economic integration.

7. Conclusion and recommendations

This study contributes to the literature on regional workforce development by reframing internships as ecosystem-level mechanisms rather than standalone educational activities. Through the development and application of the Regional Internship Ecosystem Assessment Framework (RIEAF) to the case of Passage to ASEAN (P2A), the analysis demonstrates how institutional capacity, experiential design, and strategic feedback

mechanisms jointly shape cross-border employability and professional identity formation.

The findings suggest that P2A exhibits many characteristics of an emerging high-impact regional platform, particularly in fostering a shared professional identity and digital adaptability among participating students. At the same time, the analysis highlights a structural limitation: while student mobility outcomes are strong, the transition from mobility to coordinated workforce deployment remains largely informal. Addressing this gap is critical if regional internship networks are to move beyond facilitating movement toward sustaining long-term workforce integration within the ASEAN Economic Community.

Based on these insights, this study outlines three theory-informed directions for the continued evolution of P2A. First, at the foundational level, greater harmonization of mentorship practices across member institutions may strengthen the consistency of student support without imposing centralized instructional control. Second, at the process level, upgrading short-term mobility initiatives from observational study tours to expert consultation formats could deepen industry engagement and enhance experiential learning intensity. Third, at the outcome level, the findings point to the potential value of a shared digital infrastructure capable of validating internship project portfolios and supporting academic recognition and credit articulation across institutions. Such an approach would help integrate high-intensity mobility experiences into degree pathways while improving transparency between graduate competencies and regional labor market needs.

Rather than prescribing a fixed implementation model, these recommendations underscore how regional internship networks can progressively institutionalize successful practices. By doing so, initiatives like P2A can transform individual mobility experiences into coordinated workforce development strategies that align educational outcomes with regional labor market demands.

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