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From Partnership to Practice: Strengthening Teaching Factory and Industry Collaboration Through University Mentoring

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ABSTRACT

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Vocational education institutions are increasingly expected to produce graduates who possess industry-relevant competencies, entrepreneurial capabilities, and adaptability to technological transformation. Teaching Factory (TeFa) has emerged as a strategic learning model that integrates industrial work processes into vocational education; however, its implementation often faces challenges related to governance, stakeholder engagement, and industry collaboration. This community service study examines the contribution of university-led mentoring in strengthening Teaching Factory implementation and enhancing industry collaboration at SMK Negeri 1 Pangkalanbaru, Indonesia, under the SMK Pusat Keunggulan program. A descriptive qualitative approach was employed using observations, interviews, focus group discussions, and documentation review. The mentoring program was implemented through five stages: initial assessment, stakeholder coordination, mentoring intervention, collaborative implementation, and monitoring and evaluation. The findings indicate that the mentoring program successfully strengthened institutional capacity and improved Teaching Factory implementation from Level 1 to Level 2. The intervention also facilitated the expansion of formal partnerships from two to four institutions, involving both industry and higher education partners. In addition, the program enhanced teacher and student competencies through industry engagement, practitioner teaching, and digital business training initiatives. The results demonstrate that university mentoring plays a significant role in fostering collaboration among schools, industries, government agencies, and higher education institutions, thereby supporting vocational education transformation. Despite challenges related to infrastructure development and Teaching Factory sustainability, the mentoring program contributed positively to creating a more industry-oriented and collaborative learning ecosystem. The study highlights the importance of multi-stakeholder collaboration and university involvement in strengthening vocational education quality and workforce preparedness.

I. INTRODUCTION

Technical and vocational education and training (TVET) play a strategic role in preparing a skilled workforce capable of responding to technological advancement, industrial transformation, and evolving labor market demands. Across many developing countries, vocational institutions are increasingly expected not only to provide technical competencies but also to cultivate adaptability, innovation, entrepreneurship, and digital literacy among learners. However, despite continuous reforms, a persistent challenge remains in bridging the gap between vocational education outcomes and industry expectations. Employers frequently report that vocational graduates possess insufficient practical experience, limited exposure to industrial work cultures, and inadequate competencies required in contemporary workplaces (UNESCO, 2022).

In Indonesia, the government has introduced various initiatives to strengthen vocational education quality and relevance. One of the most significant reforms is the implementation of the SMK Pusat Keunggulan (Center of Excellence Vocational School) program, which aims to accelerate the transformation of vocational schools through industry-based learning, curriculum alignment, infrastructure development, and strategic partnerships among educational institutions, industries, and government agencies. The program seeks to improve graduate employability while ensuring that vocational education contributes directly to regional and national economic development (Kemendikbudristek, 2023)

Among the key components of the SMK Pusat Keunggulan program is the implementation of Teaching Factory (TeFa), a learning model that integrates industrial work processes into educational environments. Teaching Factory emphasizes competency-based learning through real production activities, allowing students to experience authentic industrial practices while still in school. Unlike conventional classroom instruction, Teaching Factory creates a learning ecosystem where students are actively engaged in planning, producing, marketing, and evaluating products or services under conditions that closely resemble industrial settings. Consequently, students acquire not only technical competencies but also soft skills such as teamwork, communication, problem-solving, creativity, and entrepreneurial thinking (Wahjusaputri et al., 2021).

Recent studies have demonstrated that Teaching Factory significantly contributes to improving vocational students' competencies and employability. (Yoto et al., 2024) found that Teaching Factory implementation positively influences students' technical skills, work readiness, and professional attitudes through experiential learning approaches. Similarly, Prianto et al (2025) reported that Teaching Factory-based learning enhances employability skills, particularly communication, collaboration, adaptability, and problem-solving competencies that are highly valued by employers. Furthermore, Teaching Factory encourages entrepreneurial orientation among students by exposing them to real business processes and customer-oriented production systems (Heriyati et al., 2023).

