*e-Proceeding*

# SULAM INNOVATE, SHOWCASE AND SYMPOSIUM (SUISS 2025)

**CELEBRATING** **CHANGEMAKERS**
INSPIRING IMPACT

SULAM PROJECT CONCEPT
& SULAM PROJECT

*Editor in Chief*
**SHAH ISKANDAR FAHMIE RAMLEE**

UNIVERSITI
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UNIVERSITY FOR SOCIETY

SUISS
SULAM INNOVATE SHOWCASE & SYMPOSIUM
UNIVERSITI MALAYSIA KELANTAN

AMAZING
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*e-Proceeding*

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**Faculty of Hospitality, Tourism and Wellness & Centre for Academic Excellence and Development**

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**Editor in Chief: Shah Iskandar Fahmie Ramlee**

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# TABLE OF CONTENTS

# Foreward

First and foremost, I express my utmost gratitude to Allah SWT for with His permission, we are able to successfully mark yet another important milestone in the higher education landscape at UMK, namely the 3rd SULAM Innovate Showcase and Symposium (SUISS 2025), now it is third year of implementation.

As the Deputy Vice-Chancellor (Academic and International), I view that SUISS not merely as a high-impact program but as a manifestation of academic policy achievements grounded in community engagement, also known as Service Learning Malaysia University for Society. This program directly supports the Ministry of Higher Education's agenda in producing holistic, ethical, and well-rounded graduates, as outlined in the Malaysia Education Blueprint (Higher Education) 2015–2025.

SULAM is not just an avenue for students to contribute to the community, it is integrates course learning outcomes with real-life application, strengthening empathy and developing students' leadership capacity. Hence, programs like SUISS serve as the best platform to demonstrate how this approach is translated into impactful projects, social interventions, and innovations.

This year's theme, "Celebrating Inspiring, Changemakers Impact", perfectly aligns with UMK's aspiration to produce students who are creative change agents and socially driven individuals. We are not merely celebrating the outcomes of their work, but also the spirit, values, and principles that underpin every student and lecturer's effort in collaboration with the community. I would also like to express my pride in the participation of various higher education institutions in SUISS 2025, including UPM, UNIMAS, USIM, UNIMAP, UUM, and many more. This reflects that the SULAM approach has been embraced as a holistic and resilient educational model and can even serve as a strategic element in building a university-for-society ecosystem.

UMK, as a community-driven entrepreneurial university, consistently emphasizes the balance between academic excellence and social responsibility. Therefore, SUISS is not only academic in nature but also strengthens a high-impact learning ecosystem that fosters multidisciplinary interaction and action research among lecturers and students. As the Deputy Vice-Chancellor, I am committed to continually supporting initiatives such as this in cultivating a progressive, innovative, and meaningful academic culture. We will continue to strengthen policy support, lecturer capacity development, and recognition for academic initiatives that prioritize values and social impact.

In conclusion, I would like to congratulate the entire SUISS 2025 secretariat, particularly FHPK and PKPA, all participants, evaluators, and everyone involved. Let us continue this effort not just for today's success, but for a future legacy. May SUISS 2025 be a bridge toward a university that truly lives within the heartbeat of society.

**PROF. DR. HUZILI BIN HUSSIN**

**DEPUTY VICE-CHANCELLOR**
Academic and International
Universiti Malaysia Kelantan

**SULAM Innovate, Showcase and Symposium (SUISS)**
Universiti Malaysia Kelantan
*Theme: Celebrating Changemakers, Inspiring Impact*

## Preface: SUISS 2025 e-Proceeding

It is with great pride that we present the official e-Proceedings for the SULAM Innovate, Showcase, and Symposium (SUISS) 2025, which marks the third edition of this annual conference. This publication, prepared by the Faculty of Hospitality, Tourism and Wellness (FHPK) and published by UMK Press, serves as a testament to the transformative power of the Service Learning Malaysia University for Society (SULAM) initiative.

The conference operates under the compelling theme, **"Celebrating Changemakers, Inspiring Impact"**. SUISS 2025 functions as an essential global platform, uniting academicians, researchers, professionals, students, and organizations to share experiences and refine the quality of future SULAM projects and other community initiatives.

SULAM is a pivotal High-Impact Educational Practice (HIEP) introduced by the Ministry of Higher Education (MOHE). It is a transformative learning approach that seamlessly integrates community service into academic coursework, enabling students to apply their knowledge to real-world societal issues. The focus is on generating high-impact projects that create sustainable, measurable, and transformative change within communities, thereby fostering civic responsibility and holistic development in our graduates.

This e-Proceeding showcases a diverse and inspiring collection of SULAM projects, demonstrating the collaborative spirit between the university and the broader community. The papers cover a vast range of critical areas, from practical life skills such as dining etiquette and enhancing digital literacy, to promoting sustainability through waste management and renewable energy awareness. Other impactful projects highlight community-centered heritage education, empowerment for vulnerable groups like autistic children and orphans, and the advancement of STEM education.

We extend our deepest gratitude to the dedicated team, including the Editors and the Editor in Chief, Shah Iskandar Fahmie Ramlee, and the organizing bodies: the Faculty of Hospitality, Tourism and Wellness (FHPK) and the Centre for Academic Excellence and Development (CAED) Universiti Malaysia Kelantan (UMK). Their commitment has ensured that SUISS 2025 remains a dynamic space for collaboration and innovation.

We hope this e-Proceeding serves not only as a record of achievement but also as a source of inspiration, encouraging all readers, from practitioners and researchers to future students to contribute towards advancing service-learning, community development, and sustainability in Malaysia and beyond.

**The Editors SULAM Innovate, Showcase and Symposium (SUISS) 2025 Universiti Malaysia Kelantan (UMK)**

**SULAM Innovate, Showcase and Symposium (SUISS)**
Universiti Malaysia Kelantan
*Theme: Celebrating Changemakers, Inspiring Impact*

## About SUISS 2025

The SULAM Innovate, Showcase, and Symposium (SUISS) is an annual conference that will enter its third edition in 2025. Organized by the Faculty of Hospitality, Tourism, and Wellness (FHPK) in collaboration with the Centre for Academic Excellence and Development (CAED) Universiti Malaysia Kelantan (UMK), SUISS serves as a platform to bring together academicians, researchers, professionals, students, and organizations from around the world. This conference aims to share key insights and experiences on Service Learning Malaysia - University for Society (SULAM) projects and other community initiatives to refine and enhance the quality of future projects.

Service Learning Malaysia–University for Society (SULAM) is a transformative learning approach integrating community service into academic coursework. Through SULAM, students engage with real-world societal issues, applying their knowledge and skills to create meaningful solutions while fostering civic responsibility and personal growth. SUISS strongly emphasises high-impact projects, the initiatives that go beyond short-term engagement and create sustainable, measurable, and transformative change in communities. This initiative, introduced by Malaysia's Ministry of Higher Education (MOHE), is part of High-Impact Educational Practices (HIEPs) to produce holistic, well-balanced and entrepreneurial graduates.

The Malaysian higher education landscape has increasingly emphasized community engagement and service learning. Universities across the country are integrating SULAM-based projects to strengthen the link between academia and society. A number of universities, such as Universiti Malaya, Universiti Putra Malaysia, Universiti Utara Malaysia and UMK have implemented various SULAM projects that involve close collaboration between students and local communities to address real-world challenges. There is also a growing trend in sustainable and impactful community projects. Universities such as Universiti Tun Hussein Onn Malaysia (UTHM) have been actively involved in green infrastructure and social sustainability projects that enhance the well-being of local communities. These initiatives provide practical learning platforms for students while contributing to the community's long-term development.

## SUISS 2025

Building on the success of previous editions, SUISS 2025 aims to be a dynamic space for knowledge-sharing, collaboration, and innovation in SULAM and community engagement initiatives. The conference will feature:

- Virtual Presentations showcasing impactful projects
- Panel discussions with experts in community engagement and higher education
- Workshops and networking sessions to foster meaningful collaborations

With a relevant theme, esteemed speakers, and engaging sessions, SUISS 2025 welcomes participants from diverse backgrounds to contribute towards advancing service-learning, community development, and sustainability in Malaysia and beyond.

# DINING WITH CONFIDENCE: A PRACTICAL GUIDE TO TABLE ETIQUETTE AMONG STUDENTS UMK

Fatin Nadzirah Bon[1], Hazirah Shafiah Noorman[1], Muhammad Azriq Aiman Burhanuddin Raphel[1], Idayu Wahidah Zulkifli[1], Nur Dini Nazifa Sabri[1], Nurul Izzati Zulkepeli[1] & Mohammed Ruqaimi Remeli[1*].

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**Highlight:** The SULAM project to give exposure to non-hospitality students learning table etiquette in a formal occasion. The participants develop their soft skills, build their confidence, and learn how to communicate more effectively with people through practical exercises like role-playing authentic dining situations. The project also produces a handbook and guide to excellent dining, teaching appropriate manners and deference in formal settings. By close collaboration with the community, this project fosters personal relationships and deepens ties between the community and the institution. Overall, it helps non-hospitality students to be a confident and professional person in a formal dining setting.

**Keywords:** Volunteer, Professional dining, Interpersonal communication, Hospitality training, Fine dining guide, soft skills development

## Introduction

This project is led by students from Universiti Malaysia Kelantan (UMK) through the HPT30203 L106 Volunteer course. It focuses on teaching proper table manners, respectful behavior, and how to carry oneself in formal or professional environments. The participants take part in practical activities where they learn by working with other participants from different courses, community members, and professionals to build their confidence and social skills. Dining with confidence: A Practical Guide to The Table Etiquette Among Students UMK is one of the high-impact educational practices (HIEP) used to improve non-hospitality students learn about table etiquette in formal occasions. At the same time, it helps the community by promoting good values, cultural awareness, and respect for others. It also supports Malaysia's goals for education by helping students grow into well-rounded and skilled individuals. This project goes beyond just learning how to dine professionally, it helps the participants build character, strengthen relationships, and prepare for success in both their personal and professional lives. Projects like this show how universities can shape students into confident, responsible, and respectful members of society.

## Dining with Confidence: Table Etiquette, Self-Confidence & Career Success

Dining with confidence: A Practical Guide to The Table Etiquette Among Students UMK is one of the high-impact educational practices (HIEP) employed to increase student learning. Through this, it also benefits society by developing good values, cultural awareness, and respect for other people. It also supports Malaysian education goals by providing the skills and well-roundedness for the students to become competent individuals. This project is not all about learning manners, it helps students build character, improve relationships, and set them up for success in life and business. This kind of project shows how universities can shape students into confident, accountable, and respectful members of society.

The SULAM Program allocated 20 hours for preparation, including 14 hours over 7 days for pre-program tasks such as creating materials (modules, slides, quiz questions, feedback forms), confirming venue and equipment, assigning roles, and finalizing timelines. The team ensured all equipment worked, procured necessary items, and arranged catering. On-site preparations took place in the last two days, involving venue setup, equipment testing, and sound checks, with group members assigned specific roles. There was minimal rehearsal before the event, which lasted 4 hours and ran on schedule. Post-event, 2 hours analysis assessed the program's strengths, weaknesses, and future implementation suggestions. First and foremost, through practical community service that utilizes students' academic knowledge to address local needs, our project supports SULAM. In addition, this project could help students in their studies develop critical soft skills. Besides that, it can assist students in developing leadership skills early on. Furthermore, students gain empathy, cultural knowledge, and practical skills from this learning experience, all of which aid in their personal and professional development. Last but not least, by empowering residents and enacting meaningful change, the project also promotes long-term community impact.

Dining with Confidence: A Practical Guide to The Table Etiquette Among Students UMK, part of the SULAM initiative, is a community-focused project that engages students from Universiti Malaysia Kelantan (UMK) in imparting knowledge and skills about dining etiquette and appropriate table manners to the local community. Via hands-on workshops, real-time demonstrations, and engaging activities, students work together with community members, classmates from diverse academic fields, and industry experts to promote understanding of respectful conduct, cultural awareness, and self-assurance in formal and professional environments. This hands-on learning method enhances students' soft skills like communication, leadership, and professionalism while also solidifying the connection between the university and the community. In general, the initiative seeks to foster a lasting beneficial effect by encouraging substantial knowledge exchange and enhancing the quality of social interactions among various sectors of society.

Our project "Dining with Confidence: A Practical Guide to The Table Etiquette Among Students UMK" has successfully brought values to the university community, especially those preparing to enter the workforce. Through this structured program, participants get to learn the fundamentals of dining etiquette such as serving techniques to culturally appropriate behaviour at formal dinners and proper table manners. These skills are essential for assessing individual personal presentation and social confidence, particularly in corporate or formal settings, despite the fact that they are usually seen as fundamental. In addition, by fostering students from many faculties to participate, the program itself successfully promotes unity and inclusivity. By introducing dining practices from various kinds of cultural perspectives, particularly the difference between Western and Asian etiquette, encourages students to develop their cultural sensitivity and social awareness. As the final result of this program, university students who participated are able to demonstrate themselve body in a more polite, polished and confident form.

From the perspective of education, an engaging and rich learning experience can be gained from this program to enhance formal academic studies. The workshop is intended to be hands-on and interactive which is different from standard lectures that allow students to be eager in participating beneficial activities such as serviette folding, service sequencing, table preparation and simulation of fine dining scenarios. This approach secures the engagement of students that also promotes greater understanding of the skills learned for a long-term. Values such as respecting tradition, meticulousness and empathy are also delivered through this program for the participant to learn and acknowledge how vital they are. These uncommon yet significant lessons foster the growth of essential soft skills like self-assurance, poise communication and social adaptability. This form of exposure is crucial in equipping students with these skills for real-life situations, whether they are attending business dinners, formal events, networking gatherings or interviews.

Therefore, the program also provides volunteers and student organisers with a valuable opportunity to exercise and refine critical leadership and management skills. They can experience the reality of public speaking, time management, teamwork, and event execution through the planning, organising, and guiding of a semi-formal, scheduled event. They gain the ability to adjust to new situations, come up with innovative solutions to difficulties, and make sure every session runs smoothly all of which greatly enhance their professional preparedness and personal development. As the organisers work to empower their peers through meaningful knowledge-sharing, the ideals of community service and volunteerism further enhance this experience. All things considered, the "Dining with Confidence" program successfully bridges the gap between theoretical knowledge and real-world application, leaving a lasting impact on participants' manners and sense of self as well as the skills and

personalities of the organisers. It is proof that extracurricular activities may create future graduates who are not just knowledgeable but also culturally aware, open-minded, and ready for the workforce.

This program gives great potential for marketability and profitability, especially in the hotel and food and beverage sectors, this program has substantial commercial value. The program improves employability and raises service standards by teaching students and local communities professional dining etiquette and service abilities, which are highly sought after in Malaysia's growing tourist and hospitality industry. Its capacity to be marketed to colleges, universities, and hospitality training facilities looking to enhance their soft skills ability as well as to hotel and restaurant employees for professional growth is what makes it marketable. Such etiquette classes may also be beneficial for corporate clients, event coordinators, and wedding service providers in terms of staff training and providing exceptional customer service. Profitability can be attained through paid seminars, certificates, partnerships with businesses like hotels or resorts, and specially designed training programs for corporate social responsibility programs, private institutions, or tourism events.

In order to increase the impact of the "Dining with Confidence: A Practical Guide to The Table Etiquette Among Students UMK" project, the organizers bought to think about offering participants an official certificate of participation. Participants get certificates as an acknowledgment of appreciation for their participation in the program and as evidence of their participation in skills-related activities. To demonstrate their involvement in extracurricular activities, students might add this certificate on their resumes. Offering official certificates of participation can enhance students' employability by providing verifiable records of their skills and achievements (Awaji et al., 2020). These days, businesses place a high value on students participating in university-sponsored events, therefore offering this certificate is crucial for future job applications. For students, it is therefore an excellent opportunity for the future. Moreover, the organizer should invite industry professionals as guest speakers, such as banquet managers or lecturers with etiquette experience, as another recommendation for future sessions. Due to the fact that students will be exposed to professionals and people who are actively working in the hotel sector, the invited industry experts can significantly enhance the workshop. Sharing information from these professionals can help students gain a deeper grasp of the hospitality sector and provide them a clearer picture of professional ethics in the workplace.

It is then suggested that secondary school pupils be invited to the next session. This is due to the fact that this course helps pre-university students develop their social skills in addition to helping university students. When they proceed to higher education, exposure to table settings and eating etiquette might boost their confidence. Students from secondary schools who participate in this session will acquire practical skills that will help them adjust to a variety of future circumstances. They will have an advantage in developing social skills and enhancing their sense of self as a result.

