

Evaluating The Impact of Agro-Entrepreneurial Activities In an Academic Health Promotion Program at a Children's Activity Centre in Kuala Muda

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ABSTRACT

In 2016, the government launched the Young Agropreneur Program to encourage young people to participate in agriculture, agri-food, and entrepreneurship. To support the growth of young agropreneurs, promoting interest from an early age is essential. Indeed, some programs target schoolchildren to cultivate this interest, but their effectiveness remains uncertain. This study examines children's interest in agropreneurship at the Pusat Aktiviti Kanak-Kanak (PAKK) Kuala Muda, Penaga. The objective is to assess the level of attitude and knowledge among children exposed to activities by Universiti Teknologi MARA Cawangan Pulau Pinang (UiTM CPP) that enhance knowledge, skills, and interest in entrepreneurship, agriculture, and health. The study sample involves 20 children, with data collected through interviews and observations during activities. Results indicate that children's knowledge, awareness, and interest can influence their interests towards agropreneurship. However, there is potential to improve their attitudes and awareness. This study provides preliminary insights for policymakers to encourage interest in agropreneurship from an early age through targeted support schemes, helping higher education institutions design focused programs that foster greater engagement in this field.

Keywords: children, effectiveness, interest, young agropreneur

INTRODUCTION

The Malaysian Department of Statistics (2024) reported that the agriculture sector contributes 7.2 % of the Gross Domestic Product (GDP) in the second quarter of 2024. This makes it second highest contributor among six key sectors driving Malaysia's GDP. The National Agri-Food Policy (NAP 2.0) 2021-2030 and the Young Agropreneur Program (YAP) have been introduced by the government to strengthen the country's agri-food sector, ensuring food sustainability and security for the future. Both

initiatives emphasise the need to develop a skilled and knowledgeable young workforce in this field. Early exposure, particularly among children, can prepare them with an awareness of the importance of agriculture, as an essential source of food and economic stability. Integrating agropreneurial activities for children in Malaysia has gained attention as a way to foster entrepreneurial skills and promote sustainable farming practices. However, quantitative outcomes on the effectiveness of these programs are infrequently reported.

Recent studies highlight the potential of these activities in enhancing children's understanding of agriculture, inspiring a sense of responsibility, and encouraging innovation in food production. For instance, Jaafar et al. (2023) noted that involving children in agropreneurship not only builds practical skills but also promotes positive attitudes toward agriculture as a viable career path. Similarly, Ambad (2024) reported that such initiatives could improve children's problem-solving and teamwork skills, crucial for future entrepreneurial endeavors. Nonetheless, challenges persist, including the need for well-structured programs and sufficient resources to effectively support these activities. Overall, integrating agropreneurship into children's education in Malaysia presents a promising approach to developing a new generation that is environmentally aware and economically savvy, as supported by various studies.

This descriptive study aims to assess the attitudes, knowledge, and awareness of children at Pusat Aktiviti Kanak-Kanak (PAKK), Kuala Muda, Penaga by exposing them to community-based agropreneurial activities organised by Universiti Teknologi MARA, Cawangan Pulau Pinang (UiTM CPP). Findings from the study will provide initial insights for developing comprehensive potential integrative programs by UiTM CPP and other stakeholders.

LITERATURE REVIEW

Integrating agropreneurship into the education system for children in Malaysia is a relatively new yet increasingly significant field. In light of global concerns regarding food security, environmental sustainability, and economic diversification, promoting agropreneurial activities among children has gained attention as a strategic approach to promote a new generation that is knowledgeable in agriculture and motivated toward entrepreneurship. This literature review explores various aspects of promoting agropreneurial activities among children in Malaysia, examining the benefits, challenges, and strategies within the framework of national policies such as the National Agri-Food Policy 2021-2030 and the Young Agropreneur Program.

Agropreneurship combines agriculture with entrepreneurship, focusing on applying business principles to agriculture and food production. It involves innovative approaches to traditional farming, integrating technology and market-based strategies to enhance productivity, profitability, and sustainability. Agropreneurs are often viewed as catalysts for rural development, job creation, and food security, which are crucial in the context of Malaysia's socio-economic development. The Ministry of Education Malaysia has initiated several programs aimed at incorporating agropreneurship into schools, such as school gardens, agriculture clubs, and entrepreneurship modules within the curriculum. These initiatives align with the government's broader objectives under the National Agri-Food Policy 2021-2030, which emphasises the necessity of nurturing a new generation of agropreneurs to ensure the sustainability and competitiveness of the agri-food sector.

