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Developing SORONG GROW to Transform Vocational School and Industry Alignment in Sorong

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Abstract

This study developed and evaluated SORONG GROW to support vocational school alignment with the palm oil industry in the Sorong Special Economic Zone, Indonesia. The model addresses the difficulty of translating occupational diagnosis into leadership decisions and organizational action. A multistrand mixed methods design integrated with ADDIE was implemented from April 2025 to June 2026. Diagnosis covered eight vocational schools and three companies; implementation involved six purposively selected schools. The model combined Scanning Occupational Requirement of the Market, Navigating Gaps of Curriculum, GROW Coaching, and Collaborative Inquiry. Questionnaires, interviews, observations, documents, coaching records, and monitoring notes supplied evidence. Descriptive alignment comparisons were integrated with process evidence through joint displays and cross-case analysis. Mean alignment increased from 58.33 to 60.98; four schools improved and two declined, with changes ranging from +17.40 to –6.78 points. Qualitative findings documented greater use of industry evidence, revised priorities, collaborative action, and structured monitoring. Differences across schools were associated with organizational readiness, leadership capacity, baseline conditions, and partnership maturity. SORONG GROW provides a context-sensitive mechanism linking diagnosis, leadership commitment, collective action, and organizational learning. Without a control group, these findings do not establish causal effectiveness. Further implementation should strengthen organizational consolidation and examine the sustainability of emerging practices.

Keywords: vocational education, school–industry alignment, leadership coaching, organizational readiness, SORONG GROW

INTRODUCTION

Vocational education is expected to prepare learners for work while enabling them to respond to changing occupational requirements. This expectation creates an organizational challenge: schools must translate external signals about employment into curriculum priorities, practical learning, teacher development, and credible partnerships. Human capital development provides an important rationale for investment in vocational competence, but investment alone does not explain how schools revise established practices when industry needs change (Becker, 1964; Indrawati & Kuncoro, 2021).

In Indonesia, link and match describes efforts to strengthen the relationship between vocational education and business and industry. Alignment involves more than agreements or student placements. It includes curriculum relevance, workplace learning, teacher competence, assessment, certification, and the organizational arrangements through which partnerships are maintained. Studies of vocational alignment and

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program implementation provide a basis for treating these dimensions as connected responsibilities rather than isolated activities (Mahmudah & Santosa, 2021; Maulina & Yoenanto, 2022; Pohan et al., 2023).

The Indonesian vocational education literature situates alignment within a wider history of institutional development, resource constraints, and changing economic expectations (Suharno et al., 2020). More recent work examines partnership models under Merdeka Belajar and the role of industry in curriculum alignment, implementation, and evaluation (Ahmad et al., 2024; Yoto et al., 2024). These strands locate the present intervention at the organizational interface between curriculum autonomy and external occupational requirements. The relevant question is not simply whether collaboration exists, but how its information and commitments enter school routines.

The Sorong context makes this challenge particularly visible. The dissertation underlying this article examined vocational schools in relation to palm oil industry requirements around the Sorong Special Economic Zone. Industry diagnosis identified operational competence, occupational safety, supervision, integrity, and adaptability as priorities. School diagnosis revealed gaps across practical learning, teacher experience, facilities, and partnership management. These findings located the problem within the capacity of schools to respond to industry evidence, extending beyond the technical skills of individual graduates.

Occupational alignment is also a comparative concern rather than an exclusively local problem. Research in Oman addresses the relationship between TVET student competencies and labor market needs (Al Shuaili, 2025), while European research distinguishes educational and skills mismatches in examining wage outcomes (Cultrera et al., 2022). Work on contemporary workforce competency demands further broadens attention beyond narrow technical preparation (Granillo et al., 2025). These perspectives support distinguishing school capacity, occupational competence, and labor market outcomes in the Sorong analysis instead of treating them as equivalent measures.

Existing approaches offer several relevant starting points. School–workplace collaboration provides opportunities to connect learning with occupational practice (Hiim, 2023; Nykänen et al., 2022). Curriculum analysis can help identify differences between taught content and required skills (Almaleh et al., 2019). Occupational analysis can also clarify the task demands that vocational programs seek to address (Friedrich, 2023). However, identifying a mismatch does not establish that school leaders can prioritize it, mobilize staff, or sustain an appropriate response.

