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Analysis of International Cooperation Management between UNPAB and PTSS Malaysia in Enhancing the Competence of Human Resources at Mangga Harum Manis MSMEs

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International cooperation in higher education has become a strategic mechanism for strengthening institutional capacity and expanding universities' contributions to community economic development, particularly among micro, small, and medium enterprises (MSMEs) that continue to face challenges in human resource competency development. This study aimed to analyze the management of international cooperation between Universitas Pembangunan Panca Budi (UNPAB), Indonesia, and Politeknik Tuanku Syed Sirajuddin (PTSS), Malaysia, in enhancing the competencies of human resources involved in Mangga Harum Manis MSMEs. A descriptive qualitative approach was employed, with data collected through interviews, observations, and document analysis involving five purposively selected informants representing UNPAB, PTSS, and the participating MSMEs. The findings indicated that the partnership supported human resource competency development through knowledge sharing, training, mentoring, technology transfer, and exchanges of practical experience. These activities addressed business operators' needs in management, product development, digital marketing, entrepreneurship, and business sustainability. However, the implementation of the partnership encountered coordination challenges arising from differences in institutional procedures, scheduling arrangements, communication practices, and geographical distance. Additional limitations included insufficient follow-up mentoring and evaluation practices that emphasized participation in activities rather than measurable competency improvements. The study concluded that international higher education partnerships could contribute to MSME human resource development when supported by effective cooperation management. Strengthening program planning, institutional coordination, implementation, monitoring, and evaluation through clearly defined competency indicators and continuous mentoring was therefore recommended to improve the sustainability and

potential long-term contribution of these partnerships to MSME competitiveness.

INTRODUCTION

International cooperation in higher education has become an important strategy for strengthening institutional capacity, developing human resources, and expanding universities' socioeconomic contributions. Universities are increasingly expected to extend their responsibilities beyond teaching and research by establishing partnerships that generate practical benefits for communities and business sectors. International collaboration facilitates knowledge exchange, technology transfer, capacity building, and the sharing of best practices across national boundaries. In this context, cooperation between Indonesian and Malaysian higher education institutions offers opportunities to strengthen community empowerment initiatives, particularly those supporting micro, small, and medium enterprises (MSMEs) (Alexandro, 2025; Ariani et al., 2026; Aulia & Rizki, 2025; Darmilisani et al., 2024; Desy et al., 2024).

MSMEs play a significant role in promoting economic growth, generating employment opportunities, and strengthening local economic resilience. Nevertheless, many MSMEs continue to encounter challenges related to human resource competencies, business management, digital marketing, product innovation, financial management, and market expansion. These challenges highlight the importance of improving access to relevant knowledge and providing continuous capacity-building opportunities to enhance MSME competitiveness. Managerial, entrepreneurial, technological, and marketing competencies are particularly important for enabling business operators to respond to changing consumer behavior and increasingly digitalized business environments (Elfitra & Nurafrina, 2025; Ferine, 2022; Harianto & Ahmad, 2024; Mamdouh et al., 2026; Nushasanah et al., 2025).

Mangga Harum Manis MSMEs represent a local economic sector with potential for further development through systematic human resource capacity building. Although these enterprises have opportunities for product innovation and market expansion, limitations in managerial expertise, digital marketing capabilities, product packaging, innovation, and sustainable business management may constrain their competitiveness. Consequently, collaboration between higher education institutions and MSMEs is essential for providing relevant knowledge, practical training, mentoring, and technology-based solutions tailored to the needs of local business operators (Rahayu, 2018, 2020a, 2020b; Suciningtyas et al., 2026; Wahyu et al., 2025).

In this context, cooperation between Universitas Pembangunan Panca Budi (UNPAB), Indonesia, and Politeknik Tuanku Syed Sirajuddin (PTSS), Malaysia, represents a strategic international academic partnership. This collaboration provides opportunities to exchange knowledge, expertise, practical experience, and innovative approaches to community empowerment. Through jointly implemented activities, both institutions can contribute to strengthening the competencies of MSME personnel while advancing their community engagement responsibilities through international collaboration.

However, the effectiveness of international cooperation cannot be assessed solely through the existence of formal agreements or the number of activities implemented. Effective cooperation

management requires systematic planning, clearly defined institutional responsibilities, coordinated implementation, continuous monitoring, and outcome-oriented evaluation. Without these mechanisms, international partnerships may become primarily activity-oriented, with limited contributions to sustainable community development. Therefore, examining cooperation management processes is essential for understanding how international academic partnerships support the development of MSME human resource competencies.