## Conclusion

In conclusion, students have found the SULAM initiative's "Dining with Confidence: A Practical Guide to The Table Etiquette Among Students UMK" program to be a worthwhile and significant endeavour. This is thought to be the case because the program's goal is to help the participants become more self-assured and proficient. Participants are thus more equipped to handle real-life events in social and professional settings thanks to exposure to topics like formal dining etiquette and the development of soft skills. This program has a great chance of producing competent and accountable people in the future by offering certification and professional participation. Students also get an opportunity to practice good leadership and communication skills with other participants, as well as build connections with peers from other backgrounds. Students and program participants build stronger relationships as a result of this contact, which makes the learning environment more pleasurable. By providing professional involvement and accreditation, this program has a tremendous chance to develop capable and responsible people in the future.

## Acknowledgement

grateful for the opportunity to make a positive impact and are committed to continued growth and collaboration in our mission to strengthen communities through the SULAM project.

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# COMPASSIONATE HOSPITALITY SERVICE FOR AUTISTIC CHILDREN

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**Highlight:** The Compassionate Hospitality Service for Autistic Children joins hospitality education with community work. UMK students organized it to support empathy, social responsibility, and the practice of service for everyone, using real-life examples with people living with autism. Students and the autism community get the valuable chance to practice together, learn from each other, and interact in a true hospitality environment. This was achieved through hands-on activities such as DIY chef hats, donut decorating, and role-play simulations.

**Keywords:** Compassionate, Hospitality Service, Autistic Children, Volunteer

## Introduction

A compassionate hospitality service for autistic children is a volunteer program organized by Hospitality students as part of their class project. The aim is to apply hospitality skills such as customer service, event management, and communication in a real-life setting. At the same time, students also learn important values like empathy, patience, and care. The program focuses on children with autism, giving them a chance to enjoy fun and interactive activities that introduce basic hospitality concepts in a safe and friendly environment. It also helps them develop social and communication skills. This program not only creates meaningful experiences for the children but also raises awareness about social inclusion and encourages the spirit of volunteerism among students. It represents a practical implementation of hospitality skill in a real-world, inclusive environment. This project plays an important role in helping to include children with autism in the hospitality sector. Hospitality students use what they learn in class by assisting children with autism. By experiencing the program, students better understand various service needs, mainly those for people needing more care. In addition, the project works on developing empathy, adaptability in communication, and emotional intelligence, which are important in the future service sector. More generally speaking, the program improves the university's collaborations with the community and encourages students to act responsibly. It also helps to spread information on why providing inclusive and caring service matters in our society today. Through this real-world interaction, both students and children gain hands-on exposure that strengthens social inclusion efforts within the hospitality context.

## Compassionate Hospitality Service For Autistic Children

The Compassionate Hospitality Service for Autistic Children program involved a series of well-structured and engaging activities. These were designed to promote interaction, creativity, and real-life hospitality experiences for the children. The table below highlights the key moments and activities conducted throughout the program.

Table 1: Key Moments from the 'Compassionate Hospitality Service for Autistic Children' Program

| Picture/Activity | Description |
|---|---|
|  | **Initial Discussion & Briefing Session**<br><br>Initial preparations for the 'Compassionate Hospitality Service for Autistic Children' program began with a discussion session with the supervising lecturer to finalize the title and organize the activities to be carried out. On the day of the program, a briefing session was also given by the Autism Center manager to the students to explain the role and activity schedule, thus ensuring smooth running throughout the program. |
|  | **Event Day Highlights**<br><br>These photos highlight the main activities carried out during the program, including interactive sessions between students and children with autism such as ice-breaking (coloring and who am I), creative sessions: DIY chef hats where they decorated the hats according to their creativity and 'Little Chef' where the special children were asked to decorate donuts and a hospitality role-playing simulation. |
|  | **Closing Ceremony & Appreciation**<br><br>As the closing of the 'Compassionate Hospitality Service for Autistic Children' program, Hospitouch UMK presented souvenirs to the management of the Autism Center and took a group photo with the director and teachers as a sign of appreciation and official closing. |

All activities were conducted using a hands-on, guide-approach method, where students played the role of facilitators. This approach ensured that each child received focused attention and meaningful engagement throughout the program.

## Impact and Learning Experience

Enhanced comprehension of autism spectrum disorder (ASD) is one effect on the volunteers, community, and students of Autism. Volunteers had the opportunity to see the behaviour patterns of children with ASD up close. They gained an understanding of the special requirements, abilities, and difficulties faced by people with autism. The cultivation of soft skills, empathy, and tolerance, consistent awareness of emotions, and openness is necessary when working with youngsters who have special needs. Verbal and nonverbal communication skills among volunteers improved, and they learnt how to modify their approaches for increased participation. Next, teamwork with teachers, therapists, and other volunteers promoted greater leadership and cooperative abilities. For individual development, it heightened self-awareness and a greater understanding of diversity and inclusivity. Motivated many people to think about pursuing jobs in therapy, healthcare, or special education.

More assistance and care volunteers gave the kids more individualised attention by lending a helping hand with therapy sessions, play-based learning, and daily care. A Better Educational Setting for the community and volunteers who can organize creative activities (such as games, storytelling, and arts and crafts) increased the interest and interactivity of the sessions. Stimulation of the social children's ability to socialize and adjust to various communication styles was enhanced by their

interactions with new people. The key to this study is that the volunteers emphasized the importance of early intervention, which witnessed how the structured activities and therapy sessions contributed significantly to improvements in communication behaviour. Value of Consistency and Routine learned the importance of structured routines in managing and supporting children with autism. These collective experiences have not only benefited the children but also contributed to the volunteer's holistic development as future hospitality professionals.

## Market and Commercial Value

The Compassionate Hospitality Service for Autistic Children project holds considerable promise for commercial development, particularly in integrating hospitality practices with specialized support for children on the autism spectrum. As public awareness of autism spectrum disorder (ASD) continues to grow, so too does the demand for inclusive, structured services that cater to neurodiversity populations (National Autistic Society, n.d.). A potential commercial application of this project lies in the development of therapeutic hospitality workshops or experiential day programs. These can be packaged as fee-based services for families seeking enrichment programs for their children with ASD. Furthermore, the hospitality industry may benefit from training modules that educate employees on autism-friendly practices, thereby creating a more inclusive service environment.

Additionally, creative outputs from such programs, such as decorated chef hats, personalized crafts, or artworks, can be commercialized as part of a social enterprise model. These items may serve as fundraising tools or awareness merchandise, simultaneously generating income and supporting advocacy efforts. The integration of compassionate hospitality into commercial services not only satisfies market demand but also aligns with the global shift toward socially responsible business models. Thus, the project exemplifies a hybrid value proposition: combining social impact with revenue generation through inclusive hospitality service innovation. It also highlights the importance of continuous support from both public and private sectors in sustaining advocacy initiatives and inclusive service models for the long term.

## Future Recommendation

Based on the outcomes of the project, several forward-looking strategies are proposed to ensure the program's sustainability and scalability. Firstly, program expansion to include more autism centers across other regions in Malaysia is recommended. A wider geographical implementation would enhance community engagement and broaden the impact of the initiative. Scheduled activities throughout the academic year would also allow for long-term monitoring and development. Secondly, multidisciplinary collaboration with experts in special education, occupational therapy, and child psychology is essential. Their professional input can help refine the structure and content of activities to ensure therapeutic relevance and measurable outcomes (Baron-Cohen et al., 2009).

Thirdly, it is advisable to develop a formal volunteer training module that equips hospitality students with the necessary skills to work effectively with children with special needs. This training should cover topics such as autism awareness, communication techniques, ethical guidelines, and emergency response protocols. Certification programs may further incentivize participation and enhance professional credibility. Fourthly, the implementation of outcome-based evaluation tools— such as pre- and post-program assessments or behavioural checklists—would provide empirical evidence on the program's impact. These findings could inform continuous improvement and serve as data for academic publications or grant proposals. Fifthly, securing funding through corporate sponsorships, government grants, or non-profit partnerships is crucial. Financial support will ensure continuity and allow for the procurement of materials, transportation, and professional services without burdening families or institutions.

Lastly, it is vital to engage in public awareness and advocacy campaigns using digital platforms, local media, and academic outreach. Promoting the success and reliability of the project can encourage other hospitality institutions to adopt similar models, thereby creating a nationwide movement toward inclusive service provision. By adopting these suggestions, future initiatives can be made more effective, inclusive, and sustainable, thereby maximizing the program's long-term impact on both the hospitality field and the special needs community.

## Conclusion

In conclusion, The Compassionate Hospitality Service for Autistic program has successfully combined academic learning and community service effectively while instilling the values of empathy, awareness, and volunteerism among students. Through activities such as decorating doughnuts, making chef hats, and colouring, it provides an interesting and beneficial experience for their social development. The program also strengthens students' communication and event management skills and shows the potential to be developed to a better level. Overall, the program has a significant social impact and opens up opportunities for innovation in inclusive hospitality service.

## Acknowledgement

We are very grateful for the opportunity to be involved in the hospitality program with autistic children, which has been a very meaningful and eye-opening experience. Our deepest appreciation goes to our comrades who cooperated in making the program a success. In addition to the mentors and lecturers who have guided and encouraged us throughout the planning and implementation of the program, as well as the director of the Autism Care Foundation, who has welcomed our presence with open arms and given us the opportunity to interact directly with these special children. This program has further strengthened our understanding of the value of love. We hope that this meaningful collaboration between the university and the special needs community will continue to grow in the future. Let this project be the beginning of more compassionate initiatives in the hospitality industry.

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# EMPOWERING THE LOCAL POULTRY SUPPLY CHAIN THROUGH COMMUNITY AND AGENCY SYNERGY

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**Highlight:** The research approach project aimed to focus on strengthening Malaysia's local poultry industry by fostering effective partnerships between communities and government agencies. This initiative addresses critical challenges such as supply chain disruptions, trade barriers, and quality assurance issues that affect the availability, affordability, and safety of locally produced poultry. By promoting collaborative problem-solving and capacity building, the project enhances the resilience and efficiency of the poultry supply chain—from farm production to market distribution. It supports smallholder farmers and local producers in overcoming logistical and regulatory hurdles, improving product traceability, and ensuring compliance with quality and halal standards. The project also offers valuable experiential learning opportunities for students, integrating academic knowledge with real-world community engagement. Ultimately, it contributes to national food security, economic sustainability, and consumer confidence in local poultry products, positioning Malaysia's poultry sector for greater competitiveness and long-term growth.

**Keywords:** Supply chain, poultry, trade barriers, quality assurance, affordability

## Introduction

The local poultry supply chain plays a vital role in Malaysia's food security, nutrition, and rural economy. Poultry products are among the most widely consumed sources of animal protein, contributing significantly to the dietary needs of the population. However, the sector faces numerous challenges, including supply chain disruptions, trade restrictions, quality control issues, and competition from imported products (Bahri et al., 2019). These challenges can lead to price volatility, reduced availability, and compromised product quality, ultimately affecting both producers and consumers. This SULAM project, "Empowering the Local Poultry Supply Chain: Community and Agency Collaboration in Addressing Disruptions and Trade Issues," seeks to address these challenges by fostering strong partnerships between local poultry producers, community members, and relevant government agencies. Through collaborative efforts, the project aims to identify key bottlenecks and trade issues within the supply chain, develop practical solutions, and enhance the resilience and sustainability of the local poultry industry. By empowering communities with knowledge, negotiation skills, and access to resources, this initiative supports improved market access, better product traceability, and compliance with food safety and halal standards. The project also provides a valuable platform for experiential learning, allowing students to apply academic theories to real-world problems while contributing to national goals of sustainable food systems and economic development.

**Empowering The Local Poultry Supply Chain Through Community And Agency Synergy**

The Malaysian poultry industry is a vital component of the country's food security and economy, providing an affordable and accessible source of animal protein to the population. With over 3,000 poultry farms and a significant contribution to the national economy, the sector has evolved from small-scale farming in the 1960s to a modern, integrated industry supported by private investment, government policies, and research institutions (Jamaludin et al., 2023) Despite its growth, the industry faces challenges such as supply chain disruptions, high post-harvest losses, limited adoption of precision farming technologies, and trade issues that affect profitability and sustainability (Hafez & Attia, 2020).

The Mid-Term Review of Malaysia's 12th Malaysia Plan (12MP) highlights the slow uptake of advanced technologies like precision farming, which could improve resource efficiency and reduce losses. Factors such as lack of awareness, technical expertise, and high initial costs hinder technology adoption among poultry farmers (Zulhelmi et al., 2023). Additionally, issues like fluctuating feed costs, market access barriers, and the need for better coordination between stakeholders further complicate the supply chain. This SULAM project is designed to tackle these challenges by fostering collaboration between local poultry producers, government agencies (such as the Department of Veterinary Services and Ministry of Agriculture & Food Security), and technology providers. The project aims to identify bottlenecks along the supply chain, facilitate knowledge transfer, and develop negotiation strategies to improve market access and supply chain resilience. By integrating community engagement with academic learning and agency support, the project aligns with national objectives to modernize the poultry industry, enhance food security, and promote sustainable agricultural practices. It also provides a platform for students to gain practical experience while contributing to the socio-economic development of local poultry farming communities.

**Importance of the SULAM Project**

The Malaysian poultry industry is a critical pillar of the nation's food security and economy, providing an affordable, widely accepted source of high-quality animal protein to the multi-ethnic population. Accounting for over 57% of the total value added in the livestock sector, poultry production has demonstrated resilience and steady growth, achieving near self-sufficiency in chicken meat and eggs (Sulaiman et al., 2021). This sector not only supports the nutritional needs of Malaysians but also contributes significantly to rural livelihoods and national income through domestic consumption and exports. Despite its importance, the local poultry supply chain faces challenges including supply disruptions, trade barriers, fluctuating feed costs, and competition from imports. These issues can affect product availability, price stability, and the profitability of small-scale producers (Ferlito, 2020). Addressing these challenges through effective collaboration between communities and agencies is essential to enhance supply chain resilience, improve market access, and ensure the sustainability of the poultry industry.

This SULAM project is important as it empowers local poultry producers by facilitating community-agency partnerships to identify and resolve trade and logistical issues. By strengthening the supply chain, the project supports stable food supply, economic empowerment of farmers, and consumer confidence in locally produced poultry. Additionally, it aligns with national goals to modernize agriculture, promote sustainable practices, and safeguard food security amid evolving market and environmental conditions. Therefore, the project's significance lies in its potential to bolster Malaysia's poultry sector as a key contributor to the economy and food system, while fostering community resilience and sustainable development through collaborative and practical interventions.

**Description of SULAM project**

The project focuses on enhancing the resilience, efficiency, and sustainability of local poultry supply chain in Jeli, Kelantan. It aims to bring together local poultry farmers, community members, and relevant government agencies to collaboratively identify and address supply chain disruptions, trade barriers, quality control, and market access issues. By using participatory approaches, the project was carried out by three groups of four students each. They conducted interviews with nine communities, including chicken farmers, suppliers, retailers, and restaurant owners. Additionally, they consulted with three key agencies, which were Lembaga Pertubuhan Peladang (LPP), Pertubuhan Peladang Kawasan (PPK) and Department of Veterinary Johor, to develop practical solutions that improve the flow of poultry products from farm to consumer. Activities include mapping supply chain bottlenecks, educating farmers on sustainable and modern farming techniques, improving their knowledge on

regulatory compliance and halal certification and promoting the adoption of technology for improved traceability and quality assurance.

The project also provides an experiential learning for the students to apply their academic theories to real-world community problems. By empowering local producers and facilitating community-agency synergy, the project supports national goals to strengthen food security, promote economic development in rural areas and ensure Malaysian consumers have access to safe, high-quality poultry products. Finally, this project builds towards a more transparent, competitive, and sustainable poultry industry that deliver benefits to producers, consumers, and the broader Malaysian food system.

## Impacts of the Project

The findings from this project indicated that all retailers purchased chickens from the same farm and supplier, leading to supply vulnerabilities, particularly during festive seasons, as well as price manipulation, lack of quality alternatives, and market instability. To address these issues, the Johor Veterinary Department suggested several measures, including encouraging supplier diversification by sourcing from multiple farms, developing local breeder networks or cooperative farming groups to spread risk, and establishing long-term contracts with clear performance standards to ensure consistent quality and reliability. To overcome the issues of having too few raw chicken suppliers, Lembaga Pertubuhan Peladang (LPP) suggested that local poultry producers adopt a cycle system in their operations to ensure a continuous chicken supply. This system involves maintaining three chicken coops, each designated for different chicken sizes or ages. When the chickens in Coop 3 are ready for sale, the chicks from Coops 1 and 2 are moved up to the next stage, and new chicks are placed into the now-empty Coop 1. This rotation helps maintain a steady production flow and consistent availability of local chickens.

