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DepEd-ATI Collaborative Industry Work Immersion Framework: The Case of Sindaton National High School

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ABSTRACT

The work immersion program at Sindaton National High School lacked a structured framework with industry partners, resulting in weak coordination, misaligned training, and limited skill development. This study aimed to examine current immersion practices, identify implementation challenges, and develop a collaborative DepEd–ATI framework for agricultural training. The study involved four key informants from Sindaton National High School and its partner institution. Using a qualitative design, data were gathered through a validated interview guide and analyzed using thematic analysis. Findings revealed four key issues; lack of formal partnerships, inadequate pre-immersion preparation, weak stakeholder coordination, and limited ATI technical support. The study also found gaps in students' soft skills, workplace readiness, task alignment, and monitoring mechanisms. These findings suggest that improving immersion requires not only a formal framework but also practical measures such as stronger coordination, pre-deployment preparation, continuous monitoring, and targeted skills training. The study contributes to practice by providing guidance for schools and partner institutions in enhancing immersion delivery and training relevance. It also has broader social value by promoting work-ready graduates and stronger school-industry collaboration in agricultural education. The study recommends institutionalizing the proposed DepEd–ATI framework and related support mechanisms.

INTRODUCTION

Agricultural education can only prepare students for real-world work when schools and industry partners collaborate effectively. However, in many developing contexts, weak coordination continues to result in training that is poorly aligned with actual agricultural practice (Bannor & Arthur, 2024). At Sindaton National High School, the absence of a formal partnership system created serious gaps in the delivery of agricultural work immersion.

As a result, students were often exposed to learning experiences that did not match their skills or training needs. Some were assigned inappropriate tasks, guided by untrained personnel, or placed in inadequate facilities, limiting their ability to build practical agricultural competence (Necio, 2022). This reflects a wider concern, as training mismatches and skill gaps remain major barriers to youth participation and agribusiness development in developing countries (Bannor & Arthur, 2024).

The issue is especially urgent despite ongoing national efforts to strengthen agricultural education. While DepEd and ATI have introduced farm schools and youth-focused agricultural initiatives, many rural schools still struggle with weak industry linkages, limited resources, and insufficient technical support (DepEd, 2021; ATI, 2023). Without stronger intervention, work immersion risks remaining a compliance activity rather than a meaningful avenue for skills development.

Although some school–ATI partnerships have shown promise, no clear and comprehensive DepEd–ATI immersion framework had been established for Sindaton National High School. This study addressed that gap by developing a framework designed to strengthen collaboration, improve immersion quality, and better align student training with both industry demands and educational goals.

LITERATURE REVIEW

Work Immersion and Career Readiness

Work immersion is a required component of the Philippine K–12 curriculum designed to expose Senior High School students to authentic workplace settings related to their chosen specialization. As stated in DepEd Order No. 30, s. 2017, this 80-hour practicum allows learners to apply classroom knowledge in real work environments while developing technical competencies, work values, and essential soft skills. In the same way, the OECD (2019) emphasized that workplace-based learning strengthens students' employability by providing meaningful opportunities to build practical and interpersonal skills in actual industry contexts.

Philippine Evidence on the Value and Challenges of Work Immersion

Studies in the Philippine context generally affirm the value of work immersion in preparing students for future employment, although implementation challenges remain evident. Necio *et al.* (2022) found that students and partner institutions were generally satisfied with the program, noting its contribution to career preparation

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despite concerns related to travel distance, limited facilities, and task mismatch. Similarly, Ador *et al.* (2023) and Honesto *et al.* (2022) reported that work immersion enhanced students' confidence, practical abilities, and workplace readiness, suggesting that the program plays a significant role in linking academic preparation with real-world experience.

Global Insights on Effective Vocational Immersion

Literature highlights that successful vocational immersion depends on strong program design, active industry participation, and alignment between school learning and workplace practice. The OECD (2019) noted that work-based learning enables students to acquire both technical and soft skills when supported by well-structured partnerships and employer engagement. Likewise, Hafid *et al.* (2019) and Rastegari Henneberry and Radmehr (2020) found that effective immersion programs are those that integrate classroom instruction with guided practical experience, supported by adequate mentoring, funding, and institutional collaboration.

Youth Engagement in Agricultural Education

Studies show that engaging young people in agriculture remains a continuing challenge despite increased policy attention to agricultural education. Manalo *et al.* (2023) emphasized the need to involve youth in agriculture as part of broader food security and development efforts, especially as the farming population continues to age. However, Mercado and Osbahr (2023) found that although many students recognize the value of agriculture, uncertainty about its profitability, social image, and long-term opportunities continues to discourage deeper interest and participation in the field.