Young Agropreneur Program

The National Agri-Food Policy 2021-2030 serves as a comprehensive framework outlining Malaysia's strategies to ensure food security, enhance the sustainability of the agri-food sector, and

promote economic growth through agro-based industries. A key objective of this policy is to develop human capital within the agri-food sector, particularly by promoting interest and skills in agriculture among youth. Promoting agropreneurial activities among children is viewed as a critical component in achieving this objective. By introducing agropreneurship principles at an early age, the policy aims to cultivate a future generation of agropreneurs equipped to drive innovation and sustainability in the agri-food sector. This approach is expected to contribute to the long-term resilience of Malaysia's food system and reduce the country's reliance on food imports.

The Young Agropreneur Program (YAP) is another significant initiative by the Malaysian government aimed at promoting agropreneurship among youth. Initiated in 2016 by the former Ministry of Agriculture and Agro-based Industry, this program provides financial assistance, training, and guidance to young Malaysians interested in starting agro-based businesses (Ministry of Agriculture and Food Industry, 2021). While primarily focusing on young adults, the principles and objectives of YAP are also relevant for promoting agropreneurial activities among children. By exposing children to the possibilities of agropreneurship from an early age, the program lays the groundwork for their future participation in initiatives like the YAP as they mature. One of the main benefits of promoting agropreneurial activities among children is the enhancement of agricultural literacy (Muhsain et al., 2022). Children exposed to agropreneurship early on are more likely to develop a deep understanding of agricultural practices, food production processes, and the importance of sustainable resource management. This knowledge is crucial for developing an environmentally aware generation capable of making informed decisions about food production and consumption (Yaakub et al., 2022). Moreover, agricultural literacy among children can lead to a greater awareness of global issues such as climate change, food insecurity and biodiversity decline. Understanding agriculture's role in these issues prepares children to contribute solutions as future leaders, entrepreneurs, and engaged citizens.

Agropreneurial activities provide children with practical entrepreneurship experience, helping them develop essential skills such as critical thinking, creativity, financial literacy, and risk management. These skills are valuable not only for those pursuing careers in agriculture but are also transferable to other sectors. According to Ambad (2024), children involved in agropreneurial activities tend to show improved problem-solving abilities and teamwork skills, both of which are crucial for success in any entrepreneurial venture. Additionally, these activities promote initiative and resilience in children, equipping them to navigate challenges and uncertainties in the business world. Promoting agropreneurship among children can also contribute to career diversification in Malaysia. Traditionally, agriculture has not been perceived as an attractive career option for many Malaysian youths, leading to a decline in interest in the sector. However, by highlighting the entrepreneurial potential within agriculture, agropreneurial activities can help shift this perception and attract more young people to the field. The development of agropreneurial competencies can act as a catalyst for economic growth and create market opportunities for agropreneurs (Yaakub et al., 2022). In the long run, this shift can contribute to economic development by creating new business opportunities, increasing agricultural productivity, and enhancing food security. A more diversified economy with a robust agri-food sector is better positioned to withstand global economic fluctuations and ensure sustainable growth.

Children and Agropreneurship

Early exposure to agropreneurship can play a critical role in shaping children's perceptions of agriculture and entrepreneurship. According to Jaafar et al. (2023), engaging children in agropreneurship helps them develop practical skills and a positive attitude toward agriculture as a viable career path. This early involvement can dismiss negative perceptions of farming, which is often viewed as a low-status profession, and highlight its potential as a dynamic, rewarding and profitable sector. Research indicates that introducing children to agropreneurship can enhance their problem-solving abilities, teamwork, and leadership skills (Ambad, 2024). These competencies are not only important for future entrepreneurs but also contribute to their overall personal growth. Furthermore, early exposure to agropreneurship can instill an appreciation for environment responsibility, as children

learn about sustainable farming practices and their impacts on food security and ecosystem health. Conventionally, Malaysia's education system has focused on academic excellence, with less emphasis on vocational skills and entrepreneurship. However, recent educational reforms have recognised the need to prepare students with a broader skill set, including those related to agriculture and entrepreneurship. Integrating agropreneurship into the curriculum is viewed as a means to minimise this gap.