The growing importance of Teaching Factory is further reinforced by the emergence of Industry 4.0 and Society 5.0 paradigms, which require vocational institutions to prepare graduates with interdisciplinary competencies, digital capabilities, and technological adaptability. In response to these developments, vocational schools are increasingly expected to integrate digital business practices, e-commerce, data utilization, and technology-enhanced learning into their educational processes. According to Hatmojo & Ikhsannudin (2024), modern Teaching Factory models should not merely replicate traditional industrial practices but should also incorporate digital innovation and technology-based entrepreneurship to maintain relevance within rapidly changing economic environments.

Despite its potential benefits, Teaching Factory implementation remains challenging for many vocational schools. Previous studies indicate that successful Teaching Factory implementation depends on multiple factors, including institutional leadership, teacher competency, industrial participation,

infrastructure readiness, governance mechanisms, and sustainable financial support ((Safarinah et al., 2022) (Suhartini, 2022)). In many cases, vocational schools struggle to establish meaningful industry partnerships, secure adequate resources, and develop operational systems that enable sustainable Teaching Factory activities. These limitations often result in Teaching Factory initiatives functioning merely as simulated learning environments rather than authentic production-based educational systems. Industry collaboration has therefore emerged as a critical success factor in vocational education transformation. Effective collaboration between schools and industries provides opportunities for curriculum synchronization, internship programs, industrial practitioner involvement, technology transfer, teacher upskilling, and graduate recruitment. Wahyudin et al (2025) emphasize that strong industry-education partnerships create mutual benefits by ensuring that educational programs remain relevant to labor market requirements while simultaneously supporting industry workforce development needs. Furthermore, collaborative partnerships enable vocational institutions to access resources, expertise, and networks that may otherwise be unavailable.

The importance of collaboration extends beyond industry partnerships alone. Contemporary educational development increasingly adopts the Triple Helix framework, which highlights interactions among universities, industries, and government institutions as drivers of innovation and institutional transformation. Within vocational education, universities play a particularly important role as facilitators, knowledge providers, mentors, and capacity builders. Through mentoring programs, higher education institutions can assist vocational schools in strengthening governance systems, developing industry networks, improving educational quality, and implementing innovative learning approaches (Etzkowitz & Zhou, 2017).

University mentoring has become increasingly relevant within the implementation of the SMK Pusat Keunggulan program. As external facilitators, universities can provide technical expertise, institutional support, and stakeholder coordination mechanisms that help vocational schools overcome implementation barriers. Mentoring activities may include institutional assessment, partnership facilitation, capacity building, monitoring and evaluation, and collaborative problem-solving. Previous studies suggest that mentoring-based interventions contribute positively to organizational learning, stakeholder engagement, and educational innovation, particularly in vocational and community-based educational settings (Pratama et al., 2025).

SMK Negeri 1 Pangkalanbaru is one of the vocational schools participating in the SMK Pusat Keunggulan program. The school has demonstrated commitment to implementing Teaching Factory within its Digital Business competency program. However, initial assessments revealed several challenges that potentially constrained the effectiveness of Teaching Factory implementation. These challenges included limited industrial partnerships, insufficient integration between educational activities and industry practices, developing governance systems, and limited infrastructure support. In addition, opportunities for expanding collaboration with external stakeholders remained largely underutilized.

To address these challenges, a structured mentoring program was conducted by Perbanas Institute as the assigned university partner. The mentoring activities focused on strengthening stakeholder coordination, enhancing industry collaboration, improving Teaching Factory implementation, facilitating institutional partnerships, and supporting capacity-building initiatives for teachers and students. Through collaboration involving government agencies, industries, universities, and school stakeholders, the mentoring program sought to create a more sustainable and industry-oriented vocational education ecosystem.

The significance of this community service initiative extends beyond institutional improvement at a single vocational school. It provides practical insights into how university mentoring can contribute to strengthening vocational education systems, particularly in developing contexts where schools face resource constraints and partnership limitations. Furthermore, the program offers empirical evidence

regarding the role of collaborative governance and stakeholder engagement in supporting vocational education transformation.