School–Industry Collaboration in Work Immersion

Literature shows that school–industry collaboration is essential to the success of work immersion programs. DepEd Order No. 30, s. 2017 underscores the need for formal partnerships between schools and host institutions to ensure that immersion experiences are relevant, supervised, and aligned with curricular goals. In support of this, TESDA (2010) and ATI (2024) demonstrated that structured collaboration between educational institutions and industry partners can strengthen technical training, provide access to authentic learning sites, and improve the overall quality of student immersion experiences.

Gaps in Agricultural Immersion Implementation

Despite supportive policies and emerging partnership models, significant gaps remain in the implementation of agricultural immersion programs, particularly in rural schools. ATI (2023) reported that youth interest in agriculture remains limited due to weak exposure, outdated perceptions, and insufficient incentives. In addition, Necio *et al.* (2022) and Torres and Andicoy (2025) found that inadequate facilities, mismatched assignments, weak institutional partnerships, and lack of equipment continue to hinder the effectiveness of immersion, reducing its potential to develop relevant agricultural skills and sustain student interest in the field.s.

MATERIALS AND METHODS

Method Used

This study employed a qualitative design with thematic analysis to examine the status of the DepEd–ATI work immersion program at Sindaton National High School. Key Informant Interviews were used to gather the views of ATI coordinators and other involved personnel on the program's processes, challenges, and areas for improvement.

Data Gathering Instrument

The study used a researcher-made Key Informant Interview guide, validated through expert review and revised based on their comments. It contained open-ended questions designed to gather information on the current practices, challenges, and improvement opportunities of the DepEd–ATI work immersion program.

Sampling Technique

The study used purposive sampling to select key informants with direct involvement in the DepEd–ATI work immersion program at Sindaton National High School. It included the School Work Immersion Focal, School Head, SHS Coordinator, and ATI Work Immersion Focal, for a total of four participants.

Data Analysis

The data were analyzed using thematic analysis. Interview responses were transcribed, reviewed, coded, and organized into themes to identify patterns related to the practices, challenges, and improvement needs of the DepEd–ATI work immersion program..

RESULTS AND DISCUSSION

Practices of Deped, ATI, and other Stakeholders Involved in the Implementation of the Agricultural Work Immersion Program

Table 1 presents the major themes and corresponding categories that describe the existing practices of the DepEd–ATI work immersion program and the participation of other stakeholders.

Structure and Multi-Stakeholder Implementation of Work Immersion

Formalized partnerships and agreement through MOAs emerged as a key practice, as these agreements clarified roles, strengthened accountability, and protected learners. This supports Barnett (2004), who emphasized that formal agreements strengthen institutional collaboration. Comprehensive pre-immersion preparation was also evident, with orientations helping students understand work ethics, safety, and expectations before deployment.

Table 1: Major Themes and Categories on the Existing Practices of DepEd-ATI and other Stakeholders

Major Themes	Categories
Structure and Multi-Stakeholder Implementation of Work Immersion	Formalized Partnership and Agreement Comprehensive Pre-Immersion Preparation Parental and Community Involvement Monitoring, Evaluation, and Recognition ATI E-Learning as a Core Support Mechanism
Learner Readiness and Holistic Skill Development	Technical Skill Enhancement through Industry Exposure Soft Skills as Persistent Gaps Effect Skill Gaps on Performance Technical and Safety Skills Readiness Issue
Leadership, Roles, and Shared Accountability	School-Based Leadership and Coordination Collaborative Decision-Making Defined Institutional Roles Instructional and Supervisory Leadership
Policy-Practice Alignment and Institutional Support	Translation of Policies into Practice Policy Gaps and Legal Constraints Ground-Level Implementation Gaps Policy Rectification and Standardization

This reflects Kolb's (1984) experiential learning theory, which stresses that preparation supports meaningful workplace learning. Parental and community involvement further strengthened the program by promoting shared responsibility, student monitoring, and learner safety, especially in rural contexts. Monitoring, evaluation, and recognition mechanisms also helped improve implementation, as feedback from learners, teachers, and partners guided program adjustments and future MOA decisions. This aligns with DepEd Order No. 30, s. 2017, which promotes collaboration and continuous improvement in immersion programs. Lastly, ATI e-learning as a core support mechanism expanded access to agricultural knowledge and complemented hands-on training, which is especially valuable in resource-limited settings, as noted by Necio *et al.* (2022) and Torres and Andicoy (2025).