Curriculum relevance can be examined through several complementary approaches. Anggita et al. (2022) consider vocational curriculum relevance in relation to industrial practice, Aslindar et al. (2023) address curriculum synchronization with industry needs, and Cheon et al. (2024) examine matching skill demand with curricular competencies through text analytics. These approaches inform the diagnostic purpose of SORO–NG. The contribution pursued here lies in what happens after a discrepancy is documented: leadership interpretation, selection of feasible responses, and responsibility for implementation.

The use of occupational standards also requires contextual judgment. Allais (2023) questions the value of treating skills anticipation and competency standards as sufficient solutions within African vocational systems. Although that context differs from Sorong, the critique draws attention to a relevant analytical risk: a detailed map of industrial requirements can become another document unless schools have the organizational means to interpret and use it. The present study therefore focuses on the transition from diagnosis to action.

School leadership provides one potential bridge. Instructional leadership directs attention toward educational goals, the instructional program, and the conditions supporting learning (Hallinger & Murphy, 1985). In a vocational school, these responsibilities encompass industry-responsive learning, teacher practice, and coordination with external partners. Data-informed leadership likewise requires interpretation rather than

simple possession of indicators (Marsh et al., 2006). The central issue is how principals convert diagnostic evidence into decisions that teachers and school teams can enact.

This interpretation also requires attention to the professional learning capacity of the school. Huang et al. (2024) identify teacher professional learning as a mechanism linking principal instructional leadership with instructional disparities in Chinese lower-secondary schools. Dwiniasih et al. (2024) examine principals' digital literacy in their instructional leadership role, while Aryani and Haryadi (2023) address collaborative leadership and learning quality. These contexts do not establish effects in Sorong, but they justify examining leadership through its connection with teacher practice and collective coordination rather than relying on principal-level commitment alone.

GROW Coaching offers a structured sequence of Goal, Reality, Options, and Will through which leaders can examine priorities and commit to action. Coaching scholarship and school-based applications provide grounds for examining its developmental role (Leach, 2020; Igu et al., 2023; Mohammad et al., 2024). Yet individual commitment is only an intermediate achievement. Curriculum revision, workplace learning, and partnership coordination require collective participation and follow-through across organizational roles.

Educational applications of GROW include professional development and coaching or mentoring directed toward the relationship between content knowledge and pedagogy (Anisur, 2023; Albano & Quinito, 2025). Such applications provide a relevant developmental background, while the present study addresses a broader organizational task that includes facilities, partnerships, curriculum, and monitoring. This extension calls for an explicit route from the coaching conversation to shared action. Smith et al. (2021) provide a complementary account of collaborative inquiry and generative dialogue as foundations for educational leadership.

Collaborative Inquiry addresses this second transition by connecting joint examination of evidence with action, reflection, and learning. Boyd and Hayden (2021) discuss its relationship with school leadership growth, while Kemmis et al. (2014) provide a foundation for understanding the relationship between practice, reflection, and change. Weddle et al. (2023) additionally highlight the contextual complexity of collaborative coaching. These perspectives support a design in which coaching and inquiry work together while remaining sensitive to organizational conditions.

This study addresses the gap between occupational diagnosis and school-level implementation by developing SORONG GROW as an integrated translation mechanism. Scanning Occupational Requirement of the Market (SORO) identifies external demands; Navigating Gaps of Curriculum (NG) diagnoses internal gaps; GROW translates evidence into leadership decisions; and Collaborative Inquiry translates commitments into collective action. The contribution concerns the functional relationships among these established elements and the conditions under which those relationships become operational.

Three questions guide the article. What diagnostic needs and design revisions informed the model? How did the model connect industry evidence with leadership decisions and collective action? How did changes in school–industry alignment vary across implementation schools, and what contextual explanations emerged? The article combines model development, descriptive outcome evaluation, and cross-case explanation. Its conclusions concern observed implementation and plausible mechanisms within the participating schools, without claiming an experimentally established effect.