Promotion of Agropreneurial Activities Among Children

An effective strategy for promoting agropreneurial activities among children is the implementation of school-based agropreneurship programs. These programs can include practical activities such as gardening, planting, and food processing, along with classroom instruction in agricultural science, economics, and entrepreneurship. School-based programs offer students hands-on experience in agriculture, helping them develop a deeper understanding of the subject and its relevance to their lives (Muhsain et al., 2022). Furthermore, these programs can be tailored to local contexts, allowing students to learn about specific agricultural practices and challenges in their regions. With adequate guidance and support from various stakeholders including families, schools, and relevant agencies such as higher education institutions and students can succeed in agropreneurship. A comprehensive support system not only aids in learning technical skills but also promotes confidence and readiness to tackle challenges in the entrepreneurial landscape. As stated by Zainol et al. (2019), a robust support system is crucial for the sustainability of agropreneurial transition programs, as demonstrated in a mushroom cultivation program for students with learning disabilities. Collaboration with local farmers and agropreneurs is also an effective strategy for promoting agropreneurial activities among children. By partnering with experienced agricultural professionals, schools can provide students with real-world insights into the challenges and opportunities within the agri-food sector.

METHODOLOGY

The study mainly involved conducting interviews with participants from the Pusat Aktiviti Kanak-Kanak (PAKK) in Kuala Muda, Penaga, which were documented through completed survey forms during a health promotion community program held at the centre. The aim of the study is to explore the involvement and effectiveness of agropreneurship activities among children aged 7 to 12 years. The activities are part of a health-focused community engagement program conducted at the center, which integrates entrepreneurship and gardening as healthy initiatives that promote overall well-being.

The study population consists of children aged 7 to 12 at PAKK Kuala Muda, with 20 participants that participated in the activities, based on information from the PAKK supervisor, who is also a local resident. The selection of the Kuala Muda area for this study is based on its strategic location in Penaga, Seberang Perai Utara, where the primary land use includes fishing and agriculture, along with significant rural housing. The presence of these activities makes the area relevant for studying agropreneurship among children, providing a real-world context for agricultural practices. This rural setting allows for observing how agropreneurship activities are integrated into the community's daily life.

This observation study was conducted as part of community empowerment activities conducted by Universiti Teknologi MARA Cawangan Pulau Pinang (UiTM CPP) in collaboration with government agencies. These activities included practical hydroponics planting sessions and briefings by the Seberang Perai Utara, Department of Agricultural. Another activity involved participants visiting the Ara Kuda Permanent Food Production Park (TPKM) and attending a Mind Transformation session to raise awareness about agricultural entrepreneurship. Additional activities included talks and DIY sessions on gardening's health benefits and hygiene practices like using hand sanitiser.

This study uses two main data collection methods. Interviews were conducted with children to obtain qualitative data on their experiences, perceptions, and involvement in agropreneurship activities. These interviews provided insights into children's attitudes towards agriculture and entrepreneurship, as well as the skills they developed through participation. A survey was administered to gather quantitative data regarding respondents' demographic characteristics, such as age, gender, and ethnicity. The survey also included questions intended to measure children's knowledge, interest, and awareness of agropreneurship.

Participants' demographic information, such as age, gender, and ethnicity, was analysed using descriptive statistics to provide an overview of the sample population. The Shapiro-Wilk test was performed to assess the normality of data distribution. This test was chosen due to the small sample size ($n=20$), making it suitable for detecting deviations from normality. Quantitative data from the surveys were analyzed using SPSS Statistics software. Descriptive statistics were employed to summarize the data, while inferential statistics were used to identify significant differences in responses based on participant feedback, utilizing the non-parametric Wilcoxon Signed Rank Test.

RESULTS AND DISCUSSION

Based on data obtained from the study at the PAKK, several key findings were noted regarding children's knowledge, awareness, and interest in agropreneurship activities. The study involved 20 Malay respondents aged 7 to 12 years, of which 65% were girls.