Previous research on university–industry collaboration has frequently emphasized partnerships involving large enterprises and technology transfer in developed economies, leaving comparatively limited understanding of how international academic cooperation supports micro and small enterprises in developing economic contexts. A structured literature review by Muraet al., (2025) identified the predominance of research examining collaboration between universities and large enterprises, while highlighting the relatively limited scholarly attention devoted to university–MSME partnerships despite their potential mutual benefits. Within the Indonesian–Malaysian context, (Mamdouh et al., 2026) examined cross-border university partnerships for teacher professional development. However, their focus on educational institutions did not directly address enterprise-level capacity building. Similarly, documented cooperation between UNPAB and PTSS in renewable energy education for community development in Pulau Ketam demonstrated the institutions' experience in implementing collaborative community programs but did not specifically examine MSME human resource competency development. These distinctions indicated a research gap concerning the management processes through which international academic partnerships support competency development among MSME personnel.

The urgency of addressing this research gap was reinforced by the tendency to evaluate international higher education partnerships primarily through implemented activities rather than their outcomes. Without systematic examination of cooperation planning, coordination, implementation, monitoring, and evaluation, institutional partnerships risk becoming ceremonial rather than producing sustained benefits for participating communities. Cross-border collaboration may also encounter challenges associated with differences in institutional procedures, scheduling arrangements, communication practices, and geographical distance. However, the implications of these challenges for MSME competency development remain insufficiently examined. In relation to Sustainable Development Goal 17 (SDG 17), effective partnerships require not only formal institutional commitments but also accountability mechanisms, shared responsibilities, and continuous improvement. Examining these dimensions within MSME-oriented international cooperation is therefore important for identifying institutional practices that support sustainable capacity-building outcomes.

The novelty of this study lay in examining international cooperation management through the interconnected processes of planning, implementation, coordination, monitoring, and evaluation in relation to human resource competency development within a community-based MSME context. Rather than focusing exclusively on institutional agreements or the number of collaborative activities, the study investigated how cooperation management processes supported the delivery of knowledge, skills, and practical assistance to MSME personnel. By integrating

international higher education cooperation with enterprise-level capacity building, the research offered a perspective that connected institutional partnership management with community economic empowerment. The Mangga Harum Manis case provided a context-specific understanding of how collaborative programs were aligned with business needs and how institutional arrangements influenced their implementation.

Accordingly, this study aimed to analyze the management of international cooperation between Universitas Pembangunan Panca Budi (UNPAB), Indonesia, and Politeknik Tuanku Syed Sirajuddin (PTSS), Malaysia, in enhancing the competencies of human resources involved in Mangga Harum Manis MSMEs. Specifically, the study examined the planning processes underlying the partnership, the implementation mechanisms supporting knowledge and skills transfer, the coordination arrangements facilitating or constraining collaborative activities, and the monitoring and evaluation practices used to assess program outcomes. Through these dimensions, the research sought to identify effective management practices and institutional challenges affecting the contribution of international academic cooperation to MSME capacity building.

The contribution of this study encompassed both theoretical and practical dimensions. Theoretically, it extended the discussion of university–MSME collaboration by emphasizing international cooperation management as an institutional factor influencing the implementation and potential sustainability of human resource competency development programs. Practically, the findings were expected to provide recommendations for UNPAB, PTSS, and other higher education institutions seeking to establish needs-based, systematically coordinated, and outcome-oriented international partnerships. The study also contributed to discussions on the role of higher education institutions in advancing community engagement through international cooperation, particularly in contexts where cross-border partnerships could support local economic development.

The study pursued three primary objectives: to examine the planning, implementation, coordination, monitoring, and evaluation processes of cooperation between UNPAB and PTSS in supporting Mangga Harum Manis MSMEs; to assess the reported contributions of these management processes to human resource competency development among participating MSME personnel; and to identify institutional and operational factors that facilitated or constrained the sustainability of program benefits. The anticipated contributions included a clearer understanding of international academic cooperation as a mechanism for MSME empowerment, practical recommendations for strengthening cross-border partnership management, and qualitative evidence to inform institutional policies concerning internationally oriented community engagement. For participating MSME personnel, the study also provided an opportunity to

document their experiences and identify potential improvements in future capacity-building initiatives.