During the festive seasons, retailers faced limited chicken supply. To address this, the agency involved recommended that breeders adopt smart strategies to ensure local chicken stocks remain sufficient. Retailers should avoid relying on a single supplier and proactively secure alternative sources to meet rising demand. This approach helps ensure continuous sales and maintains adequate chicken supply for the local community. Accurately identifying daily chicken demand during the flood season (especially November to January) is crucial for retailers and farmers to plan production levels. Farmers can adjust chicken growth rates to match supply needs and avoid overproduction. One major challenge is the high cost of chicken feed, which often limits production and leads to supply shortages during peak demand. To address this, some farmers have developed their own feed formulas to reduce costs. Additionally, to avoid delivery disruptions caused by floods, they strategically position chickens in flood-free areas for easier access. Effective communication and planning between retailers and suppliers, including anticipating high-demand months, are essential to maintaining stable supply and smooth operations during challenging seasons.

Next, retailers have faced rising chicken prices, partly due to the multiple layers of transportation required to deliver chickens to them, which significantly increases shipping costs. Most chicken supplies are sourced from Penang, Kedah, and Perak. One proposed solution by relevant agencies, such as Veterinary Department of Johor, LPP and Pertubuhan Peladang Kawasan (PPK), is to establish a central kiosk or collection centre for bulk chicken deliveries. This would allow chicken supplies from Penang to be sent directly to the kiosk, helping to reduce the supply chain margins and lower the overall cost of chicken from the farms. Furthermore, retailers have complained about receiving poor-quality chickens, particularly concerning the halal slaughtering status. To address this, the Veterinary Department of Johor recommended sourcing chicken supplies from licensed slaughterhouses that are officially endorsed by the department. These licensed facilities are regularly monitored and audited by the veterinary department to ensure compliance with all required standards. By doing so, issues related to improper slaughtering practices can be effectively controlled and overseen by the department

The impact of this project includes empowering the local community by enhancing their economic opportunities and improving livelihoods. This project supports local poultry farmers and communities by addressing supply chain disruptions and trade issues, enabling them to increase productivity, reduce operational costs, and improve income stability. Cooperative models and capacity-building efforts suggested from this project can boost rural economies and creating sustainable livelihoods. The findings from this project also help to enhance food security by strengthening the local poultry supply chain by providing a more stable and affordable supply of poultry products, reducing

reliance on imports, and ensuring consistent access to nutritious food for the community. Additionally, the sustainable farming practices also can be promoted through this project since it encourages the adoption of sustainable and regenerative poultry farming methods. This method contributed to the resource efficiency improvement, reduce environmental impact, and promote long-term viability of local poultry production. Besides that, the community cohesion and participation in empowering the poultry supply chain also can be nurtured by conducting the social community project such as this SULAM project since there will be collaborative efforts between communities and relevant agencies by knowledge transfer program which allowing communities to take ownership of their development and food systems.

On the student side, they can gain practical, experiential learning experiences as they can engage directly in real-world challenges involving the poultry supply chain issues and problems. Through this project, they can apply the theoretical knowledge in areas such as agriculture, economics, and community development. Students can also polish their soft skills when interviewing the related parties such as chicken suppliers, community members and agencies officers. Thus, students can broaden their perspective and interdisciplinary understanding since they were exposed to the complex food system issues throughout this project. Interdisciplinary understanding involves the integration of environmental, social, and economic dimensions of sustainable agriculture which relevant to their courses. Based on the aforementioned fact, students can grasp the importance of aligning academic work with national goals on food security, rural development, and sustainable agriculture, fostering a sense of civic responsibility and relevance in their education.

## Future Recommendation

This project can be further improved by combining the interview methods, including one-on-one interviews, focus on group discussions as well as surveys. From this multiple integration approach, a more comprehensive understanding on the problems in the local chicken supply chain for chicken traders can be provided for future mitigation measures particularly from the perspective of the policymaker. Besides that, the project should explore factors influencing chicken prices, such as production challenges, market demand, and external economic factors. This deeper exploration contributes to a more comprehensive understanding about the future action that can be adopted to overcome the issues in local chicken supply.

Establishing a method for continuous monitoring of chicken prices allows for the tracking of changes over time, which is a beneficial effort that can be suggested to policymakers to guarantee that consumers do not bear the expense. For example, traceability and certification system can be developed by implementing a digital traceability platform to ensure product authenticity and quality assurance. This system can boost consumer confidence, facilitate compliance with halal and food safety standards, and open up premium market opportunities locally and internationally. In short, this step can bring a dynamic understanding of the market and provides a foundation for future research involving a collaboration with local organisations, agricultural bodies, or community groups to enhances the credibility of this project. These collaborations provide access to a broader network of participants and offer valuable insights. Additionally, the stakeholders also can promote awareness to the consumers about sustainable farming practices as well as informing them the factors influencing chicken prices to help them understanding the crisis.



Figure 1: The interviewing session with local chicken supplier to address the issues in the local supply chain of poultry

Figure 2: The community project embeds the element of flexibility and problem-solving skills by fostering teamwork and communication.



Figure 3: A leaflet distributed to the community based on the findings from the project

**Conclusion**

In conclusion, this SULAM project highlights the imperative role played by multi-stakeholder partnerships in tackling the intricate problems confronting Jeli's poultry sector. Through the promotion of active interaction between poultry producers, poultry suppliers, poultry retailers, entrepreneurs, and government agencies, the project not only enhances the resilience and viability of the domestic seafood supply chain but also promotes food security, economic livelihoods, and environmental sustainability. By using participatory strategies, capacity development, and facilitation of negotiations, the project enables farmers, poultry entrepreneurs, and retailers to overcome supply chain disruptions, have better access to markets, and guarantee authenticity and quality of the poultry. The model of collaborative demonstrates how universities can bring together knowledge with outreach to the community to develop impactful social change. In the future, the project lays a solid groundwork for scaling up projects that enhance sustainable poultry management, fair trade practices, and innovative solutions backed by technology. Finally, this project plays a critical role in developing a stronger, more transparent, and more profitable seafood supply chain that benefits society and the nation's food system as a whole.

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# LIVING RIVERS OF JELI: A COMMUNITY-CENTERED HERITAGE EDUCATION MODEL FOR WATER QUALITY AND RIVER STEWARDSHIP IN MALAYSIA

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**Highlight:** "Living Rivers of Jeli" is a place-based educational model that transforms rivers into living classrooms where students, communities, and policy actors converge to co-create environmental knowledge, foster cultural pride, and nurture sustainable stewardship. This SULAM project integrates water quality science, storytelling, civic engagement, and youth-led environmental campaigns to safeguard river ecosystems in Kelantan, Malaysia. What makes this project truly outstanding and a strong contender for Best SULAM Project; is its unique integration of academic curriculum with real-world community transformation. The initiative empowers students to apply classroom knowledge in ways that directly benefit society and the environment. Through water quality monitoring, bilingual science communication, and heritage-based campaigns, students become environmental stewards and social innovators. Community members, including elders and schoolchildren, are not just beneficiaries but co-creators of the learning process. Moreover, the project reflects the essence of SULAM: Service-Learning that is sustainable, inclusive, and impactful. It bridges generations, institutions, and ecosystems, demonstrating that even with limited resources, meaningful environmental change and deep civic learning are possible. The model's scalability, cultural sensitivity, and evidence of impact position it as a benchmark for future SULAM initiatives across Malaysia and beyond.

**Keywords:** Environmental sustainability, service-learning, water quality, heritage education, community engagement, SDG, river stewardship, experiential learning.

## Introduction

Across Malaysia, rivers are the veins of ecological and cultural life, yet they are increasingly degraded due to pollution, unregulated development, and lack of public awareness. This is particularly evident in rural areas like Jeli, Kelantan, where rapid socio-economic changes have led to environmental pressures on once-pristine river ecosystems. Despite their cultural significance and biodiversity value, these rivers often fall outside the purview of formal education and community stewardship. In response, the "Living Rivers of Jeli" initiative was launched by Universiti Malaysia Kelantan (UMK) to reimagine rivers as active spaces of learning, collaboration, and heritage preservation. The project is anchored within the EKE 33203: River Water Quality Management *(Pengurusan Kualiti Air Sungai)* course and adopts the principles of SULAM (Service-Learning Malaysia − University for Society) to bridge academic inquiry and societal impact.

This initiative reflects a paradigm shift from passive environmental observation to participatory river stewardship. It embodies three key educational ideals: (1) place-based learning (Figure 1), (2) intergenerational knowledge exchange, and (3) civic engagement (Figure 2). By empowering students to engage directly with local communities, the project challenges conventional classroom boundaries

and nurtures a generation of environmental leaders who learn by doing, reflecting, and co-creating solutions with society. The project also addresses several national and global priorities, including the Malaysian Education Blueprint (Higher Education) 2015–2025, the 12th Malaysia Plan's call for environmental sustainability, and the United Nations Sustainable Development Goals (SDGs). Specifically, it targets SDG 4 (Quality Education), SDG 6 (Clean Water and Sanitation), SDG 11 (Sustainable Cities and Communities), and SDG 13 (Climate Action).

By transforming rivers into pedagogical landscapes, "Living Rivers of Jeli" not only raises environmental awareness but also repositions education as a tool for cultural revival, ecological monitoring, and community empowerment. It is a timely and transformative approach to integrating education for sustainable development (ESD) into Malaysia's higher education ecosystem.



Figure 1: River water quality classification and monitoring activity. Fieldwork was conducted weekly during the first half of the semester.



Figure 2: Students and local residents' engagement during the River Care Weekend Campaign. Activities include games, community dialogue, and school program; hallmarks of UMK's SULAM-integrated environmental stewardship model.

## Project Implementation, Impact and Future Directions

The implementation of "Living Rivers of Jeli" is rooted in the integration of coursework, community service, and environmental engagement under the course EKE 33203: River Water Quality Management *(Pengurusan Kualiti Air Sungai)*. Designed as a SULAM-based experiential learning model, this initiative draws on the principles of place-based education, intergenerational participation, and civic leadership. Through structured activities, it transforms undergraduate students into facilitators of community action while enabling the rivers of Jeli to serve as laboratories and cultural archives.

Field implementation spans four critical rivers: Sungai Pergau, Sungai Golok, Sungai Long, and Sungai Rual. These rivers are ecologically diverse and culturally significant to the indigenous and local Malay populations. Students are grouped into interdisciplinary teams and assigned specific river sections. Each team carries out structured field activities, which are embedded into the semester's course assessment, including pre- and post-fieldwork reflections, water data interpretation reports, and community engagement presentations.

1. **Scientific Monitoring:**
   Students conduct systematic water quality testing using portable field kits to assess critical parameters; pH, turbidity, biological oxygen demand (BOD), dissolved oxygen (DO), ammoniacal nitrogen, and total suspended solids (TSS). These are analysed using Malaysia's Water Quality Index (WQI). Data is recorded weekly, supported by field logs and photographic evidence. Students are trained in data integrity, GPS tagging, and ethical data collection.

2. **SULAM-aligned Community Engagement:**
   Students coordinate River Care Weekend campaigns in collaboration with schools, district offices, and community leaders. These campaigns include river clean-ups, educational mural painting, exhibitions, water quality demonstrations, and storytelling sessions. These are intergenerational events that involve school children, youth, elders, and local NGOs. In one instance, a group collaborated with an elder to document and showcase traditional water taboos and conservation practices—embedding cultural memory into science communication.

3. **Bilingual Science Communication and Tools:**
   Students convert raw scientific data into infographics, posters, and digital dashboards presented in both Malay and English. These materials are visually engaging, culturally sensitive, and inclusive to various literacy levels. Feedback is collected using quick surveys and focus group sessions with villagers to assess understanding and satisfaction.



Figure 3: Campaign Banner and Pamphlet for distribution during the campaign.

4. **Inter-agency Collaboration:**
   The project is supported by multiple stakeholders: the Department of Environment Kelantan, Jeli District Office, SK Kampung Gemang, SK Jeli, local councils, and several village committees. These partnerships provide logistical coordination, site access, technical expertise, and community mobilization. Through Memoranda of Understanding and Letters of Support, institutional partnerships are strengthened for long-term engagement.

5. **Academic-Policy Nexus:**
   Each student group submits a final policy recommendation report based on their observations and community input. These are presented to local authorities with actionable proposals—ranging from community bins to ecotourism guidelines. Selected reports have been included in district-level planning workshops.

**Impact Assessment**

- **Educational Impact**: Students reported higher levels of academic motivation and civic engagement. Faculty feedback indicates improved critical thinking, teamwork, and oral presentation skills. Reflection logs reveal personal growth, with students expressing deeper environmental empathy.
- **Environmental Impact**: Initial findings from Sungai Pergau and Sungai Rual show moderate improvement in WQI indicators. More importantly, visible reductions in riverbank litter and illegal dumping were reported by local residents.
- **Social Impact**: Community reception has been overwhelmingly positive. River Care campaigns attracted over 200 participants in 2024, including first-time collaborators. The storytelling and components revived forgotten narratives and encouraged cultural pride.

**Future Directions and Scalability**

Entering its third year, the project is transitioning into a replicable toolkit model. The next phase includes:

- Expand to adjacent districts via inter-university collaboration.
- Develop an open-source **LIVING RIVER @ SULAM** toolkit for other institutions.
- Integrate mobile apps for citizen-science based water tracking.
- Formalize the student-community-stakeholder model into UMK's long-term community engagement strategy.

Through these future pathways, the project aspires to build a sustainable and adaptive environmental learning ecosystem, making rivers a symbol of learning, collaboration, and transformation across Malaysia and beyond.

**Conclusion**

The "Living Rivers of Jeli" project has redefined what it means to learn, teach, and act in the context of environmental sustainability. By combining scientific rigour, community knowledge, and cultural sensitivity, it has created a holistic framework for river stewardship. As a model grounded in SULAM principles, it exemplifies how academic institutions can cultivate civic-minded graduates who contribute meaningfully to environmental protection and cultural preservation. Its success proves that education need not be confined to lecture halls, and that rivers, once taken for granted, can become vibrant learning sites and catalysts for social transformation. The project is not just about cleaner rivers, but about stronger communities and more responsible future leaders.
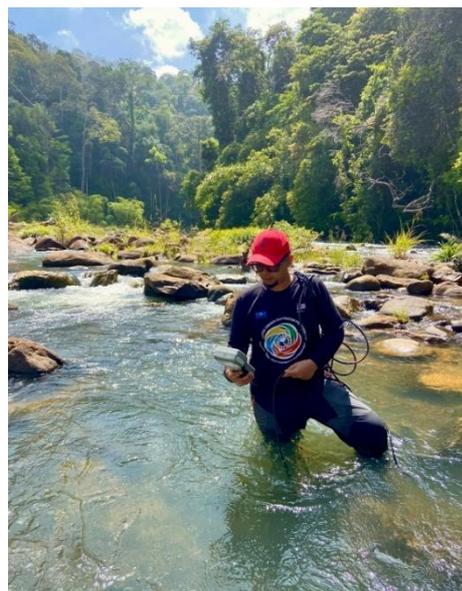


Figure 4: Rated as the best outdoor and "chill" class by the student with lecturer assessment rating of 5.0 for this course.

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# PROMOTING CIRCULAR ECONOMY THROUGH COMMUNITY-BASED WASTE COLLECTION IN INTRODUCTION TO SUSTAINABLE BUSINESS SULAM COURSE

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**Highlight:** Raising Awareness on Circular Economy (RACE) is an initiative under the Introduction to Sustainable Business course, which is implemented based on Service-Learning Malaysia – University for Society (SULAM) pedagogy. The program is designed to promote circular economy awareness and environmental responsibility among both students and local communities. Implemented as part of the course syllabus, this initiative is embedded each semester to ensure the long-term sustainability of the project. While different cohorts of students enrol in the course each term, the structured activities—ranging from awareness campaigns and community outreach to hands-on waste collection and reflection—remain consistent, allowing the program to continuously evolve and improve with new perspectives. Each semester, the initiative generates approximately RM500–RM1,000 in income and strengthens partnerships with certified recycling companies. More importantly, the program provides practical value to the community by offering a reliable and safe channel for the disposal of used cooking oil, e-waste recycle items, and old clothes, reducing environmental hazards and encouraging sustainable practices at the grassroots level. Beyond skill-building, this initiative develops students' sense of responsibility and leadership, equipping them with a sustainability mindset that they can carry into their future careers and roles in society. Ultimately, this SULAM initiative exemplifies the potential of experiential learning to create environmentally conscious graduates and meaningful community impact.