Learner Readiness and Holistic Skill Development

Technical skill enhancement through industry exposure showed that immersion improved students' hands-on agricultural skills through access to tools, facilities, and real farm tasks. This agrees with Kolb (1984), who stressed learning through experience, and Campanano and Bayona (2019), who found that hands-on immersion strengthened practical skills and career interest. However, soft skills as persistent gaps remained evident in confidence, initiative, and communication. This is consistent with Honesto *et al.* (2022) and Ador *et al.* (2023), who found that while immersion supports soft skill growth, these skills still need intentional development. The effects of skill gaps on performance were seen in students' hesitation, slow task completion, and need for close supervision, which supports OECD (2019) and Necio *et al.* (2022) that meaningful tasks and proper guidance are necessary for effective immersion. Lastly, technical and safety skills readiness issues showed that students also lacked basic office, digital, and professional skills, in line with Barnett (2004) and Torres and Andicoy (2025), who emphasized the need to align student preparation with workplace demands.

Leadership, Roles, and Shared Accountability

School-based leadership and coordination ensured organized implementation and learner safety, consistent with Barnett (2004) and Gutierrez and Resurreccion (2021). Collaborative decision-making showed shared planning between school and ATI leaders, which supports Barnett's (2004) view that trust and joint responsibility strengthen partnerships, and OECD's (2019) finding that employer cooperation improves industry-based learning. Defined institutional roles clarified responsibilities among DepEd, ATI, and partner institutions, in line with Hafid *et al.* (2019) and Barnett (2004), who emphasized clear role distribution in effective partnerships. Instructional and supervisory leadership also helped prepare students for workplace demands, reflecting Kolb's (1984) view of guided experiential learning and OECD's (2019) emphasis on structured support in immersion programs.

Policy–Practice Alignment and Institutional Support

Translation of policies into practice was shown through training plans, orientations, MOAs, and monitoring, consistent with DepEd (2017) and OECD (2019), who emphasized that clear procedures support effective immersion. Policy gaps and legal constraints also emerged, as some partners required MOA adjustments and ATI previously lacked formal guidelines, reflecting Barnett's (2004) view that collaboration often requires institutional adjustment and Gutierrez and Resurreccion's (2021) finding on coordination gaps. Ground-level implementation gaps were seen in limited resources,

scheduling, and time constraints, in line with Campanano and Bayona (2019) and Necio *et al.* (2022), who noted that practical barriers affect immersion delivery. Still, policy rectification and standardization showed progress through ATI's structured guidelines, supporting OECD's (2019) view that feedback improves policy implementation

Table 2: Major Theme and Categories on the Issues and Challenges in the Work Immersion Program

Major Themes	Categories
Operational Challenges and Constraints Management	Learner Safety Concern Logistical and Scheduling Constraints Limited Industry Partners Financial Burden on Learners Insufficient Equipment and Facilities Adaptive Resource Sharing

Key Issues and Challenges Encountered By Students, Teachers, And Immersion Partners In The Existing Work Immersion Setup

Table 2 presents the major theme and corresponding categories that summarize the key issues and challenges encountered in the implementation of the work immersion program.

Operational Challenges and Constraints Management

Learner safety concerns showed that student protection, insurance, and safe accommodation were treated as top priorities, consistent with DepEd policy and Maslow's (1943) view that safety is a basic condition for learning. Logistical and scheduling constraints were reflected in limited time, transportation, and supervision, which supports Necio *et al.* (2022) and OECD (2019) that poor coordination can weaken immersion quality. Limited industry partners also reduced placement options and task relevance, in line with Barnett's (2004) view that strong partnerships are essential and Hafid *et al.*'s (2019) finding that industry alignment improves vocational training. Financial burden on learners and insufficient equipment and facilities further showed that lack of resources affected participation and hands-on learning, consistent with Campanano and Bayona (2019) and Torres and Andicoy (2025). Lastly, adaptive resource sharing reflected stakeholders' efforts to manage shortages through collaboration, supporting Barnett's (2004) idea that shared resources help sustain partnerships.

Table 3: Major Theme and Categories in Crafting DepEd-ATI Work Immersion Framework

Major Themes	Categories
Institutionalized and Sustainable Framework	Standardization of Tools and Processes Strengthening All Phases of Immersion Tri-Agency Collaboration Institutionalization of Training, Mentoring, and Coordination Resource Sustainability and LGU Support DepEd-Led National Framework
Monitoring, Evaluation, and Continuous Improvement	Structured Monitoring and Evaluation Tools Monitoring During Immersion as a Critical Area for Improvement Standardized Indicators of Success

DepEd–ATI Iimmersion Framework

Table 3 presents the major themes and corresponding categories that guided the development of the proposed DepEd–ATI work immersion framework.