METHOD

Types of Research

his study employed a descriptive qualitative approach to examine the management of international cooperation between Universitas Pembangunan Panca Budi (UNPAB), Indonesia, and Politeknik Tuanku Syed Sirajuddin (PTSS), Malaysia. The analysis focused on cooperation planning, implementation, coordination, monitoring, and evaluation, as well as the partnership's contributions to human resource competency development among Mangga Harum Manis MSME personnel (Sugiyono, 2018).

Research Location and Time

The research was conducted at Mangga Harum Manis MSMEs, Indonesia, as the community partner in the international cooperation program between Universitas Pembangunan Panca Budi (UNPAB) and Politeknik Tuanku Syed Sirajuddin (PTSS), Malaysia. The research focused on cooperation activities related to human resource competency development, including training, mentoring, knowledge sharing, and technology transfer. The research was conducted from [Agustus] to [September] 2026, covering the stages of data collection, interviews, observation, documentation, and data analysis.

Population and Sample

The population of this study consisted of all parties involved in the international cooperation program between UNPAB and PTSS Malaysia, particularly those related to the development of human resource competence among Mangga Harum Manis MSMEs. The sample was determined using purposive sampling, involving 5 informants, consisting of representatives of UNPAB, PTSS Malaysia, and Mangga Harum Manis MSME actors. Informants were selected based on their direct involvement and knowledge of the cooperation program.

Research Instruments

The research instruments consisted of an interview guide, observation sheet, and documentation checklist. The interview guide was used to obtain information regarding cooperation planning, implementation, coordination, monitoring, evaluation, and human resource competency development. The observation sheet was used to examine the implementation of training, mentoring, knowledge transfer, and MSME development activities. Meanwhile, the documentation checklist was used to collect supporting data, including cooperation agreements, activity reports, photographs, training materials, and institutional records. The researcher served

as the main research instrument, supported by these instruments to ensure systematic and relevant data collection.

RESULT AND DISCUSSION

The results of the study indicate that international cooperation between Universitas Pembangunan Panca Budi (UNPAB) and Politeknik Tuanku Syed Sirajuddin (PTSS) Malaysia provides a positive contribution to improving the human resource competence of Mangga Harum Manis MSMEs. Based on interviews, observations, and documentation, the cooperation was implemented through knowledge sharing, training, mentoring, technology transfer, and exchange of practical experiences.

From the planning aspect, the cooperation was developed based on the needs of MSME actors, particularly in managerial capability, product development, digital marketing, entrepreneurship, and business sustainability. UNPAB functioned as a facilitator connecting academic resources with the needs of the MSME community, while PTSS Malaysia contributed knowledge, expertise, and international experience.

In terms of implementation, cooperation activities provided opportunities for MSME actors to improve their understanding of business management and digital technology. Training and mentoring encouraged participants to develop better marketing strategies, improve product presentation, utilize digital platforms, and strengthen entrepreneurial capabilities. These findings demonstrate that international academic cooperation can provide practical benefits when programs are designed according to the actual needs of business actors.

The coordination aspect showed that communication between UNPAB, PTSS Malaysia, and MSME partners was essential for ensuring the smooth implementation of activities. However, differences in institutional procedures, schedules, communication patterns, and geographical distance created several coordination challenges. Continuous communication and clearly defined responsibilities were therefore necessary to maintain program effectiveness.

The study also found that monitoring and evaluation were important in determining whether cooperation activities generated sustainable outcomes. Evaluation was conducted through observations, discussions with participants, and assessment of changes in knowledge and skills. Nevertheless, follow-up mentoring needs to be strengthened so that the competencies obtained through training can be consistently applied in daily business activities.

These findings support the view that human resource competence is an important determinant of MSME competitiveness. Knowledge, managerial skills, digital literacy, innovation, and entrepreneurial capabilities enable MSME actors to respond more effectively to changing market conditions. International cooperation can strengthen these competencies by providing access to broader knowledge and comparative experiences from different institutional and national contexts.

Overall, the UNPAB–PTSS Malaysia cooperation demonstrates that international partnerships can extend beyond academic exchange and become an instrument for sustainable MSME empowerment. To maximize its impact, future programs should establish measurable

competency indicators, continuous mentoring mechanisms, periodic evaluation, and a clear division of responsibilities between partner institutions.