Based on the background described above, this paper aims to examine the contribution of university mentoring in strengthening Teaching Factory implementation and industry collaboration at SMK Negeri 1 Pangkalanbaru. Specifically, the study seeks to analyze (1) how mentoring activities support Teaching Factory development, (2) how mentoring facilitates the expansion and strengthening of industry partnerships, and (3) what outcomes and challenges emerge from the implementation of the mentoring program. The findings are expected to contribute to the growing body of knowledge on vocational education development and provide practical recommendations for future implementation of vocational school transformation programs.

II. METHODS

A. Research Design

This community service employed a participatory qualitative approach to design, implement, monitor, and evaluate a university-led mentoring intervention conducted under the *SMK Pusat Keunggulan* program. Rather than serving as a conventional research methodology, qualitative techniques were utilized as practical tools to facilitate stakeholder engagement, identify institutional needs, monitor program implementation, and evaluate the outcomes of the mentoring process. This approach is consistent with the participatory nature of community service activities, in which universities collaborate with partner institutions to address contextual challenges and strengthen organizational capacity through continuous interaction and reflective practice.

The mentoring intervention was implemented at SMK Negeri 1 Pangkalanbaru with the objective of strengthening Teaching Factory (TeFa) implementation and expanding industry collaboration. The intervention emphasized collaborative problem-solving involving school leaders, teachers, students, industry representatives, government agencies, and university mentors. Throughout the program, observations, interviews, focus group discussions, and document reviews were conducted not only to collect information but also to support participatory planning, monitor implementation progress, facilitate stakeholder reflection, and assess institutional improvements achieved during the mentoring process.

B. Community Service Location and Duration

The mentoring activities were conducted at SMK Negeri 1 Pangkalanbaru, Bangka Belitung Islands Province, Indonesia, one of the schools participating in the SMK Pusat Keunggulan Program. The program was implemented over approximately six weeks during October to November 2024 and involved active participation from school management, teachers, students, industry representatives, government agencies, and university mentors.

C. Participants and Stakeholders

The mentoring activities involved multiple stakeholders representing the vocational education ecosystem. These participants included:

1. School principal and management team of SMK Negeri 1 Pangkalanbaru.
2. Teachers from the Digital Business competency program.
3. Students participating in Teaching Factory activities.
4. Representatives from the Provincial Education Office.
5. Representatives from BBPPMPV.
6. Industry partners, including PT Impessa Teknologi and Timberpix Creative Group PT Kinarya Imaji Indonesia.

7. Representatives from higher education institutions, including Perbanas Institute, Institut Sains dan Bisnis Atmaluhur, and Universitas Bangka Belitung.

The involvement of multiple stakeholders reflects the collaborative governance approach promoted within the SMK Pusat Keunggulan program and aligns with the Triple Helix model of interaction among academia, industry, and government.

D. Mentoring Framework

The mentoring program followed a structured framework consisting of five sequential stages: (1) initial assessment, (2) stakeholder coordination, (3) mentoring intervention, (4) collaborative implementation, and (5) monitoring and evaluation.

1. Stage 1: Initial Assessment

The mentoring team conducted a preliminary assessment to identify the existing condition of the school, evaluate Teaching Factory implementation, examine available facilities and infrastructure, and assess current industry partnerships. This stage provided baseline information that informed subsequent mentoring activities.



Figure 1. Initial Assessment

2. Stage 2: Stakeholder Coordination

Coordination meetings were conducted with relevant stakeholders, including the Provincial Education Office, BBPPMPV, school management, industry representatives, and higher education institutions. These meetings aimed to establish common objectives, strengthen communication channels, and identify opportunities for collaboration.