Normality analysis by the Shapiro-Wilk test showed that the data were not normally distributed. Consequently, the differences before and after the agropreneurship activities were analysed using the non-parametric Wilcoxon Signed Rank test. The results indicated a significant increase in children's understanding pertaining to the importance of gardening activities and health, with a p-value of 0.01 (Figure 1). This indicates that the program successfully enhanced children's understanding of how gardening contributes to their physical and mental well-being. These findings align with previous studies that reported a rise in students' knowledge about medicinal plants from 20% to 90% following similar educational interventions (Apindiati, 2024), emphasising the effectiveness of practical education in improving health-related knowledge about plants.

Additionally, awareness of the importance of gardening activities significantly increased ($p = 0.03$). This finding supports research indicating that gardening education in early childhood can play a crucial role in cognitive and affective development. This is as demonstrated in a study involving 60 six-year-old students at a kindergarten in East Java, Indonesia (Agustina et al., 2023) (Figure 1).

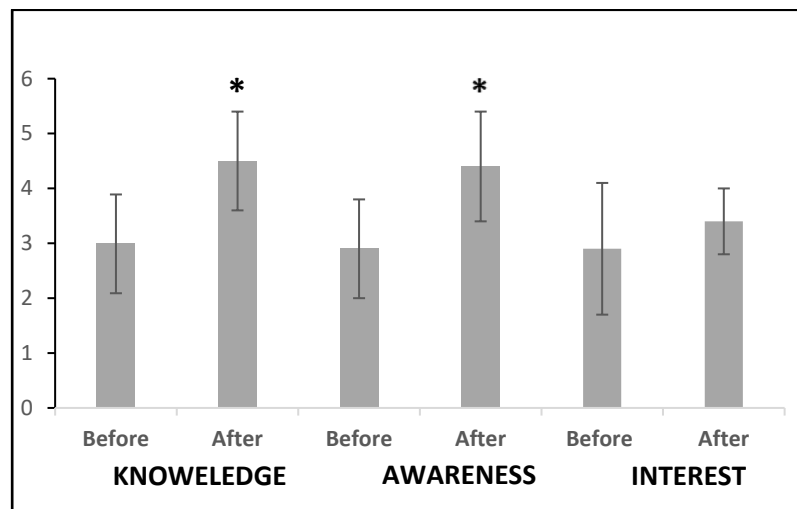


Figure 1: Effects of Community Engagement Health Program on Knowledge, Awareness, and Interest in Gardening Activities, at Pusat Aktiviti Kanak-Kanak (PAKK) (n=20). * indicates a significant difference compared to the before group, $p < 0.05$.

Although interest in gardening activities did not show significant changes ($p = 0.152$), the findings are noteworthy as they reflect existing interest among children in this area. This aligns with previous research suggesting that while children exhibit interest in gardening, more interactive approaches are needed to sustain and enhance their engagement (Agustina et al., 2023). Conversely, interest in entrepreneurship also did not yield significant results ($p = 0.427$). This possibly indicates that while children are interested in gardening, they are less engaged or less aware of how the concept of entrepreneurship can be integrated into these activities. This finding highlights a gap in integrating entrepreneurial concepts into gardening activities, a concern reflected in another study by Suk & Jong-Yeol, 2023, that emphasises the need for more effective horticultural therapy programs that engage children in practical applications (Suk & Jong-Yeol, 2023).

Furthermore, the level of knowledge acquired about entrepreneurship activities ($p = 0.295$) suggests that, despite efforts to raise awareness about entrepreneurship, the impact has not yet reached a significant level. This is consistent with findings from a study showing that understanding and interest in entrepreneurship among children require a more holistic and integrative educational approach to achieve the desired impact (Ogbari et al., 2024). Unfortunately, awareness of the benefits of entrepreneurship, with a p -value of 0.863, indicates a low level of practice among children regarding this aspect, necessitating further efforts to encourage and educate the younger generation about the potential for entrepreneurship in agriculture (Figure 2).