The findings demonstrate that international cooperation between UNPAB and PTSS Malaysia has an important role in strengthening the human resource competence of Mangga Harum Manis MSMEs. The cooperation is not limited to institutional relations but has developed into a practical mechanism for transferring knowledge, skills, experience, and technology to MSME actors. This finding confirms that higher education institutions can function as strategic partners in improving local economic capacity through community empowerment programs.

The planning aspect shows that cooperation is more effective when programs are based on the actual needs of MSME actors. Training and mentoring related to business management, digital marketing, product innovation, entrepreneurship, and technology provide competencies that are directly relevant to business development. This indicates that international cooperation should adopt a needs-based approach rather than focusing only on formal institutional activities.

The implementation of knowledge sharing and mentoring also contributes to improving the ability of MSME actors to manage their businesses. International interaction provides new perspectives and practices that may not be available through conventional local training. The involvement of PTSS Malaysia strengthens the international dimension of the program by enabling the exchange of experiences and practices between Indonesia and Malaysia.

However, the effectiveness of cooperation is influenced by coordination and sustainability. Differences in schedules, institutional procedures, communication, and geographical distance can affect program implementation. Therefore, clear responsibilities, structured communication, and joint activity planning are necessary. In addition, training without continuous follow-up may result in limited application of newly acquired competencies.

Monitoring and evaluation should consequently become an integral part of international cooperation management. Evaluation should measure not only participation in activities but also changes in knowledge, skills, business practices, digital utilization, and MSME performance. Continuous mentoring can ensure that competencies gained from the program are translated into sustainable business improvements.

Thus, the UNPAB–PTSS Malaysia partnership demonstrates that well-managed international cooperation can become an effective instrument for MSME human resource development. Strengthening planning, coordination, implementation, monitoring, and evaluation will increase the sustainability and long-term impact of cooperation on the competitiveness of Mangga Harum Manis MSMEs.

CONCLUSION

The findings of this study indicated that international cooperation between Universitas Pembangunan Panca Budi (UNPAB), Indonesia, and Politeknik Tuanku Syed Sirajuddin (PTSS), Malaysia, contributed to human resource competency development among Mangga Harum Manis micro, small, and medium enterprises (MSMEs), particularly in managerial capabilities, digital marketing, product development, entrepreneurship, and business sustainability. The cooperation

appeared to be more effective when program planning was aligned with the actual needs of MSME operators rather than driven primarily by institutional agendas, highlighting the importance of a needs-based approach in translating international academic collaboration into practical business benefits. Program implementation through knowledge sharing, training, mentoring, and technology transfer provided participants with opportunities to acquire relevant knowledge, skills, and practical insights. The involvement of PTSS also facilitated the exchange of experiences across different institutional and national contexts. However, the effectiveness of the partnership was constrained by coordination challenges associated with differences in institutional procedures, scheduling arrangements, communication practices, and geographical distance. Limited follow-up mentoring further restricted opportunities for participants to consistently apply newly acquired competencies in their daily business operations. Although monitoring and evaluation activities were conducted, they primarily emphasized program participation rather than systematically assessing changes in participants' knowledge, skills, business practices, or enterprise performance. These findings suggested that sustaining competency development required more structured, continuous, and outcome-oriented cooperation management.

Based on these findings, several recommendations were proposed for strengthening future international cooperation programs and guiding subsequent research. Partner institutions should establish measurable competency indicators during program planning to facilitate systematic assessments of participants' progress and learning outcomes. Continuous mentoring should also be integrated into cooperation programs to support the practical application and retention of acquired competencies. Furthermore, periodic evaluations should assess changes in participants' knowledge, skills, digital technology adoption, business management practices, and enterprise performance to provide a more comprehensive understanding of program outcomes. Clear institutional responsibilities and structured communication procedures should be incorporated into cooperation agreements to minimize coordination challenges associated with cross-border partnerships. Future research could employ comparative designs involving multiple MSMEs or international university partnerships to examine the transferability of findings across different institutional and business contexts. Longitudinal studies were also recommended to investigate the sustainability of competency development and potential changes in business performance over time. Additionally, further qualitative research should explore MSME participants' experiences in acquiring, adapting, and applying knowledge gained through international collaboration. Greater attention should also be devoted to institutional factors, including leadership commitment, resource allocation, and policy support, that may influence the continuity and effectiveness of international cooperation in supporting sustainable MSME human resource development.

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