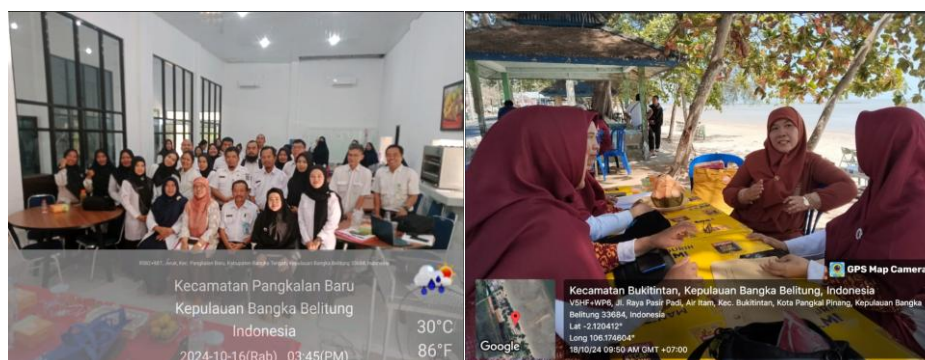


Figure 2. Stakeholder Coordination with The Head of Provincial Education Office and School Management

3. Stage 3: Mentoring Intervention

The mentoring intervention focused on several strategic areas:

- Strengthening Teaching Factory governance.

- Facilitating industry partnerships.
- Improving competency-based learning implementation.
- Supporting teacher professional development.
- Enhancing student competencies in digital business.
- Providing guidance on Teaching Factory management and sustainability.



Figure 3 Mentoring Intervention to Enhance Student Competencies In Digital Business

4. Stage 4: Collaborative Implementation

The intervention was operationalized through various collaborative activities, including:

- Focus Group Discussions (FGDs).
- Industry engagement sessions.
- Partnership negotiations and MoU/PKS development.
- Guest lecturer and practitioner teaching activities.
- E-commerce and digital business training.
- School visits and facility evaluations.



Figure 4. Collaborative Implementation FGD with Industries and Signing MoU

5. Stage 5: Monitoring and Evaluation

Continuous monitoring and evaluation were conducted throughout the mentoring process to assess progress toward predetermined targets. Evaluation focused on partnership development, Teaching Factory implementation, stakeholder participation, competency enhancement, and institutional improvements.



Figure 5. Monitoring and Evaluation with The BBPPMPV Representatives

A. Observation

Direct observations were conducted to assess Teaching Factory implementation, school facilities, learning environments, and stakeholder engagement activities. Observations enabled the mentoring team to document actual conditions and identify areas requiring improvement.

B. Interviews and Informal Discussions

Semi-structured interviews and informal discussions were conducted with school leaders, teachers, students, and industry partners. These interactions provided valuable insights into existing challenges, expectations, and perceived outcomes of the mentoring program.

C. Documentation Review

Documentation analysis included reviewing partnership agreements, school reports, mentoring records, activity documentation, attendance lists, and institutional planning documents. Documentary evidence was used to verify mentoring outcomes and support data triangulation.

D. Focus Group Discussion (FGD)

FGD served as an important mechanism for gathering stakeholder perspectives and facilitating collaborative decision-making. The discussions focused on Teaching Factory development, industry collaboration, workforce preparation, and future partnership opportunities.

E. Success Indicators

The success of the mentoring program was evaluated using indicators established within the SMK Pusat Keunggulan framework, including:

- Increased stakeholder coordination and collaboration.
- Expansion of industry and institutional partnerships.
- Improvement in Teaching Factory implementation level.
- Strengthening of Teaching Factory governance systems.
- Enhancement of teacher and student competencies.
- Increased involvement of industry practitioners in learning activities.
- Development of sustainable collaboration mechanisms among stakeholders.

Achievement of these indicators served as evidence of the effectiveness of university mentoring in supporting vocational school transformation and strengthening industry-oriented learning practices.