**Keywords:** Circular Economy, SULAM, Service-Learning, Sustainability Education, Environmental, Responsibility, Community Engagement, Experiential Learning and Sustainable Waste Management

## Introduction

The global shift toward sustainable development has elevated the circular economy as a strategic model for reducing environmental degradation, improving resource efficiency, and fostering socio-economic resilience (Geissdoerfer et al., 2017). In Malaysia, the integration of sustainability education into higher learning curricula has become increasingly important, particularly through national initiatives like the Service-Learning Malaysia – University for Society (SULAM). One such program, the Raising Awareness on Circular Economy (RACE) initiative now in its third cycle as RACE 3.0—is implemented under the Introduction to Sustainable Business course. This initiative embeds experiential learning through SULAM pedagogy into the academic syllabus, allowing students to engage directly with local communities while addressing pressing environmental issues.

RACE introduces students to the principles of the circular economy by involving them in community-based waste management activities such as collecting used cooking oil, e-waste, and old clothing. These real-life applications demonstrate the value of converting waste into resources, helping students understand the closed-loop systems central to circular economy theory (Bressanelli et al., 2021). Such engagement not only enriches students' environmental awareness but also nurtures their creativity and problem-solving skills—critical competencies for future sustainability leaders. Moreover,

the program offers practical benefits to the community by providing safe waste disposal solutions and raising awareness on responsible consumption. Educational frameworks that combine sustainability content with community engagement, such as RACE, are increasingly recognized as effective models for bridging academic learning and social responsibility (Assefa, 2024). As global calls for environmental action intensify, initiatives like this contribute meaningfully to cultivating environmentally literate graduates while delivering tangible impact at the grassroots level.

## The Raising Awareness on Circular Economy (RACE)

The Raising Awareness on Circular Economy (RACE) initiative, now at its latest phase as RACE 3.0, continues to deepen students' understanding of circular economy principles through hands-on experience with real waste streams such as used cooking oil, e-waste, and old clothes. By actively participating in the proper disposal and recycling processes, students witness firsthand how materials can be repurposed and reintroduced into the economy, closing the loop and reducing environmental impact. This practical engagement not only reinforces theoretical concepts but also stimulates students' creativity and problem-solving skills, equipping them with innovative mindsets essential for driving sustainable business practices in their future careers. RACE 3.0 thus serves as a powerful platform for experiential learning, fostering both environmental stewardship and entrepreneurial thinking aligned with current sustainability goals (Geissdoerfer et al., 2017).

This initiative is vital as it addresses environmental sustainability while providing students experiential learning aligned with the Sustainable Development Goals (SDGs), especially SDG 12 on responsible consumption and SDG 4 on quality education (Lozano et al., 2019). Service-learning has recently been recognized as an effective pedagogical approach to enhance students' environmental literacy, civic responsibility, and leadership skills (Celio et al., 2011). Implemented every semester with different student cohorts, the RACE program consists of three phases. The students assign their part of creating the video, discuss the content to ensure the community receives accurate information about the program, and implementation of the programs through discussions that are monitored and supervised by the lecturers. There were three stages to the students' participation in the program:

- Before Program: In the weeks leading up to the event, students engaged in collaborative efforts to create and disseminate announcement videos. Working with every group in the lecture class, they produced three videos that were then shared with the community through the social media. This promotional campaign detailed the upcoming program and explained the procedures for waste collection. Additionally, students participated in guided discussions to make sure the program was success.
- During the program: On the day of the program, donators had to scan a QR code for certificate of contribution before dropping off their waste, which was divided into four categories; used cooking oil, e-waste recycle items, and old clothing. Every student was assigned a separate task to manage the waste collection procedure during the program. Through their engagement with the responsible company, students were also exposed to the process of disposing used cooking oil and e-waste.
- Post-program: After the program concluded, a reflection and feedback was conducted to assess the event's effectiveness. Students and lecturers reflected on their experiences, examining how well they cooperated and managed tasks to ensure the program's success. Feedback was gathered from both participants and the community to evaluate the impact of the program and identify opportunities for future improvements.

To correctly treat the waste for this program, students collaborated with several well-established companies: Laksana Cergas Sdn. Bhd. for e-waste, Sally Global Enterprise for used cooking oil, and H&M for the old clothes. The collection from the program was reserved for a future student project, demonstrating the practical application of the circular economy concepts they were advocating through this course. The project offers multiple benefits: it provides the community with safe waste disposal channels, reduces environmental hazards, and cultivates sustainable habits. For students, it facilitates the development of soft skills and sustainability mindsets essential for future leaders. Each semester, the program collects significant quantities of recyclable materials and generates RM500–RM1,000, reinvested into sustainability projects. To expand impact, future directions include integrating the program across more faculties and universities, enhancing digital engagement tools such as mobile apps, and strengthening collaboration with local government NGOs and businesses. This aligns with recent research advocating for multi-sector partnerships and technology-enhanced environmental education for broader societal impact (Guandalini, 2022).

Figure 1: Community Engagement and Waste Collection Activities under the RACE Program by students in Introduction to Sustainable Business course

## Conclusion

In summary, RACE exemplifies a successful service-learning model that nurtures environmentally conscious graduates while delivering tangible community benefits. It demonstrates how university-community partnerships can contribute to sustainable development through continuous education and local action.

## Acknowledgement

The authors would like to extend our sincere appreciation to the Faculty of Entrepreneurship and Business, Universiti Malaysia Kelantan, for their continuous support and encouragement in implementing the RACE initiative. Special thanks to all lecturers, student facilitators, and committee members involved throughout the planning and execution of the program. The success of this community-based project was made possible through the collaborative efforts of all parties, including the partner recycling companies, local communities, and participating students.

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# EMPOWERING STEM LEARNING THROUGH SULAM: INTEGRATING COMMUNITY ENGAGEMENT AND TECHNICAL EDUCATION IN MECHATRONICS ENGINEERING

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**Highlight:** This study evaluates the effectiveness of the Service Learning Malaysia – University for Society (SULAM) initiative as integrated into two undergraduate courses at Universiti Teknikal Malaysia Melaka (UTeM): (BMKU2372) Fluid Mechanics and BMKU3643 Hydraulic & Pneumatic System, offered to Bachelor of Mechatronics Engineering students. The initiative aimed to bridge academic theory with practical application by engaging students in community-based learning activities involving secondary school students. Participants were assigned two tasks centred on demonstrating the principles of Pascal's Law and Linear Kinematic Equations of Motion through hands-on experiments, designed to reinforce both theoretical and practical understanding of these Physics concepts among the younger students. A total of 53 Mechatronics Engineering students completed a structured online survey assessing their initial awareness of SULAM, perceptions of the learning experience, and the program's impact on academic outcomes and soft skill development. Key metrics included improvements in communication, teamwork, creativity, and project management, as well as the perceived influence of their outreach on school students' comprehension of physics and interest in STEM careers. Findings revealed that while initial awareness of the SULAM program was limited, participation led to significant academic gains, particularly in Physics, through active engagement and peer instruction. Students also reported enhanced soft skills, including clearer communication, stronger collaboration, innovative content delivery, and improved group coordination. Many felt their involvement played a role in sparking interest in physics and engineering among the school participants, suggesting the program's potential for long-term impact on STEM engagement. Additionally, 70 secondary school students participated in a separate survey, evaluating the program's relevance, their prior subject knowledge, overall impressions, and whether the initiative met their learning expectations. Overall, the study concludes that integrating service-learning initiatives like SULAM into technical education not only strengthens subject mastery but also cultivates vital professional competencies. These outcomes support the broader goal of producing well-rounded graduates who are both technically proficient and socially responsible.

**Keywords:** SULAM, Physics, soft skills, knowledge transfer, hands-on demonstration

## Background

In today's context, where higher education is increasingly required to address both industry demands and societal challenges, experiential and service-based learning approaches have gained critical importance (Kuh, 2008). The Service Learning Malaysia – University for Society (SULAM) initiative, launched by the Ministry of Higher Education Malaysia, offers a transformative framework that enables students to engage with local communities while reinforcing academic content through practical application. At Universiti Teknikal Malaysia Melaka (UTeM), this initiative has been effectively embedded into two degree-level courses, which are BMKU2372 Fluid Mechanics and BMKU3643

Hydraulic & Pneumatic System, demonstrating a strong alignment between academic instruction and community engagement. Under this program, two cohorts of Mechatronics Engineering students applied theoretical knowledge, particularly Pascal's Law and Linear Kinematic Equations of Motion, by conducting hands-on demonstrations for secondary school students from Sekolah Menengah Kebangsaan Dato' Dol Said and Sekolah Menengah Kebangsaan Krubong. The initiative was designed not only to reinforce students' technical proficiency in hydraulics but also to cultivate essential soft skills such as communication, innovation, collaboration, and project management (Andrews & Higson, 2008). This approach expanded learning beyond conventional classroom settings, promoting a more inclusive and sustainable model of STEM education.

The significance of the SULAM initiative lies in its proven capacity to integrate academic learning with community service, delivering broad benefits for both university and school participants. Initial survey data revealed that 62.3% of the students were previously unaware of SULAM, and 81.1% had never participated in such programs. However, post-program feedback indicated considerable academic and personal development, despite this initial unfamiliarity. Students reported a stronger grasp of hydraulic concepts and notable improvements in soft skills such as communication, creativity, and teamwork competencies essential for professional success (Mohamad, Baharun, & Sedhu, 2024). Furthermore, the initiative had a profound effect on the secondary school participants, enhancing their understanding of physics and sparking interest in engineering, thereby contributing to early STEM engagement (Honey, Pearson, & Schweingruber, 2014). The overwhelmingly positive reception and students' enthusiasm for future participation affirm SULAM's effectiveness as a replicable and impactful educational strategy. It stands as a compelling example of how service learning can produce socially conscious, well-rounded graduates, directly advancing Sustainable Development Goal 4 (SDG4) by fostering inclusive, equitable, and lifelong learning opportunities.

## Bridging Theory and Practice: Hydraulic and Pneumatic Knowledge Transfer through SULAM

The Mechatronics Engineering students were first grouped to a maximum of 6 members per group. The SULAM program was implemented through two structured, hands-on tasks designed to integrate academic knowledge with community engagement. Both tasks were mapped to a specific Learning Outcome (LO4): Demonstrate the basic concept of hydraulics and pneumatics through a knowledge transfer program (SULAM) to the local community. This LO was then mapped to Program Outcome (PO6) that assesses societal, health, legal, and cultural issues with engineering responsibility. Both tasks were assessed via demonstration rubrics (10%) and a project report (10%), totalling 20% of the course marks.

For BMKU2372, the implementation of the two tasks involved hands-on learning and peer teaching activities centered around Fluid Mechanics and Hydraulics. In Task 1, the Mechatronics Engineering students designed and assembled a basic hydraulic system comprising components such as a pump, manometer, valves, and a cylinder. They created a TikTok video explaining the setup and demonstrated the system to Form 4 secondary school students, highlighting the working principles, the application of Pascal's Law, and piston motion governed by kinematic equations. They also facilitated direct student interaction with the system. Task 2 extended this learning by requiring students to replicate a real-world hydraulic application using syringes in place of hydraulic cylinders. A second video was recorded to showcase the project, and during the outreach, students explained the concept of force intensification and guided the school participants in experimenting with the syringe-based models.

Meanwhile, for BMKU3643, the implementation of the two tasks engaged students in constructing and demonstrating Fluid Power systems to enhance secondary school students' understanding of physics principles. In Task 1, students built a basic hydraulic system using a differential cylinder to illustrate pressure multiplication and the application of Pascal's Law. They explained the system's operation to Form 5 students and facilitated hands-on interaction with the setup. In Task 2, students developed a pneumatic circuit to demonstrate the kinematic relationship between speed, stroke, and time through piston motion. They conducted a simple experiment to measure piston speed and guided the secondary students in adjusting the flow control valve (FCV) to observe speed variations, fostering experiential learning through direct system manipulation.

**Findings**

The survey results from Questions Q1 to Q7, as in Table 1, indicate a strong positive impact of the SULAM program on the Mechatronics Engineering students' academic and personal development. A substantial 83% of respondents agreed that their understanding of hydraulics was improved through the program (Q1), demonstrating the value of experiential learning in reinforcing theoretical knowledge. Additionally, 79.2% acknowledged that the assessment format, comprising live/video demonstrations and a written report, has contributed to better academic performance (Q2), affirming the effectiveness of practical, application-based evaluation (Prince & Felder, 2006). The development of soft skills was also notable, with 88.7% reporting improvements in communication and teamwork (Q3), while 86.8% attributed enhanced collaborative skills to the hands-on tasks (Q4). These outcomes suggest that the interactive and community-based elements of the program significantly bolstered both technical understanding and interpersonal capabilities.

Moreover, the survey revealed marked growth in students' project management skills, with 83% agreeing that the program improved their ability to plan, coordinate, and execute group projects effectively (Q5). In terms of societal impact, 84.9% of students believed their demonstrations helped secondary school students better understand physics concepts (Q6), highlighting the program's dual benefit of knowledge transfer. Notably, 69.8% expressed interest in joining future SULAM initiatives (Q7), signalling sustained enthusiasm for service learning and its integration into technical education. These results collectively underscore the program's success in achieving its educational objectives, providing a compelling case for the continued inclusion of SULAM in engineering curricula as a means to produce technically proficient and socially conscious graduates (Furco, 1996).

Table 1: Survey questions on Mechatronics Engineering students and their respective results

| Question No. | Question | Percentage of agreement (%) |
|---|---|---|
| Q1 | Do you agree that this SULAM program has improved your understanding of the subject? | 83 |
| Q2 | Do you agree that the assessment methods (live/video demonstration and report submission) for the SULAM program have helped you achieve a better grade in this subject? | 79.2 |
| Q3 | Do you agree that the demonstration during SULAM Day has helped improve your soft skills? | 88.7 |
| Q4 | Do you agree that the tasks given in the SULAM program have helped improve your teamwork skills? | 86.8 |
| Q5 | Do you agree that the tasks given in the SULAM program have helped improve your project management skills? | 83 |
| Q6 | Do you agree that your demonstration improved the school students' understanding of their Physics subject? | 84.9 |
| Q7 | Would you consider participating in another SULAM program in the near future? | 69.8 |

Table 2: Survey questions on school students and their respective results

| Question No. | Question | Percentage of agreement (%) |
|---|---|---|
| Q8 | Do you agree that this program is relevant and necessary? | 98.6 |
| Q9 | Do you agree that you have knowledge in the field related to the program you attended? | 94.3 |
| Q10 | Do you agree that you have a positive perception of the program you attended? | 98.6 |
| Q11 | Do you agree that you were able to gain the knowledge you desired? | 98.6 |

In contrast, the feedback from Questions Q8 to Q11 of Table 2, gathered from 70 secondary school students, strongly affirms the perceived relevance and effectiveness of the SULAM program from their point of view. A striking 98.6% of respondents agreed that the program was both necessary and relevant (Q8), indicating that its objectives were well-aligned with the students' educational needs. This underscores the value of introducing applied STEM concepts early through engaging, hands-on experiences. Additionally, 94.3% of the students felt they already had some prior knowledge of the topics covered (Q9), suggesting the program effectively reinforced their understanding while bridging the gap between theoretical knowledge and practical application (Freeman et al.,2014).

The program also received high praise for its overall delivery, with 98.6% of respondents expressing a positive impression of the SULAM activities (Q10). This reflects the success of the diploma students' engaging approach, which incorporated relatable models and interactive teaching methods to simplify complex physics concepts. Similarly, 98.6% agreed that they had acquired the knowledge they were seeking through the program (Q11), highlighting the initiative's effectiveness in meeting its educational goals. This near-unanimous approval not only demonstrates the program's instructional clarity and impact but also emphasizes its role in sparking curiosity and interest in Physics and Engineering among the secondary school students, an essential foundation for cultivating future STEM professionals (Maltese & Tai, 2010).