METHODS

The study used a multistrand mixed methods design integrated with the Analysis, Design, Development, Implementation, and Evaluation framework (Branch, 2009). Quantitative evidence described diagnostic conditions, expert assessments, and changes in school indicators; qualitative evidence examined

decisions, actions, implementation conditions, and interpretations of change. ADDIE organized model development, while integration linked evidence across phases (Fetters et al., 2013). Collaborative Inquiry was an intervention component within this design, rather than a separate claim that the entire study constituted an independent action research project.

Research took place in Sorong Regency from April 2025 to June 2026. Analysis covered eight vocational schools in April–May 2025. Design occurred in June and Development in July 2025. Six schools participated in Implementation from August 2025 to April 2026, followed by Evaluation in May–June 2026. The implementation schools were SMK Negeri 1 Kabupaten Sorong, SMK Negeri 2 Kabupaten Sorong, SMK Muhammadiyah Aimas, SMK Muhammadiyah Salawati, SMK YPK Pengharapan, and SMK Modellink. Selection considered the relevance of their vocational programs and implementation readiness after diagnosis. The eight-school diagnostic scope must therefore be distinguished from the six-school evaluative sample.

The six principals were the main implementation participants. Internal informants included curriculum vice-principals, vocational program heads, vocational teachers, and school employment service personnel as required by the relevant data needs. Industry diagnosis incorporated one informant from each of PT Inti Kebun Sejahtera, PT Sorong Global Lestari, and PT Henrison Inti Persada. School supervisors provided contextual information and implementation feedback. Informants were selected purposively for their role, experience, and involvement; the source does not establish a fixed total for all supporting informant groups. Four validators contributed expertise in vocational education and industry, methodology and model development, vocational policy or implementation, and palm oil industry practice.

SORO mapped technical skills, nontechnical skills, occupational requirements, work standards, and emerging competencies. NG compared these demands with curriculum, teaching, teacher competence and industrial experience, facilities, Teaching Factory provision, workplace placements, certification, school employment services, and partnerships. Questionnaires and semi-structured interviews were combined with observation and documentary review. Coaching worksheets, transcripts, action plans, activity logs, monitoring records, and reflection notes documented implementation. The evidence chain connected a diagnosed gap to a coaching decision, an assigned action, and subsequent process or outcome evidence.

Content review and construct alignment were used to assess whether instruments and protocols matched their intended functions. Expert comments informed revisions, including stronger reflection and monitoring procedures. These procedures provide evidence of substantive and procedural suitability; they do not establish psychometric validation of every device. Likewise, expert ratings of implementability were kept separate from user practicality. Practicality was examined through whether the procedures could be enacted and adapted in the participating schools.

Implementation preserved the core diagnostic–coaching–inquiry sequence while allowing schools to choose different actions. GROW sessions moved from identifying goals and examining current realities to exploring options and specifying commitments. Collaborative Inquiry operationalized follow-through through assessing conditions, designing actions, implementing, measuring progress, reflecting, and monitoring. Principals coordinated responsibilities with school teams and external partners. Fidelity review examined the presence of core components, completeness of GROW, actor involvement, follow-through, and monitoring, using process records rather than assuming that identical activities were required everywhere.

Quantitative analysis used descriptive before–after comparisons of alignment scores reported in the 2025 and 2026 education report data reproduced in the dissertation. Changes were calculated as the later score minus the earlier score and are reported in points. Leadership action progress across implementation cycles was treated as a distinct process measure. Qualitative analysis examined recurring patterns in diagnosis, leadership interpretation, decisions, collective action, barriers, and reflection. Joint displays compared

numerical trajectories with documentary and interview evidence; cross-case analysis examined convergent, complementary, and divergent findings (Fetters et al., 2013). Triangulation, member checking, and an audit trail supported interpretive credibility. The researcher also facilitated implementation, making reflexive attention to favorable interpretations necessary.

The evaluation did not include a control group, random assignment, or statistical tests of causal effects. Contextual explanations were developed as qualitative interpretations, not as tested mediators or moderators. The article uses the dissertation's reported aggregate indicators and paraphrases process evidence without adding participant quotations or measurements. School names follow the source; submission requires the author to confirm permissions for identifiable institutional reporting and supply any ethics review and consent information required by the journal, because these details are not established in the material used for this article.