III. RESULTS AND DISCUSSION

3.1 Overview of the Mentoring Program

The mentoring program was implemented as part of the SMK Pusat Keunggulan initiative with the primary objective of strengthening Teaching Factory (TeFa) implementation and enhancing industry collaboration at SMK Negeri 1 Pangkalanbaru. The mentoring activities involved multiple stakeholders, including the Provincial Education Office, BBPPMPV, industry representatives, higher education institutions, school leaders, teachers, and students. The collaborative nature of the program reflects the principles of the Triple Helix framework, which emphasizes the interaction among academia, industry, and government in supporting innovation and institutional development (Etzkowitz & Zhou, 2017).

The mentoring process began with stakeholder coordination and institutional assessment, followed by a series of interventions focusing on Teaching Factory development, partnership strengthening, industry engagement, and competency enhancement. Throughout the implementation period, the mentoring team acted as a facilitator, coordinator, and knowledge partner in supporting the school's transformation efforts. Overall, the mentoring activities successfully achieved most of the predetermined targets. Improvements were observed in stakeholder coordination, partnership development, Teaching Factory implementation, governance systems, and competency development. However, several challenges related to infrastructure provision and Teaching Factory revenue generation remained unresolved.

3.2 Strengthening Teaching Factory Implementation

One of the most significant outcomes of the mentoring program was the improvement of Teaching Factory implementation. Prior to mentoring, the school's Teaching Factory activities were categorized at Level 1, indicating that the implementation was still primarily focused on basic competency-based learning activities. Following the mentoring intervention, the Teaching Factory advanced to Level 2, demonstrating stronger integration between learning processes, governance systems, industry involvement, and competency development.

Table 1. Improvement of TeFa Implementation

Indicator	Initial Condition	Target	Final Achievement
Teaching Factory Level	Level 1	Level 2	Level 2
Governance Struture	Basic	Strengthened	Achieved
SOP Development	Competency Based	Community Oriented	Achieved
Learning Environment	Limited	Partneship-Based	Achieved
Industry Participation	Moderate	Enhanced	Achieved
Student Competency Development	Existing	Improved	Achieved

The mentoring team supported the school in strengthening Teaching Factory governance through improvements in organizational structure, standard operating procedures, and learning management systems. Teaching Factory activities were increasingly aligned with community needs and industry expectations, reflecting the principles of authentic learning environments described by Wahjusaputri et al., (2021).

The successful completion of these stages indicates that Teaching Factory activities were conducted systematically and in accordance with recommended implementation standards. Similar findings were reported by Yoto et al., (2024), who concluded that comprehensive Teaching Factory implementation significantly improves students' practical competencies and readiness for employment.

Furthermore, the Business Digital competency program demonstrated notable progress in integrating entrepreneurial learning into educational activities. Students were actively involved in developing and marketing products through digital platforms, thereby enhancing both technical and entrepreneurial competencies. Such activities align with findings by (Heriyati et al., 2023), who emphasized that Teaching Factory serves as an effective mechanism for combining vocational competencies with entrepreneurship education.

3.3 Strengthening Industry Collaboration

A major focus of the mentoring program was the expansion and strengthening of industry partnerships. Prior to mentoring, the school maintained only two active institutional collaborations. Through stakeholder facilitation, networking activities, and Focus Group Discussion (FGD), the number of formal partnerships increased to four institutions.

Table 2. Development of Institutional Partnerships

Aspect	Before Mentoring	After Mentoring
Number of Partnerships	2	4
Industry Partners	1	2
Higher Education Partners	1	2
Graduate Recruitment Clauses	Not Available	Available
Practitioner Teaching	Limited	Expanded
Job Fair Collaboration	Not Available	Available

The newly strengthened partnership network included:

- PT Impessa Teknologi.
- Timberpix Creative Group PT Kinarya Imaji Indonesia.
- Institut Sains dan Bisnis Atmaluhur.
- Universitas Bangka Belitung.

The collaboration with PT Impessa Teknologi was expanded to include graduate recruitment opportunities in addition to existing internship and practitioner-teaching activities. This enhancement demonstrates a shift from transactional partnerships toward strategic collaboration.