## Conclusion

In conclusion, the SULAM initiative has proven to be an impactful educational approach that effectively bridges technical learning with community engagement. By integrating hands-on tasks into the curriculum, students not only deepened their understanding of core engineering concepts like Pascal's Law and kinematic equations, but also developed critical soft skills such as communication, teamwork, innovation, and project management. The overwhelmingly positive feedback from both university and secondary school students demonstrates the program's success in promoting STEM awareness, improving conceptual clarity, and fostering meaningful knowledge transfer. These outcomes strongly support the continued adoption of service-learning models like SULAM as a sustainable and holistic strategy for nurturing socially responsible and industry-ready graduates.

## Acknowledgement

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# EMPOWERING COMMUNITY HEALTH THROUGH UNIVERSITY-MOSQUE COLLABORATION: A SULAM-BASED PREVENTIVE HEALTH MODEL IN KELANTAN

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**Highlight:** The proposed volunteer initiative at Masjid As-Salam, Pengkalan Chepa, aims to engage both the mosque congregation and the surrounding community in addressing two pressing public health challenges: the limited accessibility to regular health screening services and low awareness regarding the importance of early detection of non-communicable diseases (NCDs) such as diabetes, hypertension, and high cholesterol. These health conditions often remain undiagnosed until complications occur, increasing the risk of severe outcomes. Additionally, the community faces a shortage of voluntary blood donors, which adversely affects the regional blood bank's ability to meet medical demands. In response, the project will provide free basic health screenings—including blood pressure, blood glucose, and body mass index (BMI) checks—alongside a blood donation drive in collaboration with relevant health agencies. The overall objective is to raise health awareness, promote preventive healthcare and healthier lifestyle choices, and support the local healthcare system by contributing to the sustainability of the blood supply. Through active participation and strategic collaboration, the project aims to foster a more health-conscious and resilient community.

**Keywords:** Community Health, Blood Donation, Volunteer Project, Health Awareness.

## Introduction

Empowering Community Health Through University-Mosque Collaboration under the Service Learning Malaysia-University for the Community (SULAM) initiative exemplifies how higher education institutions can effectively bridge the gap between academic knowledge and social responsibility. This program not only delivers tangible health benefits to the community of Pengkalan Chepa but also enhances students' experiential learning through meaningful engagement. The initiative is a collaborative effort involving university volunteers, healthcare professionals from Sultan Ismail Petra Hospital Kuala Krai, the Malaysian Red Crescent Society (PBSM), mosque committees, and local residents. By fostering strong community ties, the program cultivates core values such as compassion, solidarity, and unity. Furthermore, it underscores the significance of strategic partnerships in addressing societal challenges and offers a replicable model for future community-based social entrepreneurship initiatives.

The project, centered on community health assessment and a blood donation campaign, was held at Masjid As-Salam, selected for its strategic location and established trust within the local community. It addresses two critical public health concerns: limited access to regular health screenings and insufficient blood supply in regional healthcare facilities. In response, the program provides free health services, including blood pressure monitoring, blood glucose testing, and Body Mass Index (BMI) assessments. These efforts aim to enhance health literacy and promote early detection of non-communicable diseases such as diabetes and hypertension. Simultaneously, the

blood donation campaign, organized in partnership with PBSM, fosters a spirit of altruism and civic responsibility while directly supporting local healthcare institutions. This dual approach not only contributes to the immediate health needs of the community but also strengthens long-term public health infrastructure.

Importantly, the initiative serves as a dynamic learning platform for students across various academic disciplines. It enables them to apply theoretical knowledge in practical contexts while developing essential soft skills such as leadership, communication, teamwork, and empathy. By confronting real-world challenges, students gain a deeper understanding of social issues, enhance their community engagement, and advance their personal and professional growth. Although the program's primary objective is to improve community health services in Pengkalan Chepa, its framework holds potential for broader implementation. With expanded collaboration involving healthcare institutions, non-governmental organizations, and universities, the model can be scaled to address systemic healthcare disparities across wider regions. Moreover, by institutionalizing such initiatives, they can evolve into sustainable development projects that consistently provide accessible and affordable healthcare services to underserved populations.

## Empowering Community Health Through University−Mosque Collaboration

"Empowering Community Health Through University−Mosque Collaboration" is a community-driven initiative under the SULAM (Service-Learning Malaysia − University for the Community) framework. It was designed to tackle public health challenges and promote community well-being, particularly in underserved areas of Pengkalan Chepa, Kelantan. The project was strategically conducted at Masjid As-Salam, a respected and central institution in the local area. By choosing the mosque as the venue, the program leveraged a trusted community space to improve accessibility and participation, especially among semi-urban and rural populations with limited healthcare access.

Key activities included free health screenings (blood pressure, blood glucose, and BMI) and a blood donation drive. These services aimed to raise awareness, enable early detection of non-communicable diseases (NCDs), and foster health-conscious behaviors. The blood donation component also supported local hospitals with essential blood supply while encouraging community volunteerism. Collaboration was essential to the project's success. Key partners such as Sultan Ismail Petra Hospital Kuala Krai and the Malaysian Red Crescent Society (PBSM) provided medical expertise, logistical support, and safety oversight. The involvement of these stakeholders ensured professionalism and effective service delivery. The project also embodied SULAM's mission by integrating academic learning with community service. University students engaged directly with the community, gaining real-world experience, enhancing their leadership and communication skills, and fostering empathy and social responsibility.

## Importance of the Project

Our SULAM project, which focuses on Empowering Community Health Through University−Mosque Collaboration is a meaningful initiative that brings a significant impact to public health and community well-being. Through the free health screenings we provide, we aim to help individuals detect potential health issues such as high blood pressure, diabetes, high cholesterol, and other chronic illnesses at an early stage. Early detection is crucial as it enables individuals to seek medical advice or treatment promptly, thereby preventing more serious complications in the future. This initiative not only improves individual health outcomes but also promotes the importance of preventive healthcare and healthy lifestyle practices within the community, shifting the focus from treatment to prevention.

The blood donation campaign, on the other hand, addresses the continuous demand for a safe and sufficient blood supply in hospitals. Donated blood is essential in saving lives during medical emergencies, major surgeries, childbirth complications, and in treating patients with conditions such as thalassemia and cancer. Blood donation is not only a life-saving act but also a noble form of charity that encourages a spirit of volunteerism and social responsibility. Through this campaign, we also educate the public about the benefits and safety of donating blood, aiming to dispel myths and motivate more people to become regular donors. This project also serves as a valuable platform that connects university students, healthcare professionals, and the local community in a collaborative effort to enhance public health. For the students involved, it provides practical experience in organizing and executing community service activities, while also strengthening soft skills such as communication, leadership, teamwork, and empathy. Overall, the project contributes to building a healthier, more caring,

and more socially responsible society. With the active participation of all stakeholders, we believe this initiative will create lasting positive impacts and instill valuable values in future generations.

## Project Description

Empowering Community Health Through University–Mosque Collaboration is a collaborative outreach initiative dedicated to promoting public health awareness and community well-being in Pengkalan Chepa, Kelantan. Held at Masjid As-Salam, this programme serves as a platform for accessible healthcare services and social responsibility. The campaign provides free health screenings, including blood pressure checks, glucose level testing, and BMI assessments, allowing community members to better understand their health status and take proactive steps toward healthier living. Simultaneously, the blood donation drive encourages a spirit of giving and compassion, contributing to the critical blood supply needed by local hospitals and medical centers. Organized in partnership with local health agencies, university volunteers, and mosque committees, the campaign reflects a strong community spirit and aligns with the SULAM (Service-Learning Malaysia – University for Society) goals of combining academic engagement with real-world impact. It empowers students to apply their knowledge meaningfully while fostering unity, education, and improved healthcare access among the local population. This programme not only benefits the physical health of participants but also strengthens the bonds between the university, the mosque, and the surrounding community through shared values of service, care, and collaboration.

## Impact of the Project

The SULAM Project: Empowering Community Health Through University–Mosque Collaboration, held at Masjid As-Salam, Pengkalan Chepa, Kelantan, has made a significant impact on both the local community and the learning experience of the participating students. This program not only provided free healthcare services to the public but also served as a platform that united various stakeholders in a spirit of collaboration and social responsibility. From the community's perspective, the program successfully raised health awareness among local residents. Free services such as blood pressure checks, glucose testing, and Body Mass Index (BMI) assessments allowed participants to understand their current health conditions. This empowered them to take proactive measures toward maintaining their well-being, thereby reducing the risk of chronic diseases such as diabetes and hypertension. This service was particularly valuable for low-income individuals and senior citizens who might face difficulties in accessing regular medical check-ups.

The simultaneous blood donation drive brought additional benefits to the community. It encouraged a culture of compassion and giving while helping to replenish the blood supplies needed by local hospitals and medical facilities. Through this initiative, the public was also educated on the importance of donating blood regularly as a life-saving act. From the students' learning perspective, the program provided a valuable opportunity to apply classroom knowledge in real-world settings. Students from various academic backgrounds, such as health sciences, communications, and management, gained practical experience in planning, organizing, and executing a community-based program. This enhanced their soft skills, including leadership, teamwork, effective communication, and creative problem-solving.

Furthermore, students were able to better understand the needs and challenges of the local community through direct interaction during the program. This exposure deepened their empathy and social awareness, reinforcing the importance of civic responsibility and public engagement. It aligns closely with the goals of SULAM, which emphasizes service-based learning to produce graduates who excel academically and are also socially conscious and capable of contributing meaningfully to society. Overall, the program successfully bridged the university, the mosque, health agencies, and the wider community in a shared mission toward public well-being. It not only improved health outcomes for the participants but also enriched students' educational journeys by instilling humanitarian values, collaborative spirit, and leadership qualities. Through this holistic approach, the SULAM project proves that higher education can be a powerful catalyst for meaningful change within communities.

## Commercial Value of the Project

The SULAM: The collaboration of Masjid As-Salam with Sultan Ismail Petra Hospital Kuala Krai creates a powerful synergy that significantly enhances the marketability and commercial potential of Community Health Awareness Program and Free Health Screening. By leveraging the hospital's institutional reputation and medical credibility, the project gains tremendous commercial value on

several levels. The presence of the hospital serves as a powerful trust signal that dramatically increases the level of community participation. In the close-knit community of Pengkalan Chepa, the support of HSIP goes a long way, especially among older groups who might otherwise be reluctant to turn up for health screenings. Such built-up trust equates directly to larger numbers of attendance, which makes the event more appealing to prospective sponsors.

The hospital's brand affiliation enhances the perceived value of the event, enabling event organizers to command premium sponsorship rates from pharmaceutical companies, medical device manufacturers, and health insurance providers for access to this captive audience. From a profitability standpoint, there are numerous financial gains from the HSIP partnership. The hospital can make in-kind contributions that tremendously reduce the cost of operations, including medical personnel, screening instruments, and testing supplies. This resource sharing allows organizers to reinvest in revenue-generating activities or increase margins on existing services. The collaboration opens the door to high-end service opportunities such as niche screenings that would otherwise be too costly, creating new revenue through differential pricing structures. Blood drives are particularly economically enabled by this partnership, as the constant need for blood products by HSIP offers the possibility of direct payment or in-kind support that would otherwise be paid for by private blood banks.

The hospital affiliation also creates the possibility of substantial long-term business prospects other than a single event. The partnership offers the foundation for repeat initiatives that can seek multi-year sponsorships from corporations focusing on health. The health information gathered, if properly anonymized and aggregated, is a resource for public health studies and commercial health analytics. Most significantly, perhaps the mosque-hospital model established in Pengkalan Chepa is reproducible elsewhere in Kelantan, with the potential for regional scale-up and expansion of both community benefit and income generation.This collaboration transforms what might otherwise be a standard health screening exercise into a sustainable social enterprise approach. The combination of HSIP's medical expertise and Masjid As-Salam's grassroots reach creates a strong value proposition that is appealing to corporate sponsors and addresses genuine public health needs. The model shows how health institutions and community organizations can come together to create activities that are not just socially meaningful but also financially self-supporting, with the potential to be expanded and replicated throughout the region. The fact that one of the large government hospitals is involved provides continuity and stability that commercial organizations find reassuring when they decide to invest in long-term sponsorship, which makes this collaboration so attractive from a business perspective.

## Future Recommendations

The SULAM initiative entitled "Empowering Community Health Through University–Mosque Collaboration" was successfully conducted at Masjid As-Salam, Pengkalan Chepa, Kelantan. The program was carried out through strategic collaboration with various stakeholders, including Sultan Ismail Petra Hospital Kuala Krai, with the main objective of enhancing health awareness and promoting overall well-being within the local community. In light of the positive outcomes achieved, several comprehensive recommendations are proposed to further enhance the scope, impact, and sustainability of the program in the future, including:

1. **Expansion to Broader Geographical Areas**
   To ensure wider community inclusivity and engagement, it is recommended that similar health programs be extended to other rural and semi-urban districts in Kelantan, such as Tumpat, Pasir Mas, and Bachok. These areas often have limited access to healthcare facilities, and mobile health screening programs can serve as an essential outreach method. This expansion will not only increase community health awareness but also position the university as a proactive partner in statewide health promotion.

2. **Diversification of Health Services Offered**
   Future editions of the program should include a broader variety of health and wellness services that cater to the diverse needs of the community. Potential services include dental check-ups, vision screening, BMI and obesity assessments, nutritional counseling, mental health awareness sessions, workshops on women's health (e.g., breast cancer self-examinations), and smoking cessation guidance. By offering these services, the program can promote a holistic approach to well-being, addressing physical, mental, and emotional health.

3. **Stronger and More Sustainable Collaborations**

To ensure long-term viability and effectiveness, partnerships should be cultivated with key government agencies, including the District Health Office, Klinik Kesihatan, the National Blood Bank, and local non-governmental organizations (NGOs). These partnerships can provide valuable expertise, medical personnel, equipment, and financial support, allowing the program to grow in scale and reach.

4. **Student Empowerment and Capacity Building**
   The involvement of university students is a central element of the SULAM program. To maximize their contribution and learning outcomes, structured training should be provided in areas such as health communication, community engagement, first aid, and event coordination. This will empower students to become confident health advocates and leaders, while simultaneously enhancing their soft skills and professional competencies.

5. **Continuous Health Education and Awareness Campaigns**
   To maintain public interest and encourage long-term behavior change, ongoing health education initiatives should be developed. This could involve the production of informative digital content such as short educational videos, infographics, virtual seminars, and regular newsletters. Dissemination can be done through social media, WhatsApp groups, mosque bulletin boards, and local health centers to continuously engage the community.

6. **Monitoring, Evaluation, and Feedback Mechanisms**
   It is essential to implement robust monitoring and evaluation tools to assess the effectiveness of the program. Feedback can be gathered using QR-coded digital surveys, structured interviews, and follow-up questionnaires. The data collected will provide insights into participant satisfaction, identify areas for improvement, and guide future enhancements in program delivery.

7. **Active Community Involvement**
   The success of the program depends greatly on active participation from the community. Involving residents in the planning, decision-making, and implementation stages can foster a sense of ownership and empowerment. Community committees or health volunteer groups should be established to act as liaisons between organizers and the broader community, ensuring the program remains relevant and responsive to local needs.

8. **Provision of Follow-Up Treatment and Referrals**
   For participants who are identified with potential health issues during screenings, it is crucial to have a clear follow-up and referral mechanism in place. By working closely with nearby healthcare facilities, such as Klinik Kesihatan and hospitals, individuals can receive further diagnostic services, medical treatment, or specialist consultation. This ensures the program's effectiveness beyond just detection and promotes continuous care.

9. **Family-Based Health Empowerment**
   Recognizing the family unit as a foundation of community well-being, future programs can incorporate activities and education sessions that address health topics at the family level. Topics may include maternal and child health, elderly care, nutrition for all age groups, hygiene practices, and preventive healthcare. Promoting health literacy within families will help nurture a supportive environment for healthier lifestyles.

10. **Issuance of Participation Certificates and Recognition**
    To foster a culture of appreciation and motivation, certificates of participation and acknowledgments should be awarded to volunteers, partners, and active community members. These forms of recognition not only validate their contributions but also encourage continuous involvement and enthusiasm for future health campaigns.