RESULTS AND DISCUSSION

Diagnostic needs and model development

The diagnostic phase identified a multidimensional demand profile. Industrial informants emphasized technical execution, supervision, quality control, occupational safety, integrity, discipline, teamwork, problem solving, and adaptation to technological change. The source reported nontechnical skills at 4.9 and occupational safety at 5 on its priority scale, compared with 2 for design, planning, and technical modelling. These values summarize the three-company diagnostic evidence; they are not population estimates for the palm oil sector. Their practical significance lies in the combination of occupational competence and dependable work behavior.

School diagnosis indicated alignment with mapped occupational skills of approximately 28–38%, alongside gaps of 62–72% across the eight-school diagnostic scope. These diagnostic percentages differ from the later education-report alignment indicator and should not be interpreted as the same measure. NG also identified needs in teacher competence, practical learning, facilities, certification, Teaching Factory activities, workplace placements, and partnership coordination. Taken together, the findings shifted the development problem from revising curriculum documents alone to strengthening the organizational capacity that makes relevant learning possible.

The model responded by integrating external and internal diagnosis before coaching. SORO supplied evidence of industrial requirements, while NG located the corresponding school gaps. Their intersection produced diagnostic knowledge that principals could use to reconsider priorities. GROW then connected this knowledge with decisions and commitments, and Collaborative Inquiry organized collective enactment and review. Table 1 summarizes the operational architecture and the evidence used to trace it.

Table 1. Operational architecture of SORONG GROW

Component	Function	Traceable evidence
SORO	Identify industrial occupations and competencies	Industry interviews, competency profile, skills heatmap
NG	Identify school capacity and curriculum gaps	Gap matrix and school documents
GROW Coaching	Translate diagnosis into priorities and commitments	Goal, Reality, Options, Will worksheets and action plans
Collaborative Inquiry	Translate commitments into action and learning	Activity logs, monitoring, reflection, revised actions

Component	Function	Traceable evidence
Integrated evaluation	Explain changes and variation across schools	Joint displays and cross-case comparison

Expert appraisal supported the model's overall conceptual organization while identifying a specific weakness in collective follow-through. GROW and model structure each received 4.8, theoretical foundations 4.5, and several diagnostic and implementability components 4.3. Collaborative Inquiry received 3.3 and required stronger reflection, monitoring, and continuous improvement. These results justified revision of the operational inquiry cycle before implementation. They support the suitability of the design for field use, rather than demonstrating effectiveness or a post-implementation user practicality score.

The emphasis on occupational safety, practical competence, and reliable work behavior also connects the diagnosis with research on graduate competency demands and work readiness in the Industrial Revolution 4.0 context (Kamaludin et al., 2022; Nurjanah et al., 2022). Industrial practice and its management are examined as relevant domains for developing industry-related competence (Mahendra et al., 2024; Purwanto et al., 2025). In this study, these connections inform the interpretation of the local needs profile; the three-company data remain context-bound and do not establish a complete or representative competency standard for the sector.

The revision has substantive significance. A model can specify a coherent sequence yet leave uncertain how commitments will be revisited when implementation encounters difficulty. Explicit assessment, design, implementation, measurement, reflection, and monitoring made follow-through visible. This development decision is consistent with an understanding of collaborative inquiry as a process of organizational learning (Boyd & Hayden, 2021; Kemmis et al., 2014), while retaining the source's distinction between model validation and field evaluation.

Figure 1 summarizes the developed mechanism after expert revision. External occupational evidence and internal gap diagnosis converge before the coaching process. The central pathway makes the two translation tasks explicit: diagnostic evidence becomes a leadership commitment through GROW, and that commitment becomes collective practice through Collaborative Inquiry. The feedback loop represents the use of reflection and monitoring to revisit priorities. Readiness, leadership capacity, baseline conditions, and partnership maturity frame implementation throughout the sequence; they are contextual interpretations rather than statistically estimated moderating effects.