An equally important achievement was the establishment of a new partnership with Timberpix Creative Group PT Kinarya Imaji Indonesia. This collaboration provided opportunities for student internships, teacher internships, practitioner teaching, and graduate recruitment. The involvement of industry practitioners directly supports the recommendations of Wahyudin et al., (2025), who argue that vocational schools should establish sustainable industry engagement mechanisms to improve workforce alignment.

The mentoring team also facilitated stronger collaboration with higher education institutions. The partnership with Institut Sains dan Bisnis Atmaluhur was expanded to include job fairs, research collaboration, and community service activities. Additionally, a new collaboration was established with Universitas Bangka Belitung, creating opportunities for academic cooperation and institutional development.

The increase in partnership quality demonstrates that university mentoring can effectively function as a bridging mechanism between vocational institutions and external stakeholders. Such findings support previous research indicating that collaborative partnerships significantly contribute to vocational education quality improvement (Pratama et al., 2025).

3.4 Capacity Building and Competency Enhancement

The mentoring program also contributed to the enhancement of teacher and student competencies. Several activities were conducted to strengthen participants' understanding of digital business practices and contemporary industry trends.

One of the most notable initiatives was the facilitation of e-commerce training through Shopee Academy. The training involved teachers and students from the Business Digital program and focused on:

- Online selling strategies.
- Marketplace optimization.
- Product promotion techniques.
- Digital marketing practices.
- E-commerce entrepreneurship.

These activities are particularly relevant in the context of Industry 4.0, where digital competencies have become essential employability skills. According to Hatmojo & Ikhsannudin (2024), the integration of digital technologies into vocational education significantly enhances students' adaptability to modern workplace environments.

Industry practitioners also participated in mentoring activities by sharing professional experiences and insights regarding digital entrepreneurship and workplace expectations. Such practitioner involvement contributes to bridging the gap between theoretical learning and industrial realities.

The mentoring program further supported teacher professional development through industry interaction and collaborative discussions. Enhanced teacher competencies are critical for sustaining Teaching Factory implementation because teachers serve as facilitators, mentors, and coordinators of learning activities.

3.5 Contribution of University Mentoring to Vocational School Transformation

The findings indicate that university mentoring played a significant role in facilitating institutional transformation at SMK Negeri 1 Pangkalanbaru. The mentoring process generated improvements across multiple dimensions, including governance, collaboration, competency development, and stakeholder engagement.

Table 3. Summary of Mentoring Outcomes

Component	Achievement Status
Stakeholder Coordination	Achieved
Industry Partnership Expansion	Achieved
Teaching Factory Level Improvement	Achieved
Teacher Competency Enhancement	Achieved
Student Competency Enhancement	Achieved
Industry Practitioner Involvement	Achieved
Teaching Factory Revenue Generation	Not Yet Achieved
Infrastructure Enhancement	Partially Achieved

The results suggest that mentoring activities contributed not only to technical improvements but also to organizational learning processes. Through continuous interaction with stakeholders, the school developed stronger collaborative networks and gained access to new resources and opportunities. These findings support the Triple Helix perspective, which emphasizes that educational innovation emerges through collaboration among universities, industries, and government institutions. The mentoring team effectively acted as an intermediary organization connecting stakeholders and facilitating knowledge exchange. The transformation observed during the mentoring process

confirms previous studies highlighting the importance of external facilitation in supporting institutional change within vocational education environments (Safarinah et al., 2022) ; (Wahjusaputri et al., 2021)