## Conclusion

As a conclusion, SULAM projects, such as "Empowering Community Health Through University–Mosque Collaboration" in Pengkalan Chepa, are tangible examples of the transformative potential of university-community partnerships. The project has addressed important public health issues including early detection of non-communicable diseases and the decline in blood donation rates providing evident benefits to the community while also enhancing the students' academic learning. Additionally, the campaign collected over 40 pints of blood during its donation drive, directly addressing the regional decline in voluntary blood donors reported by the Blood Bank Unit of Hospital Raja Perempuan Zainab II. Consistent with the Malaysian Service-Learning philosophy, it provides a

connection between theory and practice, and develops civic responsibility, empathy, and leadership for students. Over 10 university students were involved in organizing and managing the campaign, and many reported measurable improvements in soft skills such as public speaking, event coordination, and health communication based on pre- and post-reflection surveys.

Moreover, the partnership between Masjid As-Salam and Hospital Sultan Ismail Petra Kuala Krai really showcases the depth of the initiative and provides trust, outreach, and impact to this project that the university and community organizations could not have delivered alone. Not only does the partnership uniformly deliver services at a lower cost, it enables a social enterprise approach that will be a model for socially impactful initiatives and interventions. The implementation of the campaign with a high commitment to community engagement, planning, and cross-sector collaboration also demonstrates the potential of the program to leverage assets and promote preventive healthcare, volunteerism, and social cohesion. It also demonstrated cost-effective service delivery by utilizing mosque facilities and volunteer manpower, reducing overhead by an estimated 40% compared to traditional outreach models. One meaningful experience was helping an elderly client interpret her health checkup results. She had never tested her glucose levels before and was visibly alarmed by her reading of 11.2 mmol/L, indicating potential undiagnosed diabetes. This moment highlighted the urgent need for grassroots health education and the value of bringing services directly into underserved communities. We also developed skills in teamwork, communication and planning throughout the preparation of materials and supported participants throughout the event.

Overall, the program improved our social responsibility mindset and showed us how our small actions can enhance social change. Looking ahead, the SULAM program has good potential for growth through increased geographic coverage by covering other rural zones such as Pasir Puteh and Jeli in services, by incorporating mental health screening and nutrition counselling by diversification of services and online health education. As long as there is continued commitment from every organizational party involved, SULAM can become a sustainable model for public health improvement and community empowerment in Kelantan and beyond.

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# ECOSPARK: IGNITING COMMUNITY INNOVATION FOR A GREENER TOMORROW

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**Highlight:** ECOSPARK is a student-led initiative under the STK2983 Waste Management and Toxicology course, guided by the SULAM (Service-Learning Malaysia) framework and Kolb's Experiential Learning Theory. Conducted over 14 weeks, the project involved 102 students collaborating with key community groups in Kota Samarahan, market vendors, the local authority (MPKS), village residents, and kindergartens, to develop sustainable waste management solutions. Core activities included composting demonstrations using on-site machines at Pusat Hijau Komuniti, interactive waste segregation workshops, and the creative "Ecoglow" art installations from recycled plastic bottles to engage young learners. Students also performed household waste audits and designed customized waste reduction strategies for villages such as Kampung Tambirat. These hands-on experiences enabled students to apply theoretical knowledge in real contexts, fulfilling Course Learning Outcome 4 (CLO4): proposing waste management projects through community engagement. The initiative contributed to Sustainable Development Goals 11 (Sustainable Cities and Communities) and 12 (Responsible Consumption and Production) while cultivating environmental responsibility, leadership, communication, and problem-solving skills among students. ECOSPARK illustrates how experiential learning and community-campus partnerships can drive environmental innovation and create lasting social impact.

**Keywords:** Service-learning, community engagement, waste management, experiential learning

## Introduction

Waste management has become a crucial concern as environmental problems throughout the world worsen, necessitating not just technological advancement but also active community engagement and behavioral change. In Malaysia, the gap between academic knowledge and society requirements is being filled in part via service-learning programs such as ECOSPARK, an experiential project carried out as part of the STK2983 Waste Management and Toxicology course. Based on Kolb's Experiential Learning Theory (Figure 1) and implemented using the SULAM (Service-Learning Malaysia) framework, ECOSPARK worked with four important community groups in Kota Samarahan to jointly develop sustainable trash solutions with 102 university students over 14 weeks.
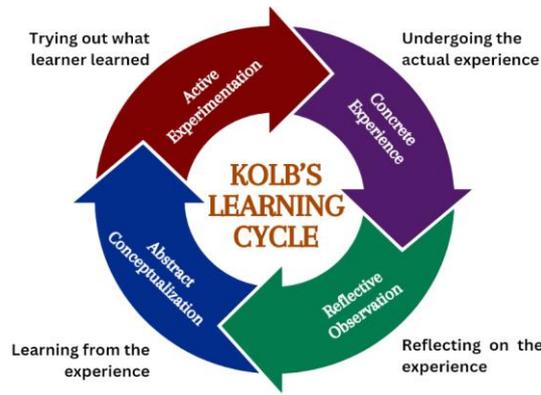
Figure 1: The interviewing session with local chicken supplier to address the issues in the local supply chain of poultry

Service-learning is increasingly recognized as an effective strategy to enhance environmental education. Studies show that such initiatives improve technical skills, leadership, and civic responsibility while fostering environmental awareness (Compare et al., 2022; Valsan et al., 2020; Sunarti et al., 2023). ECOSPARK, implemented under the SULAM framework, exemplifies this approach by engaging students in real-world waste management activities such as composting demonstrations, recycling projects, and household waste audits. These activities bridged academic learning with community needs, strengthening partnerships and promoting sustainable practices. Aligned with SDG 11 and 12, ECOSPARK demonstrates how structured service-learning fosters environmental consciousness and social responsibility, transforming students into proactive environmental stewards while driving tangible grassroots impact (Hanafiah, 2024).

## Background and Context

ECOSPARK, a student-led initiative under the STK2983 Waste Management and Toxicology course, applies the SULAM framework and Kolb's Experiential Learning Theory to bridge academic knowledge with community engagement. Over 14 weeks in Kota Samarahan, Sarawak, the project tackled local waste challenges, including low public awareness and inadequate segregation practices. Students partnered with wet market vendors, village residents, and schools to co-create practical waste management solutions such as composting and recycling programs. These hands-on activities, supported by case studies, strengthened students' technical understanding while cultivating leadership, teamwork, and problem-solving skills. The course concluded with students presenting findings and proposed solutions to Majlis Perbandaran Kota Samarahan (MPKS), affirming their role in shaping local environmental strategies. ECOSPARK exemplifies how experiential learning drives sustainability and civic responsibility through meaningful community collaboration.

## Importance of the Project

The ECOSPARK initiative addresses a critical educational and societal gap: the disconnect between theoretical environmental education and real-world application. In both Malaysia and the global context, there is a growing recognition that solving environmental challenges requires more than textbook knowledge, it demands hands-on engagement, interdisciplinary collaboration, and a strong sense of civic responsibility. Service-learning offers a powerful pedagogical strategy to meet this need. As Granados-Alos & Catalan-Gregori (2025) highlighted, service-learning frameworks enable students to engage deeply with environmental and social issues while fostering critical reflection and responsibility toward community well-being (Granados-Alos & Catalan-Gregori, 2025). Likewise, Hanafiah (2024) emphasized that SULAM-based programs not only elevate students' sustainability awareness but also deliver tangible benefits to communities (Hanafiah 2024).

The ECOSPARK project is especially important as it aligns with and reinforces key Course Learning Outcomes (CLOs) of the STK2983 course. It supports students in:

1. Distinguishing types of waste and identifying appropriate treatment processes (CLO1),
2. Inferring the environmental fate of hazardous substances (CLO2),
3. Designing waste management strategies for specific industries (CLO3), and
4. Proposing community-based waste management projects (CLO4).

ECOSPARK introduces an experiential learning model where students collaborate with local communities to tackle real waste management challenges through practical solutions. Grounded in Kolb's theory, the initiative develops technical expertise and transferable skills—leadership, problem-solving, and communication, preparing graduates as environmentally responsible change agents and sustainability innovators.

## Project Description

ECOSPARK, developed under the STK2983 Waste Management and Toxicology course, integrates academic learning with community engagement through the SULAM framework and Kolb's Experiential Learning Theory. Over 14 weeks (Table 1), students completed structured learning units and project-based assessments, fostering deep learning, skill development, and achievement of course outcomes without traditional exams.
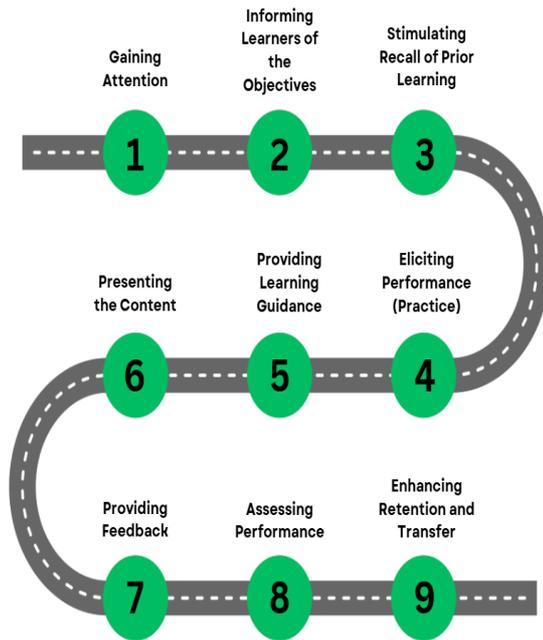
*Project Objectives*

ECOSPARK was designed to achieve three goals: strengthen students' practical waste management skills through real-world problem solving, foster environmental responsibility via community engagement, and develop soft skills, communication, teamwork, and problem-solving, through collaboration with local stakeholders. These objectives ensure academic excellence and prepare civic-minded graduates for complex environmental challenges.

Table 1: Key Moments from the 'Compassionate Hospitality Service for Autistic Children' Program

| LU | Topic | CLO | TL Activities | SLT (F2F) | SLT (Virtual) |
|---|---|---|---|---|---|
| LU1 | Solid Waste Treatment | 1 | Lecture, Discussion, Service Learning | 19 | 0 |
| LU2 | Wastewater Treatment Processes | 1 | Discussion, Service Learning, Lecture | 21 | 0 |
| LU3 | Hazardous Wastes | 2 | Lecture, Case Study, Discussion | 21 | 0 |
| LU4 | Ecotoxicology | 3 | Case Study, Discussion, Lecture | 21 | |
| LU5 | Service-learning activity | 4 | Service Learning | 12 | 0 |
| | | | Assessments | 26 | 0 |
| | | | Total SLT | 120 | 0 |

ECOSPARK employed an integrated strategy combining service-learning, case studies, reflection, and public presentations to deliver transformative education under the SULAM framework. Over 14 weeks, students collaborated with local stakeholders, including MPKS, wet market vendors, Kampung Tambirat residents, and schools, to implement waste audits, composting, segregation workshops, and creative recycling projects like "Ecoglow." Complementing these activities, case studies on palm oil waste and the Sungai Kim Kim incident deepened understanding of waste classifications and treatment. This student-led, community-driven model fostered practical skills, critical thinking, and environmental responsibility through experiential learning.

Structured reflection and continuous feedback were integral to ECOSPARK, enabling adaptive learning through pre-, mid-, and post-project sessions. Students critically evaluated progress, refined strategies, and incorporated input from instructors and stakeholders. Guided by Gagné's Nine Events (Figure 2a) of Instruction, the course combined lectures, five structured learning units, and real-world service-learning activities. The project culminated in a SULAM showcase, where students presented findings to local authorities, demonstrating technical competence, communication, and problem-solving skills while highlighting community impact. These reflective practices reinforced retention and prepared students for future sustainability roles.

Figure 2 (a): Gagné's Nine Events of Instruction and (b): The CLO achievement report shows that all CLOs are fully achieved

Overall, ECOSPARK effectively bridged theoretical instruction with real-world application, enabling students to achieve their academic goals while cultivating environmental awareness and a strong sense of community engagement. By the end of the course, all four Course Learning Outcomes (CLOs) were fully achieved (Figure 2b), demonstrating that both students and participating communities had successfully comprehended and internalized the course's core concepts.

## Dual Impact: Enhancing Student Learning and Empowering Communities

The ECOSPARK initiative delivered significant benefits for both students and local communities by transforming theoretical learning into real-world impact. Over 14 weeks, 102 students collaborated with stakeholders, market vendors, local authorities, village leaders, and schools, to design context-specific waste management solutions. The project successfully achieved all four Course Learning Outcomes (CLOs): identifying waste types, understanding hazardous chemical behavior, designing management options, and proposing community-based solutions. Reflective practice, embedded before, during, and after the project, reinforced deep learning and personal growth. Using the STARR model (Situation, Task, Action, Result, Reflection) (Figure 3), students critically analyzed challenges, assessed progress, and refined strategies. This approach cultivated technical competence, problem-solving, and civic responsibility, preparing students as environmentally conscious professionals capable of addressing sustainability challenges.

Figure 4 showcases excerpts from students' reflections across three phases: BEFORE, DURING, and AFTER the SULAM project. In the BEFORE phase (Figure 4a), one student effectively applied the STARR model, demonstrating clear role awareness, enthusiasm, and curiosity despite initial challenges. The reflection emphasized strong instructor guidance alongside student autonomy, reinforcing the course's experiential design. ECOSPARK's student-led, collaborative approach provided real-world project management experience, aligning with UNIMAS's mission to foster community engagement and preparing graduates with essential skills for future professional and societal responsibilities.
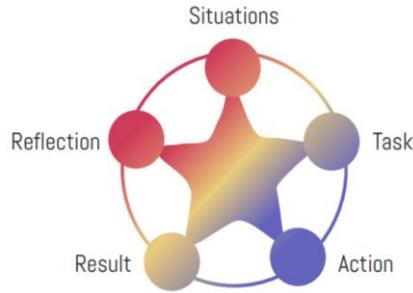
Figure 3: STARR Reflection Method

This continuous reflection not only promoted personal growth but also deepened conceptual understanding, consistent with findings by Lin et al. (2019), who found that service-learning enhances both academic engagement and civic responsibility (Lin et al., 2025). To complement fieldwork, structured case study analyses enabled students to distinguish waste types and understand the environmental fate of hazardous chemicals (CLO1 and CLO2), strengthening the link between theory and real-world application. This dual learning mode aligns with evidence from Mironesco (2021), who emphasizes that service-learning fosters environmental awareness and prepares students to become agents of change in their communities (Mironesco, 2021).



(a)                    (b)                    (c)

Figure 4: Students' reflection on how they can improve their skills, (a) Before, (b) During, and (c) After.

For the community, the ECOSPARK initiative generated meaningful and lasting impacts, as evidenced by the positive feedback illustrated in Figure 5. ECOSPARK delivered tangible community benefits, including better waste management practices, improved composting techniques, and creative recycling initiatives. The project empowered residents through active participation and co-creation, fostering ownership and sustainability. Students integrated IoT technology via a digital feedback system to capture real-time reflections and learning outcomes. Post-activity responses showed significant improvement in understanding 3R principles, Reduce, Reuse, Recycle, despite initial unfamiliarity. These results highlight ECOSPARK's success in raising environmental awareness, promoting responsible behavior, and strengthening community engagement while leveraging technology for effective evaluation and impact measurement. One standout example was the implementation of a Recycling Program involving the elderly community, which played a crucial role in promoting responsible waste management and nurturing a culture of sustainability. Through the

39

introduction of the 3R concepts, Reduce, Reuse, and Recycle, community members were encouraged to take greater responsibility for environmental issues and adopt practical, eco-friendly behaviors.
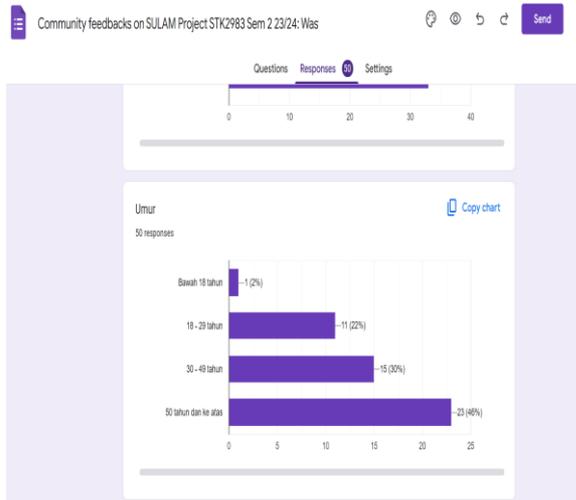


1



2



3



4

40

Figure 5: Community feedback on the SULAM Project
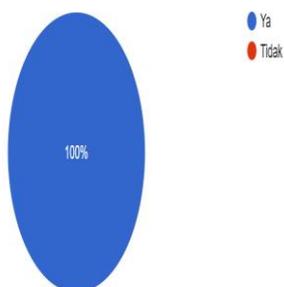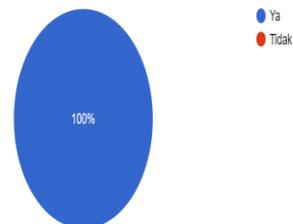
A group activity titled Upcycle Magic: Turning Trash into Treasure (T.T.I.T) enabled participants to creatively reuse materials in their daily lives, thereby contributing to safer, cleaner environments. Participants were taught to differentiate types of waste and dispose of them appropriately, into designated bins for glass, paper, and plastic, which helped instill a deeper sense of accountability and environmental responsibility. Educating individuals, particularly older community members, on recycling practices not only advances sustainable behavior but also fosters intergenerational learning and inclusivity within the community.