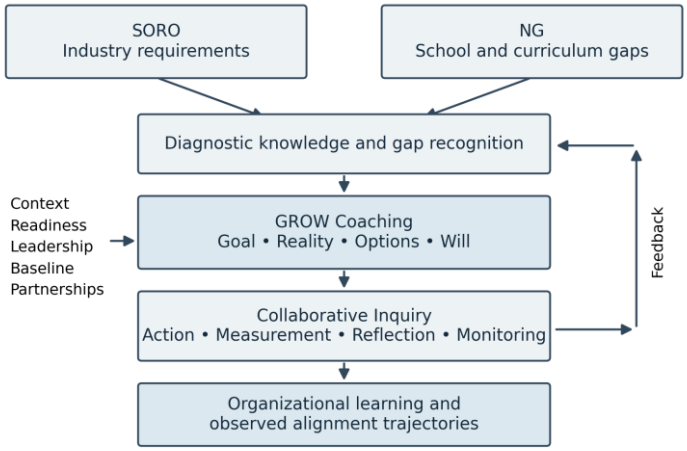


Figure 1. The developed SORONG GROW mechanism and its contextual conditions. Redrawn from the dissertation; arrows represent the proposed implementation sequence and feedback, not estimated causal effects.

From diagnostic evidence to leadership and collective action

Process evidence showed that principals did not adopt identical priorities. SMK Negeri 1 concentrated on curriculum, supervision, teacher competence, and certification arrangements. SMK Negeri 2 developed industry participation, guest teaching, practical facilities, Teaching Factory activities, and product-oriented learning. Muhammadiyah Aimas emphasized business units, practical experience, employment services, and external collaboration. Muhammadiyah Salawati prioritized teachers, learning materials, procedures, supervision, and mentoring. The common element was the use of diagnosis to frame action, while the selected activities reflected school conditions.

GROW operated at the transition between recognizing a problem and accepting responsibility for a response. Goal focused attention on the desired improvement, Reality connected that aspiration to documented limitations, Options opened alternative strategies, and Will specified commitments and follow-up. The empirical evidence concerns changes in how leaders described gaps, selected priorities, and organized actions. Cognitive dissonance and sensemaking offer interpretive language for this transition, but neither was measured as a psychological construct. The study therefore supports an observable change in leadership practice rather than a proven transformation of personality or mindset.

Collective enactment involved curriculum vice-principals, vocational program heads, teachers, employment services, industry partners, and supervisors. Curriculum responsibilities concerned translating priorities into learning arrangements; teachers enacted practical activities and learning materials; industry contributed occupational information, curriculum feedback, and guest teaching; supervisors supported review and follow-up. These differentiated roles explain why coaching the principal alone could not constitute the complete intervention. Decisions needed organizational carriers, agreed responsibilities, and evidence that actions had occurred.

The reported leadership practice total increased from 19.9 to 29.2, with the corresponding mean moving from approximately 2.0 to 2.9. The source interpreted this as a shift from developing practice toward enacted practice. This result is descriptive and instrument-specific. Separately, leadership action progress increased between implementation cycles in five schools and declined in YPK Pengharapan. Keeping these

measures distinct prevents conflation of a leadership rating, action completion, and the school alignment outcome. Table 2 presents the cycle-based action indicator alongside the annual alignment data.

Table 2. School alignment outcomes and leadership action progress

School	2025	2026	Change	Action I ⟶ II
SMK Negeri 1	56.00	61.52	+5.52	45% ⟶ 72%
SMK Negeri 2	48.00	65.40	+17.40	50% ⟶ 78%
Muh. Aimas	54.00	58.23	+4.23	42% ⟶ 82%
Muh. Salawati	61.00	61.77	+0.77	38% ⟶ 75%
YPK Pengharapan	62.00	56.73	−5.27	40% ⟶ 34%
Modellink	69.00	62.22	−6.78	48% ⟶ 68%
Mean	58.33	60.98	+2.65	—

Note. Alignment values are reproduced from the dissertation's 2025–2026 education-report comparison. Change is expressed in points. Action progress refers to implementation cycles and is a separate process indicator.

Outcome variation and the value of divergent cases

Mean alignment increased by 2.65 points, from 58.33 to 60.98. The aggregate conceals substantial variation: four schools improved and two declined. SMK Negeri 2 recorded the largest increase, 17.40 points, followed by SMK Negeri 1 at 5.52, Muhammadiyah Aimas at 4.23, and Muhammadiyah Salawati at 0.77. YPK Pengharapan declined by 5.27 points and Modellink by 6.78. These differences are central to the model evaluation because a uniform success narrative would obscure its implementation boundaries.