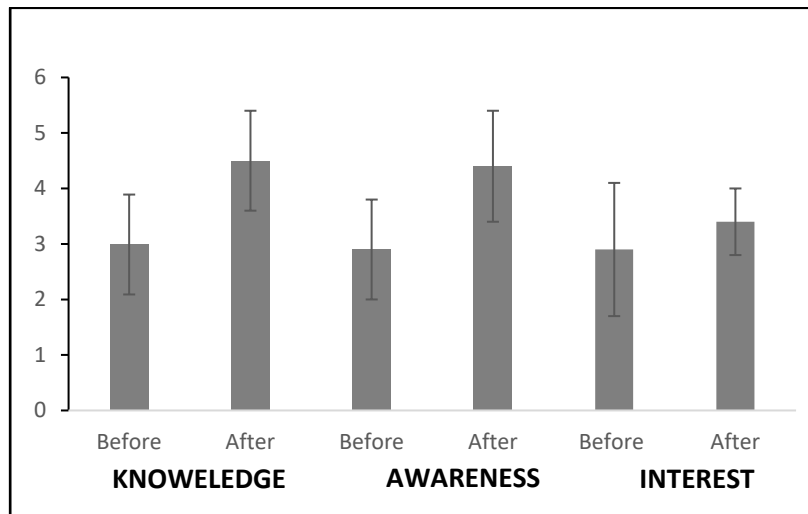


Figure 2: Effects of Community Engagement Health Program on Knowledge, Awareness, and Interest in Entrepreneurship at Pusat Aktiviti Kanak-Kanak (PAKK) (n=20).

Table 1 indicates that a majority of participants (75%) found the health talks, demonstrations, and agro-entrepreneurship programs to be beneficial. This suggests that practical activities, such as talks and demonstrations, are more effective in engaging children and providing benefits compared to purely theoretical approaches. Overall, these findings suggest that practical agro-entrepreneurship programs have significant potential for promoting children's knowledge and awareness regarding gardening and health. However, further efforts are needed to increase their interest and understanding of entrepreneurship aspects. Moving forward, a more comprehensive program that practically integrates entrepreneurial elements is potentially necessary to achieve higher effectiveness.

Table 1: Participants' Perspectives on Agro-Entrepreneurship as part of the Community Engagement Health Program, at the Pusat Aktiviti Kanak-Kanak (PAKK) (n=20).

Description	n (%)
Interest in Learning More About Agro-Entrepreneurship	
Yes	14 (70)
No	0
Uncertain	6 (30)
Agro-Entrepreneurship Sector Can Generate Income	
Yes	9 (45)
No	9 (45)
Uncertain	2 (10)
The Health and Agro-Entrepreneurship Workshop and Demonstration Program is Beneficial.	
Yes	15 (75)
No	3 (15)
Uncertain	2 (10)

CONCLUSION

Based on the findings from the study conducted at the PAKK Kuala Muda, Penaga, several key conclusions can be concluded. The agropreneurship program focused on practical activities such as gardening and health hygiene has successfully improved children's knowledge and awareness of its importance for health, as evidenced by significant improvements in their understanding of gardening. However, despite interest in gardening activities, their interest and understanding of entrepreneurship need further improvement. This indicates that while agricultural aspects are interesting, the entrepreneurial elements need greater emphasis and more engaging, practical approaches. In this

context, university Corporate Social Responsibility (CSR) programs can play a crucial role in supporting these recommendations. University CSR initiatives can provide the resources, expertise, and networks necessary to strengthen agropreneurship programs for children. With university involvement, these programs can be enriched with more practical and innovative entrepreneurship modules, alongside direct mentorship from experienced educators. Furthermore, universities can significantly contribute by engaging the local community through collaboration with schools, children's activity centres, and local agencies to broaden the reach and impact of agropreneurship programs. This collaboration will not only enhance program effectiveness but also ensure the sustainability and continuity of the knowledge and skills acquired by children over the long term. Thus, active university involvement through their CSR programs can strengthen agropreneurship initiatives among children, fostering not only knowledge of gardening but also cultivating a more competitive and entrepreneurial generation.

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AUTHORS' CONTRIBUTION

Muhsain, S.N.F., Yusmaniar, Y. and Wan Ismail, W. N. H. conducted the observations. Muhsain, S.N.F. and Ibrahim, N. A. contributed to the data preparation and interpretation of the results. Muhsain, S.N.F. led the manuscript writing. All authors provided critical feedback and contributed to shaping the research, analysis and manuscript.