By centering the project on community engagement and environmental education, ECOSPARK ensured that the benefits extended to all segments of the population, regardless of age or background. Ultimately, ECOSPARK exemplifies how service-learning can create reciprocal value, transforming students into environmentally conscious, community-engaged professionals while simultaneously delivering meaningful, lasting solutions to real-world environmental challenges.

## Future Recommendations of Project Expansion

To ensure ECOSPARK's sustainability and impact, key strategies are recommended. Institutionalizing it as a recurring, credit-bearing course component would maintain student engagement and enable long-term tracking of outcomes. Expanding interdisciplinary collaboration across education, engineering, ICT, and health fields can deliver holistic solutions and innovation. Digital tools like mobile apps for waste reporting and gamified recycling education would broaden outreach. Formal community advisory panels and stronger monitoring systems with feedback loops are essential for relevance and accountability. These measures position ECOSPARK as a scalable model for service-based environmental education nationwide.

## Conclusion

ECOSPARK integrates service-learning with environmental education, bridging theory and practice through community engagement. Students achieved learning outcomes, developed soft skills, and embraced sustainability, while communities gained practical waste solutions. This reciprocal model demonstrates how university-community partnerships address real-world challenges and prepare graduates for sustainability leadership, offering a replicable approach to impactful learning.

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# DESIGNING SOLUTIONS, EMPOWERING COMMUNITIES: A STUDENT-LED MODEL FOR SUSTAINABLE CHANGE

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**Highlight:** The "Designing Solutions, Empowering Communities" project is a student-driven, interdisciplinary initiative designed to cultivate socially conscious innovators capable of addressing real-world challenges. Rooted in the design thinking framework, the project emphasizes empathy, creativity, and iterative problem-solving to empower students in developing impactful, community-based solutions. Through collaborative, hands-on experiences, participants engage in the five core stages of design thinking—empathize, define, ideate, prototype, and test—applying them to address pressing social and environmental issues. This initiative not only enhances students' skills in critical thinking, teamwork, and innovation, but also fosters a deep appreciation for the role of social entrepreneurship in creating sustainable, meaningful change. The ultimate objective is to inspire students to become agents of transformation, designing solutions that uplift communities and promote long-term societal impact.

**Keywords:** Design Thinking, Sustainable Solution, Real-World, Empowering, Undeserved Communities

## Introduction

In today's rapidly evolving global landscape, communities are facing increasingly complex challenges such as poverty, environmental degradation, social inequality, and lack of access to quality education or economic opportunities. These multidimensional problems demand more than traditional, linear solutions, they require creative, empathetic, and systemic thinking. Universities, as agents of knowledge and innovation, play a pivotal role in equipping students with the mindset and tools to respond effectively to these challenges. Yet, conventional pedagogical approaches often fall short in preparing students to lead real-world change. The "Designing Solutions, Empowering Communities" project, implemented under the Social Entrepreneurship course (ACS3063), responds to this educational gap by introducing a student-led, interdisciplinary model rooted in design thinking. It offers a transformative learning experience where students from diverse academic backgrounds collaborate to co-create solutions for pressing social and environmental issues. The project is aligned with the Ministry of Higher Education Malaysia's emphasis on Service-Learning Malaysia - University for Society (SULAM), aiming to produce graduates who are not only competent but also socially responsible and community-oriented.

What sets this initiative apart is its strong grounding in the five-stage design thinking process empathize, define, ideate, prototype, and test. This human-centred methodology empowers students to deeply understand the needs of target communities, challenge assumptions, and develop innovative, actionable, and sustainable interventions (Levin et al., 2021). Whether working on environmental projects, educational outreach, or livelihood improvement, students engage in fieldwork, stakeholder

interviews, and community prototyping, moving beyond textbooks into real impact. The project enhances the university's role as a driver of inclusive development by embedding community engagement into academic learning. It fosters critical 21st-century competencies such as teamwork, creative problem-solving, systems thinking, and impact-driven leadership (Welch & Saltmarsh, 2023). At the same time, communities' benefit from tailored solutions that address their unique contexts, fostering a two-way value creation process.

This initiative is not only relevant in the current academic and socioeconomic context—it is essential. As we face global disruptions including climate change, health crises, and socioeconomic volatility, it is imperative to empower young changemakers to take ownership of problems and design solutions that are ethical, inclusive, and future-oriented (Hyytinen, 2021). Through this model, the university becomes a launchpad for student-driven innovation that uplifts live and contributes meaningfully to national and global sustainable development goals.

## Background and Context

This student-led initiative was developed to bridge the disconnect between academic learning and the practical demands of community engagement. It responds to a growing call for universities to produce graduates who are not only knowledgeable but also socially responsible and action oriented. The socio-economic context of the project reflects the challenges faced by marginalized and underserved groups in Malaysia, ranging from poverty, educational inequality, youth unemployment, to environmental degradation. These pressing issues require innovative, interdisciplinary interventions that connect academic knowledge with real-world solutions. The relevance of the project lies in its timely approach to empowering students not just as learners, but as solution designers and social changemakers.

## Importance of the Project

The importance of this initiative stems from its dual commitment to educational transformation and community empowerment. At a time when universities are called upon to do more than deliver content, this project reimagines the classroom as a launchpad for action. It cultivates a learning environment where students are encouraged to practice empathy, collaborate across disciplines, and translate entrepreneurial ideas into community-based solutions. Grounded in the five stages of design thinking; empathize, define, ideate, prototype, and test, students undergo a full innovation cycle that enables them to co-create impactful interventions in partnership with community stakeholders. These interventions include programs for youth development, community recycling initiatives, local tourism enhancement, mental health awareness campaigns, and more.

## Project Description / Project Methodology

The project structure involves four main phases, guided by a design thinking methodology and grounded in experiential and participatory action research approaches.

1. **Phase 1 – Empathy and Needs Assessment:**
   Students begin with immersive fieldwork in selected communities, using qualitative methods such as semi-structured interviews, focus group discussions, and community observation to identify local issues. This phase aims to build empathy by understanding lived experiences from the perspective of the community members. Tools such as empathy maps and problem trees are employed to analyze insights gathered during field immersion.

2. **Phase 2 – Ideation and Solution Design:**
   Using findings from the empathy phase, students engage in collaborative ideation sessions that involve brainstorming, mind mapping, and the use of design tools such as stakeholder mapping and the social impact canvas. This phase is grounded in the constructivist learning paradigm, encouraging students to co-create solutions through peer-led discussions and rapid iteration. Solutions are refined through design sprints and feedback loops involving both peers and community members.

3. **Phase 3 – Prototyping and Testing:**
   Students then translate ideas into low-fidelity prototypes, including physical products, educational kits, community events, or digital platforms. Prototypes are tested in real-world settings using a pilot-testing approach. Data is collected through direct feedback from

community users, usability observations, and short pre-/post-tests when applicable. Iterative refinement is emphasized, with improvements made based on feedback received from stakeholders.

4. **Phase 4 – Evaluation and Reflection:**
   In the final phase, students conduct outcome assessments using tools such as surveys, community feedback forms, and reflective journals. They analyze both the effectiveness of their interventions and their own personal development through critical reflection exercises, structured using frameworks like Gibbs' Reflective Cycle. These insights are synthesized into project reports, presentations, and visual storytelling artifacts (e.g., posters, short videos), which serve both academic grading and public communication purposes.

This methodology ensures that the project is not only action-oriented and socially responsive but also pedagogically sound, fostering a learning environment where theory meets practice, and students learn to navigate complex real-world challenges with empathy, innovation, and accountability.

## Impact of the Project

The impact of this initiative is substantial. For students, it fosters critical 21st-century skills such as creative problem-solving, teamwork, social awareness, and adaptive thinking. Evaluations of similar programs, such as Service-Learning Malaysia – University for Society (SULAM) have shown that nearly all participants reported enhanced leadership confidence, improved communication abilities, and a deeper sense of purpose in their academic and personal journeys (Herani & Pranandari, 2024; Hyytinen, 2021). Empirical studies have also demonstrated significant improvements in civic responsibility, critical thinking, and collaboration skills, with statistically significant gains in student engagement and workplace readiness (Sukumar, Jafari-Sadeghi, Xu, & Tomlins, 2022; Welch & Saltmarsh, 2023).

For communities, the benefits are tangible. These projects contribute to increased environmental awareness, youth empowerment, strengthened local enterprises, and new pathways for civic participation. A study conducted by Universiti Malaya found that university-community partnerships led to real improvements in community livelihoods, participation, and sustainability practices (Levin et al., 2021). Importantly, this initiative repositions students from passive recipients of knowledge to active co-creators of change—validating the effectiveness of participatory, reciprocal learning models that benefit both learners and the communities they serve (O'Meara, 2023; Tselepis & Lavelle, 2020).

## Commercial Value

In addition to social outcomes, the project reveals strong commercial potential. Several student prototypes, such as upcycled products, eco-friendly packaging, handmade wellness items, educational kits, and digital content platforms, have shown market appeal and scalability. These innovations are aligned with emerging consumer trends that value sustainability and ethical entrepreneurship. As such, the initiative serves not only as a community intervention but also as a pre-incubator for student-led social enterprises, potentially attracting funding from CSR partners, government grants, and impact investors (Sukumar, Jafari-Sadeghi, Xu, & Tomlins, 2022).

## Future Recommendation

To ensure long-term scalability and relevance, several strategic recommendations are proposed. First, the model should be expanded across other faculties and institutions to encourage multidisciplinary collaboration and innovation. Second, a dedicated innovation hub should be established to support students in scaling viable projects beyond the course timeline. Third, institutional partnerships with industry players, NGOs, and government agencies should be formalized to strengthen mentorship, funding access, and post-project continuity (O'Meara, 2023). Fourth, digital platforms can be developed to track project outcomes, share best practices, and engage wider audiences. Finally, an alumni network should be created to connect former participants as mentors and ambassadors, ensuring sustained impact and community growth.

By combining human-centred design with action-oriented learning, this project illustrates how higher education can be a transformative force in empowering young people to not only understand the world's problems but to play a role in solving them (Tselepis & Lavelle, 2020). It repositions students

as proactive agents of change, communities as co-creators, and the university as a true partner in national and global development. Figure 1 shows the process of design thinking that applied in this project.
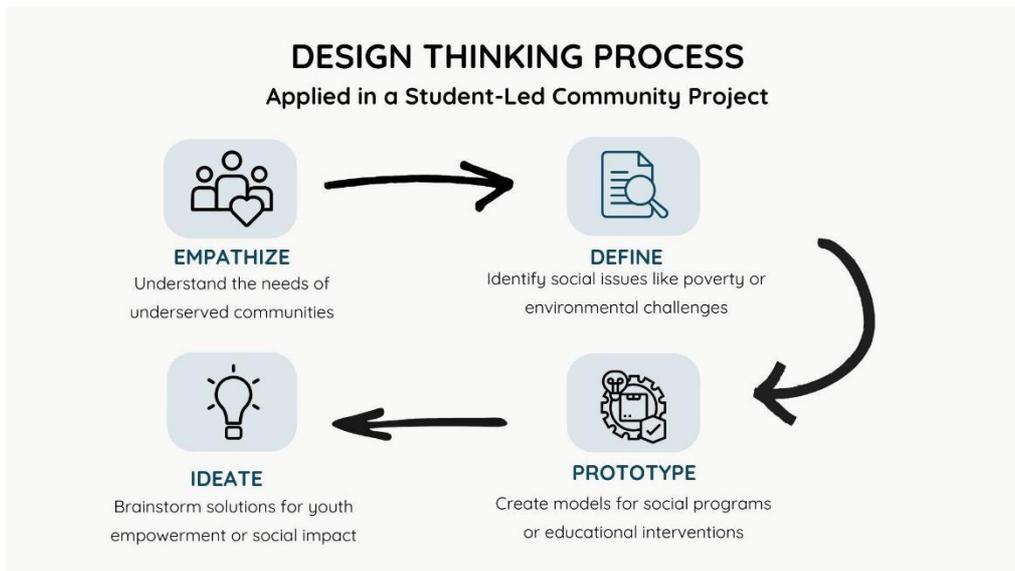


Figure 1: Design Thinking Process.

## Conclusion

The "Designing Solutions, Empowering Communities" project has been successfully implemented under a service-learning course, engaging students in real-world problem solving through the design thinking methodology. This hands-on approach enabled students to translate academic knowledge into practical action by addressing real social and environmental issues faced by underserved communities. Although formal scientific data collection was not conducted, qualitative observations and student reflections indicated positive outcomes in areas such as critical thinking, collaboration, empathy, and leadership. These findings are supported by evidence from similar initiatives like the SULAM program, which reported significant improvements in student civic responsibility and knowledge application (Sukumar et al., 2022). Likewise, community partners benefited from targeted interventions in areas like environmental awareness, youth development, and social enterprise support.

The project demonstrates not only conceptual relevance but also practical viability. With future enhancements such as structured impact assessments and cross-sectoral partnerships, this model has strong potential for replication across institutions. It reinforces the evolving role of universities as platforms for student-led innovation, producing graduates who are both academically capable and socially responsible.

## Acknowledgement

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# STEM IN ACTION: EMPOWERING DIPLOMA STUDENTS THROUGH SULAM

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**Highlight:** This study investigates the effectiveness of the Service Learning Malaysia – University for Society (SULAM) initiative integrated into the diploma-level DELC 2123 Automation course at Universiti Teknikal Malaysia Melaka (UTeM). The initiative aimed to expose diploma students to real-world learning by combining academic content with community engagement involving secondary school students. Participants completed two assignments centered on the application of Pascal's Law and the Linear Kinematic Equations of Motion. Both tasks required hands-on demonstrations to enhance secondary students' theoretical and practical understanding of these physics' concepts. A total of 71 Diploma in Electrical Engineering students completed an online survey assessing their prior awareness of SULAM, perceptions of the learning experience, and the initiative's impact on academic performance and soft skills. Key indicators included communication, teamwork, creativity, project management, and the perceived influence of outreach activities on secondary school students' understanding of physics and interest in STEM careers. Findings revealed that although initial awareness of SULAM was generally low, participation significantly enhanced students' academic understanding, particularly in physics, through peer teaching and active engagement. Students reported improved communication and teamwork skills, increased creativity in content delivery, and enhanced project planning and coordination. Many believed their efforts raised school students' interest in physics and engineering, suggesting a positive long-term impact on STEM engagement. The majority expressed strong interest in participating in similar programs in the future. Additionally, 56 secondary school students responded to a separate survey assessing the program's relevance, prior knowledge, overall attitude, and whether the program met their learning expectations. The study concludes that embedding initiatives like SULAM into technical curricula deepens conceptual understanding and nurtures essential professional skills. These findings align with the broader goal of producing well-rounded graduates capable of meaningful societal contributions and professional success in engineering.

**Keywords:** SULAM, Physics, soft skills, knowledge transfer, hands-on demonstration

## Background

In an era where higher education must address both industrial demands and societal challenges, experiential and service-based learning approaches are increasingly vital (Kuh, 2008). The SULAM initiative, introduced by the Ministry of Higher Education Malaysia, offers a transformative platform for students to engage with communities while reinforcing academic learning through real-world application. At Universiti Teknikal Malaysia Melaka (UTeM), SULAM was integrated into the DELC 2123 Automation course, where Diploma in Electrical Engineering students applied technical concepts—specifically Pascal's Law and the Linear Kinematic Equations of Motion, by conducting hands-on hydraulic system demonstrations for students from Sekolah Menengah Sains Muzaffar Syah and Sekolah Menengah Kebangsaan Air Molek. This initiative aimed not only to enhance students' understanding of hydraulics, a core technical subject, but also to cultivate soft skills such as

communication, innovation, teamwork, and project management. It demonstrated a sustainable and inclusive form of STEM education that extended learning beyond the classroom.