Figure 2 displays the magnitude and direction of change for each school, retaining both improvements and declines. The largest gain occurred at SMK Negeri 2, which moved from 48.00 to 65.40, while Modellink declined from 69.00 to 62.22. The crossing of school trajectories indicates that initial standing did not determine the observed direction of change. The mean gain of 2.65 points therefore describes the group only; it does not represent a uniform school experience. These comparisons support case-sensitive interpretation and should not be read as estimates of intervention effects.

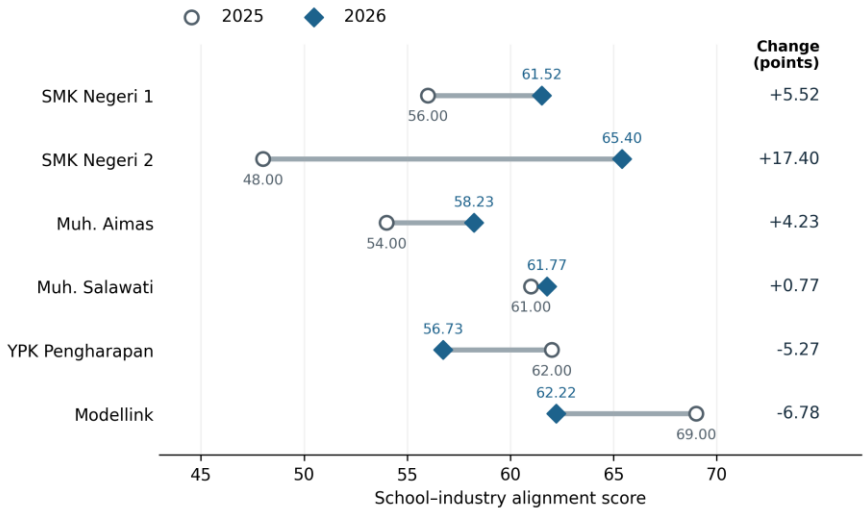


Figure 2. Changes in school–industry alignment scores between 2025 and 2026. Source: dissertation data reproduced in Table 2. Positive and negative values show point changes.

SMK Negeri 2 began with the lowest alignment score but achieved the largest improvement. Qualitative evidence described movement toward guest teaching, practical resources, industry visits, Teaching Factory provision, and stronger company collaboration. Its leadership action progress increased from 50% to 78%. The numerical and process evidence converge in indicating an active translation of diagnosis into action. This pattern suggests that a low starting score does not necessarily prevent improvement when leaders and partners can organize a response; it does not establish which activity produced the numerical change.

The three schools classified as building or strengthening systems showed more gradual change. SMK Negeri 1 connected curriculum revision with supervision and certification capacity. Aimas expanded the infrastructure of practical learning and external collaboration, while Salawati concentrated on internal teacher and instructional capacity. Action progress rose in all three, but their alignment gains differed markedly. This pattern indicates that increased implementation activity and short-term movement in an annual alignment indicator are related evaluative domains without being interchangeable outcomes.

YPK Pengharapan provides a constrained implementation case. Both alignment and leadership action progress declined, while process evidence described coordination problems and leadership dynamics that interrupted follow-through. Facility limitations also required cooperation with other schools. The findings locate a plausible bottleneck in maintaining commitments and coordinating action. They support attention to organizational consolidation before expecting sustained implementation, while leaving open other contextual influences on the annual score.

Modellink presents a different divergence. Leadership action progress increased from 48% to 68%, and curriculum alignment, guest teaching, and workplace placements continued, yet its alignment score fell from 69.00 to 62.22. The source identified weaknesses in Teaching Factory supervision and continuity. These observations suggest that maintaining selected activities does not guarantee stable institutionalization or improved aggregate outcomes. The decline must remain part of the evaluation; the presence of positive process evidence does not cancel it.