3.6 Challenges and Future Development

Despite the positive outcomes achieved through the mentoring program, the transition toward a fully sustainable Teaching Factory ecosystem remains constrained by several institutional and economic factors. First, the Teaching Factory at SMK Negeri 1 Pangkalanbaru is still in the early stage of organizational and business development, where priority has been given to strengthening governance structures, standard operating procedures, and partnership networks rather than immediate commercial production. Consequently, product commercialization and revenue generation have not yet reached a scale capable of supporting the school's operational sustainability. Second, investments in production equipment and physical infrastructure require substantial financial resources that exceed the school's regular operational budget. Although partnerships with industry and higher education institutions were successfully established, most collaborations during the mentoring period focused on capacity building, practitioner involvement, curriculum support, internships, and graduate recruitment rather than direct capital investment or equipment donations. Furthermore, procurement of government-funded educational assets is subject to administrative procedures, budget allocation cycles, and policy priorities that cannot be completed within the relatively short duration of the mentoring program. These findings suggest that while university mentoring can effectively strengthen institutional readiness and collaborative capacity, achieving financial sustainability and infrastructure modernization requires longer-term investment strategies involving government agencies, industry partners, and educational institutions through sustained multi-stakeholder collaboration.

Future development efforts should therefore focus on:

- Strengthening Teaching Factory business models.
- Expanding infrastructure investment and resource mobilization.
- Increasing industry participation in curriculum development.
- Establishing long-term monitoring systems for partnership sustainability.
- Integrating digital entrepreneurship more comprehensively into Teaching Factory activities.

By addressing these challenges, vocational schools can further strengthen their contribution to workforce development and regional economic growth.



Figure 6. Community Service Activity Photo

IV. CONCLUSION

This community service program demonstrates that university-led mentoring can serve as an effective strategy for strengthening Teaching Factory implementation and enhancing industry collaboration within vocational education institutions. The mentoring activities conducted at SMK Negeri 1 Pangkalanbaru successfully facilitated institutional transformation through stakeholder coordination, partnership development, competency enhancement, and governance improvement. The findings reveal that the mentoring intervention contributed significantly to the advancement of Teaching Factory implementation, as evidenced by the school's progression from Teaching Factory Level 1 to Level 2. Improvements were observed in governance structures, learning processes, standard operating procedures, industry engagement, and competency-based educational practices. The implementation of all Teaching Factory stages further indicates that the school has developed a more systematic and industry-oriented learning environment.

Another important outcome of the program was the strengthening of institutional partnerships. The number of active collaborations increased from two to four organizations, involving both industrial partners and higher education institutions. These partnerships expanded opportunities for student internships, teacher professional development, practitioner teaching, graduate recruitment, job fairs, research collaboration, and community service activities. The results highlight the importance of collaborative networks in supporting vocational education quality and workforce relevance. The mentoring activities also contributed to improving teacher and student competencies, particularly in the field of digital business. Through industry engagement and e-commerce training, participants gained practical knowledge and skills that support employability, entrepreneurship, and adaptation to digital transformation. These outcomes align with the objectives of the SMK Pusat Keunggulan program, which seeks to strengthen vocational education responsiveness to labor market needs.

Despite these achievements, several challenges remain. The absence of substantial infrastructure enhancement and the limited ability of Teaching Factory activities to generate sustainable revenue indicate areas requiring further development. Long-term sustainability will depend on continued stakeholder collaboration, resource mobilization, infrastructure investment, and the development of viable Teaching Factory business models. Overall, this study confirms that university mentoring functions not only as a technical assistance mechanism but also as a catalyst for institutional transformation. By facilitating collaboration among schools, industries, higher education institutions, and government agencies, mentoring programs can accelerate vocational education improvement and contribute to the development of a more adaptive, industry-oriented, and sustainable vocational education ecosystem. Future community service initiatives should focus on developing sustainable Teaching Factory business strategies, expanding industry participation in curriculum and competency development, and strengthening digital entrepreneurship integration to ensure long-term institutional impact.

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LIST OF PARTICIPANTS

1. School Principal of SMK Negeri 1 Pangkalanbaru
2. Business Digital Teachers
3. Students of Business Digital Program
4. PT Impessa Teknologi Representatives
5. Timberpix Creative Group PT Kinarya Imaji Indonesia Representatives
6. Institut Sains dan Bisnis Atmaluhur Representatives
7. Universitas Bangka Belitung Representatives
8. Provincial Education Office Representatives
9. BBPPMPV Representatives
10. Perbanas Institute Mentoring Team

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