Institutionalized and Sustainable Framework

Standardization of tools and processes was identified as necessary to ensure consistent implementation, which aligns with Huberman and Crandall's (1983) view that programs become sustainable when embedded in school systems. Strengthening all phases of immersion also emerged as important, consistent with Kolb's (1984) statement that learning is most effective when experience is supported by preparation and reflection. Tri-agency collaboration among DepEd, ATI, and TESDA was likewise emphasized, reflecting Barnett's (2004) claim that strong partnerships require shared goals and structured coordination. In addition, institutionalized training, mentoring, and coordination supports Necio *et al.*'s (2022) finding that weak supervision limits immersion quality. Lastly, resource sustainability, LGU support, and a DepEd-led national framework were seen as essential, in line with Campanano and Bayona's (2019) statement that immersion needs adequate funding and infrastructure, and Torres and Andicoy's (2025) finding that limited resources weaken agricultural training.

Monitoring, Evaluation, and Continuous Improvement

Structured monitoring and evaluation tools were identified as necessary to track learner progress and program outcomes, which aligns with Deming's (1986) view that

systematic monitoring supports continuous improvement and with Kolb's (1984) emphasis on reflection as part of learning. Monitoring during immersion as a critical area for improvement also emerged, reflecting OECD's (2019) statement that work-based learning becomes more effective when implementation is closely supervised and feedback is provided on time. Lastly, standardized indicators of success were seen as important for measuring competence, confidence, readiness, and productivity, which is in line with Honesto *et al.*'s (2022) finding that immersion outcomes can be assessed through skill development and work readiness, and Ador *et al.*'s (2023) view that immersion strengthens confidence and career preparation.

Figure 1 presents the proposed DepEd–ATI work immersion framework, which highlights the Inputs, Process, and Outputs and Outcomes of the program. It also shows how these components are connected through continuous feedback and quality improvement.

Pre-Immersion (Planning and Preparation). Stakeholders prepare students through planning, orientations, required documents, training plans, and formal partnership agreements.

Immersion (Deployment and Onsite Experience). Students undergo supervised hands-on training in real agricultural settings while applying skills, receiving mentoring, and being regularly monitored.

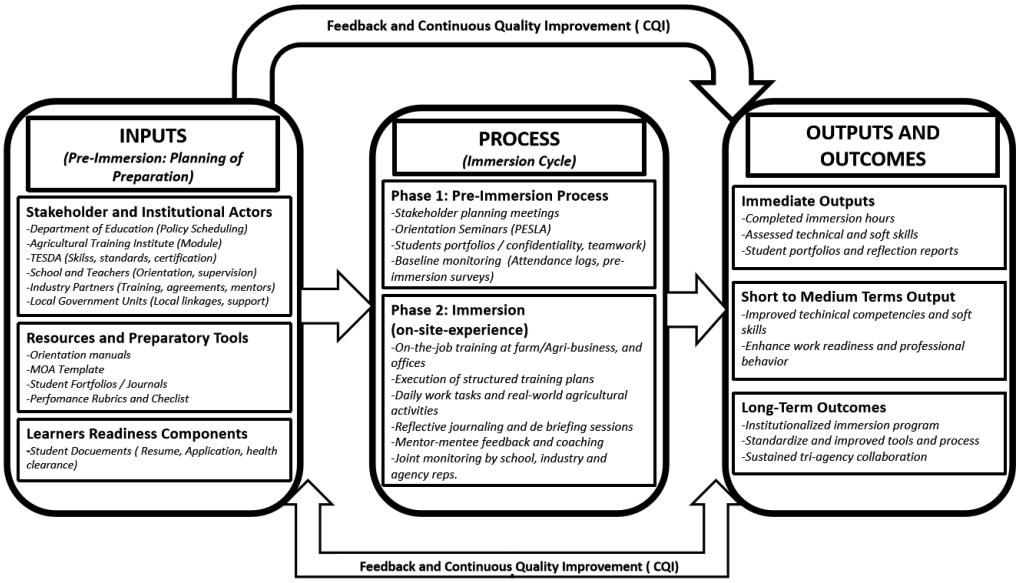

Figure 1: Input-Process-Output (IPO) Conceptual Framework of the Work Immersion Program with Continuous Quality Improvement Loop.

Post-Immersion (Evaluation and Continuous Improvement). Stakeholders evaluate student outcomes, reflect on experiences, and use the results to improve the next cycle of the immersion program.

CONCLUSION

The DepEd–ATI work immersion program at Sindaton National High School showed existing collaboration through MOAs, shared supervision, planning, and technical support, but these practices still need a more structured and institutionalized system for consistent implementation.

The current work immersion structure was constrained by safety concerns, limited partners, logistical difficulties, weak supervision, and resource and financial shortages, which reduced the quality and effectiveness of student immersion experiences.

A structured DepEd–ATI collaborative framework may be developed by institutionalizing clear roles, standardized tools, multi-agency support, continuous monitoring, and sustainable resource provision to improve agricultural training and student employability.

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