Figure 3 shows increased action progress in five schools and a decline in YPK Pengharapan. Aimas recorded the largest increase, from 42% to 82%, followed by Salawati from 38% to 75%. Comparison with Figure 2 reveals an important divergence: Modellink improved its action progress by 20 percentage points

while its alignment score declined by 6.78 points. Likewise, Salawati's 37-percentage-point rise in action progress accompanied a smaller 0.77-point alignment gain. Action completion and school alignment capture different aspects of implementation. Their divergence strengthens the need to examine the relevance, quality, continuity, and institutionalization of actions rather than using activity progress alone as evidence of improved outcomes.

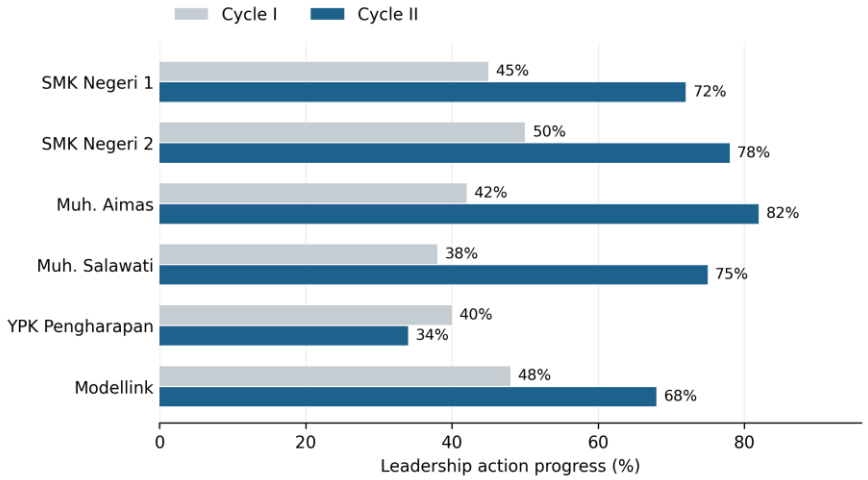


Figure 3. Leadership action progress during implementation cycles I and II. Source: the dissertation's school action progress records. These percentages are process indicators, distinct from the alignment scores in Figure 2.

The joint interpretation therefore distinguishes convergent improvement, gradual system building, constrained consolidation, and an unresolved sustainability challenge. Table 3 condenses these patterns. The categories summarize the observed cases rather than establish statistically validated school types. In particular, the sustainability orientation assigned to Modellink describes a developmental task, not evidence that sustainability was already achieved.

Table 3. Integrated cross-case interpretation

Cases	Process evidence	Interpretation and boundary
SMK Negeri 2	Industry engagement and practical learning expanded; alignment and action progress increased	Accelerating transformation; convergent evidence, without causal identification
SMK Negeri 1; Aimas; Salawati	Curriculum, practical learning, and internal capacity strengthened at different rates	Building or strengthening systems; action gains exceeded immediate alignment gains
YPK Pengharapan	Coordination and leadership difficulties accompanied declining indicators	Constrained consolidation; readiness limited follow-through
Modellink	Curriculum and guest teaching continued; Teaching Factory continuity remained difficult	Sustainability challenge; improved action progress coexisted with declining alignment

Theoretical contribution and practical implications

The principal contribution is a two-stage translation mechanism. First, GROW connects diagnostic knowledge with leadership decisions and commitment. Second, Collaborative Inquiry connects those commitments with collective practice, monitoring, and organizational learning. The model extends the focus beyond whether a school possesses industrial information to whether that information can be traced into action. This emphasis complements alignment and implementation studies that examine the wider relationship between vocational schools and industry (Mahmudah & Santosa, 2021; Maulina & Yoenanto, 2022; Ningsih et al., 2025).

The findings also refine how school–workplace collaboration is interpreted. Collaboration becomes educationally substantive when occupational information informs curriculum, practical learning, teacher competence, and review. Hiim (2023) and Nykänen et al. (2022) provide relevant perspectives on collaboration across school and workplace settings. The Sorong cases add a leadership and coordination account of how such collaboration may be organized locally. The evidence does not imply that the presence of a memorandum of understanding or occasional guest teaching is sufficient to ensure alignment.