CONFLICT OF INTEREST DECLARATION

We certify that the article is the Authors' and Co-Authors' original work. The article has not received prior publication and is not under consideration for publication in journal elsewhere. This manuscript has not been submitted for publication, nor has it been published in whole or in part elsewhere. We testify to the fact that all Authors have contributed to the work, for submission to Jurnal Intelek.

REFERENCES

Ambad, S. N. A., Andrew, J. V., Budin, D. K. A., Mawardi, F., Joseph, H., Damit, D. H. D. A., & Saptu, M. N. F. W. (2024). Food insecurity: Exploring the challenges faced by youth agropreneurs. In A. K. Othman, M. K. B. A. Rahman, S. Noranee, N. A. R. Demong, & A. Mat (Eds.), *Industry-academia linkages for business sustainability European Proceedings of Social and Behavioural Sciences*, 271–285. <https://doi.org/10.15405/epsbs.2024.05.23>

- Apindiati, R. K. (2024). Sosialisasi pola hidup bersih dan sehat melalui pembuatan tanaman obat keluarga. *Sasambo: Jurnal Abdimas (Journal of Community Service)*, 6(2), 306–318. <https://doi.org/10.36312/sasambo.v6i2.1937>
- Agustina, R., Fatmawati, F. A., Zahriani, F., Zulwati, P. R., Fauziah, S., Faridah, I., Hartanti, T., Insyarah, N., & Ardiansyah, H. (2023). Gardening education in early childhood: Important factors supporting the success of implementing it. *Gateways: International Journal of Community Research and Engagement*, 16(1), 1–13. <https://doi.org/10.5130/ijcre.v16i1.8478>
- Department of Statistic Malaysia. (2024). Retrieved 2 November 2024 from <https://open.dosm.gov.my/dashboard/gdp>
- Jaafar, M., Jalali, A., Suffarruddin, S., & Ramasamy, N. (2023). The determinants of becoming sustainable agropreneurs: Evidence from the bottom 40 groups in Malaysia. *Sustainability*, 15(10), Article 8283. <https://doi.org/10.3390/su15108283>
- Kementerian Pertanian & Industri Asas Tani Malaysia. (2021). Retrieved from <http://www.moa.gov.my>
- Muhsain, S. N. F., Zainal, N. F., Harun, N. H., Abdul Halim, 'I., & Md Yusoff, M. S. (2022). Kecenderungan kanak-kanak terhadap bidang agropreneur: Kajian kes di Pusat Aktiviti Kanak-Kanak Kuala Muda, Malaysia. *Asian People Journal (APJ)*, 5(2), 161–168. <https://doi.org/10.37231/apj.2022.5.2.468>
- Ogbari, M. E., Uzoma, G. K., Chima, F. O., Olarewaju, O., Olokundun, M., & Ufua, D. E. (2024). Towards an integrative model of innovative entrepreneurship education for institutional sustainability. In *Sustainable development goals series: Entrepreneurship and the informal economy in Sub-Saharan Africa*, 143–169. https://doi.org/10.1007/978-3-031-46293-1_6
- Suk, Y., & Lee, J.-Y. (2023). Analysis of horticultural activity programs in research articles on horticultural therapy for children in Korean journals. *Journal of People, Plants, and Environment*, 26(3), 233–245. <https://doi.org/10.11628/ksppe.2023.26.3.233>
- Yaakub, S.B., Arshad, M. M., Pemajuan, J., & Lanjutan, P. (2022). Pembinaan kompetensi agropreneur muda di Malaysia. *Asia Pacific Journal of Youth Studies*, 1(1), 76–100. <https://doi.org/10.56390/apjys2022.1.1.5>
- Zainol, R. M., Ghazali, M. H., Andin, C., & Lam, K. C. (2019). Pengaruh sistem sokongan terhadap kelangsungan program transisi kerjaya keusahawanan agro tanaman cendawan kepada murid berkeperluan khas bermasalah pembelajaran. *International Journal of Modern Trends in Social Sciences*, 2(8), 83–98. <https://doi.org/10.35631/IJMTSS.28009>