The observed translation into action further suggests that partnership evaluation needs to examine who participates, which learning arrangements are affected, and how follow-up is maintained. Rahmi et al. (2025) examine the management of cooperation between vocational schools and business and industry in relation to students' work skills. The Sorong evidence adds within-case process detail to this management perspective: a partnership becomes operational through assigned curriculum responsibilities, teacher participation, guest teaching, practical activities, and review. The continuation of selected activities at Modellink also shows why partnership activity should remain analytically separate from sustained aggregate improvement.

Organizational readiness emerged as a conditioning explanation rather than a directly tested moderator. Across the cases, readiness concerned the ability to coordinate responsibilities, sustain leadership continuity, mobilize resources, and maintain follow-up. Leadership capacity, initial conditions, and partnership maturity interacted with these implementation circumstances in the qualitative interpretation. Weddle et al. (2023) similarly direct attention to the complexity of collaborative coaching under improvement pressure. The contribution here is an empirically grounded proposition that the same sequence can encounter different bottlenecks within different organizations.

The strongest practical implication is to preserve the evidence chain while adapting the content of action. Schools should identify a manageable priority from SORO–NG, specify how it enters Goal and Reality, document the Options considered, and assign responsibilities through Will. Collaborative Inquiry should then record implementation, progress, unresolved obstacles, and decisions about continuation or revision. This makes adaptation accountable: variation is justified by the diagnosed problem and available capacity, rather than by loosely connected activities.

Supervisors and industry partners can use this structure to target support. Schools still building foundations may require teacher development, practical learning resources, and functioning partnership coordination. Schools facing leadership disruption may need consolidation of responsibilities and continuity arrangements before expanding programs. Schools with established partnerships may need closer attention to supervision, quality, and institutional routines. These implications follow from the observed case contrasts and should be treated as context-sensitive guidance requiring further evaluation.

Limitations and future research

Several limitations define the scope of the findings. Six purposively selected implementation schools cannot represent all vocational schools or industries. Selection based partly on relevance and readiness may favor settings where implementation is feasible. Industry diagnosis relied on three company informants. Without a comparison group, changes may reflect other initiatives, annual reporting conditions, leadership turnover, or wider contextual developments. The descriptive increase in the mean therefore cannot be attributed solely to SORONG GROW.

The evaluation also combined measures with different purposes and time frames. Diagnostic occupational alignment, annual education-report scores, leadership practice ratings, and cycle-based action progress describe different aspects of change. Their integration supports explanation, but does not make them a single validated scale. The available source does not establish a detailed year-to-year measurement equivalence analysis for the annual indicator. In addition, researcher facilitation may have influenced participant responses and interpretations despite triangulation, member checking, and documentation.

Transferability requires attention to context and measurement as well as intervention content. Chejara et al. (2024) examine the generalization of collaboration quality estimation models across authentic school contexts. That work concerns a different analytical setting, but it highlights the relevance of testing whether a process indicator retains its meaning across settings. Future SORONG GROW evaluations should accordingly specify what constitutes action progress, document scoring decisions, and examine whether institutional differences affect comparability before interpreting numerical differences as differences in improvement.

Future research should test the model across more schools and sectors, include credible comparison conditions, and examine measurement consistency over time. Longer follow-up is needed to distinguish initial activity from sustained institutional practice. Readiness and partnership maturity could be operationalized prospectively, while the proposed translation pathways could be examined through longitudinal process analysis. Graduate employment, workplace competence, and employer assessments would provide outcome evidence beyond school-level alignment indicators.

CONCLUSION

SORONG GROW was developed as a context-sensitive mechanism linking industry diagnosis, school gap analysis, leadership coaching, and collaborative inquiry. Across six vocational schools in Sorong, mean alignment increased from 58.33 to 60.98, but the pattern comprised four improvements and two declines. Process evidence documented changes in the use of industry data, prioritization, collective action, and monitoring. The principal contribution is the traceable connection between diagnosis and leadership commitment, followed by the translation of commitment into organizational practice.

The contrasting trajectories indicate that implementation depends on coordination, leadership capacity, initial conditions, and the maturity of industrial collaboration. These findings support further use and refinement of the model as an adaptive development framework, while providing no basis for a universal or causal effectiveness claim. Schools should combine evidence-informed coaching with explicit responsibilities, reflection, and continuity arrangements. Comparative and longer-term research is required to establish whether the emerging practices lead to sustained alignment and improved graduate outcomes.

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