The importance of this SULAM project lies in its demonstrated ability to bridge academic learning with community engagement, resulting in multifaceted benefits for both university students and school participants. Initial survey data indicated that 57.7% of the students were previously unaware of the SULAM initiative, and 90.1% had never participated in such a program. Despite this, post-program results showed considerable academic and personal development. The initiative deepened students' conceptual understanding of hydraulics and enhanced vital soft skills, aligning with employability competencies (Mohamad, Baharun, & Sedhu, 2024). The program also significantly impacted the secondary school students by improving their grasp of physics and stimulating interest in engineering, supporting early STEM exposure (Honey, Pearson, & Schweingruber, 2014). Positive feedback and interest in future initiatives reinforce SULAM's value as a scalable, impactful educational strategy. It exemplifies how service learning promotes socially responsible, well-rounded graduates and supports Sustainable Development Goal 4 (SDG4): inclusive, quality education and lifelong learning.

## Project Implementation

Students were grouped (maximum four per group) and assigned two structured, hands-on tasks that combined academic knowledge with community engagement. These tasks were mapped to Learning Outcome 4 (LO4): Demonstrate the basic concept of hydraulics and pneumatics through knowledge transfer programs (SULAM) to the local community. LO4 was further mapped to Program Outcome 6 (PO6): Assess societal, health, legal, and cultural issues with engineering responsibility. The tasks contributed 25% of the total DELC 2123 course marks, 15% from demonstrations and 10% from a project report.

Task 1 focused on Pascal's Law, requiring students to design syringe-based hydraulic systems that demonstrated force intensification. Each model used at least two syringes of different diameters. Students also produced one-minute TikTok videos explaining the concept and showcasing model functionality. On SULAM Day, students guided secondary school participants in interactive activities, enabling fun, experiential learning. Meanwhile, Task 2 demonstrated the Kinematic Equation of Motion using pneumatic circuits. Students created systems simulating piston motion and explained the relationship between speed, stroke, and time. They conducted mini-experiments and facilitated sessions where school students observed how adjusting flow control valves influenced piston speed. These hands-on activities reinforced theory and promoted active learning.

## Findings

Students The survey responses reflect a highly positive reception of the SULAM initiative among the participating Diploma of Electrical Engineering students, as summarized in Table 1 (Q1 – Q7). A remarkable 98.6% agreed that their understanding of hydraulics, the core subject in DELC 2123, was significantly enhanced through the SULAM program (Q1). This underscores the effectiveness of experiential learning, particularly when students are tasked with teaching and demonstrating technical concepts to others (Kolb & Kolb, 2017). Additionally, 90.1% of respondents believed that the assessment method comprising live/video demonstrations and a written report has contributed positively to their academic performance (Q2), highlighting the value of diversified evaluation strategies that blend theory with practice.

Beyond technical comprehension, the SULAM tasks significantly boosted the development of essential soft skills as also highlighted by (Bringle & Hatcher, 2009). 95.8% of respondents agreed that Task 1 fostered their innovation skills (Q4), likely because of the creative design involved in modelling real-world hydraulic systems using syringes and tubes with other reusable materials. When it came to teamwork and communication skill, 97.2% of students acknowledged improvement (Q3 and Q5), which is likely due to the requirement to collaboratively present and explain technical models to secondary school students, thereby reinforcing articulation, clarity, and public engagement abilities. Project management (Q6) emerged as the most standout competency (98.6%), which reflects the structured nature of the tasks that requires students to coordinate effectively under time constraints. Notably, 87.3% of the students expressed interest in participating in future SULAM programs (Q7), indicating that the initiative not only succeeded in its immediate educational goals but also cultivated long-term enthusiasm for service learning. These findings validate the integration of community-based, hands-on

programs like SULAM into technical curricula as a robust approach to nurturing holistic, employable graduates (Mohamad, Baharun, & Sedhu, 2024).

Table 1: Survey questions and their respective results

| Question No. | Question | Percentage of agreement (%) |
|---|---|---|
| Q1 | Do you agree that the SULAM program in DELC 2123 has improved your understanding of the subject, particularly in hydraulics? | 98.6 |
| Q2 | Do you agree that the assessment methods (live/video demonstration and report submission) for the SULAM program have helped you achieve a better grade in this subject? | 90.1 |
| Q3 | Do you agree that the demonstration during SULAM Day has helped improve your communication skills? | 97.2 |
| Q4 | Do you agree that Task 1 has helped enhance your innovation skills? | 95.8 |
| Q5 | Do you agree that the tasks assigned in the SULAM program have improved your teamwork skills? | 97.2 |
| Q6 | Do you agree that the tasks assigned in the SULAM program have improved your project management skills? | 98.6 |
| Q7 | Would you consider participating in another SULAM program in the near future? | 87.3 |
| Q8 | Do you agree that this program is relevant and necessary? | 98.2 |
| Q9 | Do you agree that you had prior knowledge related to the program's subject area? | 98.2 |
| Q10 | Do you agree that you have a positive perception of the program? | 98.2 |
| Q11 | Do you agree that you gained the knowledge you expected from the program? | 100 |

On the other hand, the responses to Q8 through Q11, which were collected from 56 secondary school students, provide compelling evidence of the SULAM program's perceived value and effectiveness from the participants' perspective. An overwhelming 98.2% of students agreed that the program was both relevant and necessary (Q8), indicating a strong alignment between the program's objectives and the educational needs of the school participants. This result highlights the importance of early exposure to applied STEM concepts through interactive, hands-on learning. Similarly, 98.2% of respondents believed they already had some foundational knowledge in the subject area (Q9), suggesting that the program successfully built upon their existing understanding and bridged the gap between school-level theory and practical application (Freeman et al., 2014).

Furthermore, the positive perception of the program was reinforced in Q10, where 98.2% of school students expressed a favourable overall impression of the SULAM activities. This is a testament to the engaging and approachable delivery style adopted by the diploma students, who used relatable models and interactive demonstrations to convey complex concepts. Most notably, 100% of the respondents agreed that they gained the knowledge they desired from the program (Q11), confirming that the SULAM initiative effectively met its educational objectives for the secondary school audience. This perfect score not only reflects the clarity and impact of the demonstrations but also underscores the program's success in generating interest and curiosity in physics and engineering topics among younger learners, being an essential step toward cultivating future STEM talent (Maltese & Tai, 2010).

## Conclusion

The integration of SULAM into DELC 2123 (Automation) effectively combined academic content with community outreach. The initiative enhanced students' technical understanding nurtured critical soft skills and fostered interest in STEM education. Structured, peer-led activities allowed for the development of communication, innovation, teamwork, and project management competencies. The overwhelmingly positive feedback from both diploma and school participants, along with expressed interest in future participation, positions SULAM as a sustainable, impactful educational model aligned with national graduate development goals and Sustainable Development Goal 4.

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# HOSPITALITY IN EDUCATION: EMPOWERING TEACHERS WITH DIGITAL TOOLS THROUGH COMMUNITY ENGAGEMENT

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**Highlight:** Sulam innovative showcase & symposium involves students interacting with the community to solve local problems by using the knowledge and skills learned in the classroom. In this project, a training session was conducted at SK Kemumin to help teachers to learn basic skills in using digital technologies such as Canva, which they can use in the classroom during teaching sessions as well as when completing tasks that require digital tools. What we do during this project, we taught them how to create presentation slides, how to design certificates, posters, and banners, as well as conducted a practical session where they were required to create a menu poster for a school event to test their understanding of using Canva.

**Keywords:** Digital technology skills, community engagement, teacher digital literacy, local community problem solving.

## Introduction

In Sulam Innovative Showcase and Symposium is an initiative from the University Malaysia Kelantan to help the community. What is special about this project is that it involves students helping the community. The objective of this project is to transfer or share knowledge about digital technologies to the teachers in SK Kemumin. In this project, we chose the Teachers in Sk Kemumin as part of the community that we want to help. The reason why we want to help the teachers in SK Kemumin is to further enhance their understanding of how to use digital technologies such as Canva. Our team provided personalized guidance and created a welcoming learning environment, demonstrating the spirit of hospitality while empowering the teachers at SK Kemumin with essential digital skills

The context of this Sulam project is this project was carried out as part of the SULAM (Service-Learning Malaysia- University for society) initiative, which motivates students to utilize their academic expertise to assist and enhance local communities. Our team partnered with SK Kemumin to improve teachers' digital literacy by familiarizing them with accessible digital literacy by familiarizing them with accessible digital tools like Canva. These abilities are essential for developing impactful teaching resources, such as presentation slides, certificates, posters and banners. During the project, we highlighted the principles of hospitality by promoting a welcoming, respectful, and encouraging learning atmosphere. Through tailored support and attentive mentoring, we established an environment where educators felt appreciated, welcomed, and motivated to develop. This method not only aided their career growth but also embodied the spirit of for hospitality, which is caring for and sincerely serving others while strengthening SULAM primary goal. fostering deeper ties between universities and the community.

The SULAM project is important because it embodies the integration of academic learning with community service, fostering a deep and practical understanding of societal issues among students. This project helped the teachers at SK Kemumin by providing exposure to the use of Canva both during

and outside of teaching hours. By engaging real-world problems and working directly with community members, students not only apply knowledge from their coursework but also develop critical soft skills such as leadership, problem-solving, and communication. This kind of experiential learning bridges the gap between academia and the community, making education more relevant and impactful. Through this project, students can observe directly the impact of their efforts, which can be deeply inspiring and rewarding, on both personal and professional levels. Moreover, the SULAM project plays a crucial role in promoting social responsibility and civic engagement. In an era where digital literacy plays a vital role in education, it is important for hospitality students to develop a strong sense of service, empathy, and community engagement. In this SULAM project we implemented the fundamental values of hospitality such as care, warmth, and friendliness by assisting teachers at SK Kemumin in improving their digital skills with Canva, ultimately creating a more supportive and inclusive learning environment. This experience not only prepares them to be more informed and active citizens but alos inspires them to pursue careers and initiatives that contribute positively to society. Additionally, this SULAM project strengthens the bonds between universities and the communities.

The description of our SULAM project is, SULAM is a transformative and flexible initiative that refers to teaching and learning methods that combine course learning with community service. The goal of SULAM project initiative seeks to assist teachers at SK Kemumin by improving their digital literacy with tools such as Canva. This initiative aims to strengthen educators by encouraging skill enhancement, integrating technology, and fostering active community involvement, this initiative will benefit both teachers and their students. The project aim is to enhance teacher's digital skills so they can develop more captivating teaching resources and handle school-related responsibilities more effectively. By creating a friendly and supportive atmosphere, this initiative embodies the fundamental principles of hospitality like care, service, and attentiveness, while also aiding the overarching aim of modern education and closing the digital divide in schools. This program enhances the digital skills of educators leading to more efficient teaching strategies, improved student involvement, and greater integration of technology in the learning process. It also encourages a stronger feeling of community and collaboration among students and teachers. In our project, we collaborated closely with the educators at SK Kemumin by holding training sessions with them.

In this way, we not only boosted their confidence in technology use but also integrated the essential values of hospitality. This initiative ultimately enhances education in the community by equipping educators with the resources and abilities needed for contemporary classrooms. For this project, we selected SK Kemumin as our community partner, focusing on helping improve their digital literacy skills. The teachers at SK Kemumin have been dedicated to educating students for many years, but many of them had limited exposure to digital tools like Canva. We conducted hands-on session on how to create effective presentation slides, design posters, certificates, and banners using Canva. To reinforce their understanding, we also organized a practical challenge where the teachers were tasked with designing a menu poster for a school, we conducted hands-on sessions on how to create effective presentation slides, design posters, certificates, and banners using Canva. To reinforce their understanding, we also organized a practical challenge where the teachers were tasked with designing a menu poster for a school feast. Through this activity, they were able to apply the skills they learned in a meaningful and creative way, boosting their confidence and ability to integrate digital tools into their daily work.

Each community initiative has its unique influence, whether aimed at students or the community as a whole. Engaging in this SULAM initiative at SK Kemumin, which included activities like digital training workshops, practical design sessions, and interactive tasks using Canva, provided significant advantages for both the community and the participating students. The project offered teachers, particularly those with little exposure, a chance to acquire vital digital skills that can improve both classroom instruction and administrative duties. Mastering the design of presentation slides, posters, certificates, and banners enhanced their efficiency and also ignited creativity and confidence in utilizing modern technology. The practical activity of designing a menu poster for a school celebration enabled teachers to utilize their newly acquired skills in a relevant, real-life setting. This engaging method fostered a deeper feeling of inclusion, teamwork, and professional development among the teachers. From a hospitality standpoint, our team made certain that each session was inviting, courteous, and encouraging, creating a friendly atmosphere where educators felt at ease asking questions and trying out new resources. The collective experience deepened the bond between university students and the school community, showcasing the essence of service, empathy, and shared learning that is central to SULAM. This project provided participants, like students or volunteers, with a valuable practical learning opportunity. It enabled them to utilize the knowledge and skills

acquired in class, especially in communication, digital tools, and hospitality. By instructing educators on utilizing Canva for designing presentation slides, posters, certificates and banners, student acquired important abilities like teamwork, leadership, problem-solving, and effective communication. Additionally, observing the teacher's advancement and boosted confidence in utilizing digital tools provided participants with a profound sense of accomplishment and intention. The initiative not only aided in the professional growth of educators but also fostered personal and professional development for students. In straightforward terms, this project was advantageous for all participants by improving digital preparedness, fostering stronger ties between schools and communities, and offering a valuable, skill-developing opportunity for the university students

Collaborating with SK Kemumin to train teachers in using Canva has equipped them with valuable digital skills that enhance teaching and administrative tasks. Beyond improving classroom materials, these skills hold commercial value, teachers can now create and offer design services such as certificates, posters, and banners for school events or local businesses. This opens up opportunity for side income and entrepreneurship, turning digital literacy into an economic asset. The project not only boost readiness but also reflects hospitality values by fostering an inclusive, empowering learning environment with long term and economic benefits.



Figure 1: The program at SK Kemumin featured several activities, including how to make posters, slide presentations, banners, and practical challenge to make the school feast menu

As student volunteers engaged in the SULAM program at SK Kemumin, we found the experience to be profoundly inspiring and significant. This initiative has motivated us to enhance future efforts by integrating additional digital resources to more effectively assist educators and by suggesting partnerships with other educational institutions or organizations to make the program more captivating and widespread. By incorporating digital platforms, SULAM activities can become more inclusive, accessible, and efficient in providing knowledge. To expand the SULAM project at SK Kemumin in the future, we recommend introducing more digital tools beyond Canva, such as CapCut, Google Workspace, and PowerPoint, to provide teachers with broader digital competencies. Implementing a peer-to-peer mentorship program can encourage trained teachers to guide their

colleagues, fostering a self-sustaining digital learning environment. Additionally, developing pre-recorded online modules will allow teachers to access the training materials at their convenience, promoting continuous learning offering. Offering certification upon completion of the training can also add value to their professional development. To expand the project, upcoming workshops could involve educators from additional schools to enhance community influence. Hospitality students can serve as a digital representative, acquiring practical experience by assisting with the training. Educators can also profit from their digital creations, introducing an entrepreneurial aspect. Partnering with local educational authorities or NGO can offer additional assistance, and ongoing feedback and assessment will aid in enhancing and maintaining the program.

## Conclusion

In conclusion the SULAM initiative at SK Kemumin seeks to connect academic knowledge with impactful community service by providing teachers with vital digital competencies. By concentrating on resources such as Canva, the initiative improves teaching effectiveness and administrative efficiency, assisting educators in developing captivating classroom content and professional resources. This program enhances the school's digital abilities while also embodying the fundamental values of hospitality, nurturing an inclusive, supportive, and empowering atmosphere. In the end, the initiative fosters sustainable educational advancement and community progress via knowledge exchange and teamwork

The SULAM initiative at SK Kemumin encompasses multiple efforts focused on improving digital skills and encouraging learning within the community. This initiative unites university students, educators, and the local school community to work together on educational advancement via practical training in digital resources like Canva. The program enhances students' education by utilizing classroom knowledge in real-life situations while also equipping teachers with useful skills to enhance their teaching and management duties. This partnership has strengthened connections between the university and the school community, improved digital preparedness, and aided in the educational progress and sustainable growth of the local region

The effects of the SULAM project at SK Kemumin are significant for the school community and the students involved. For educators, mastering digital tools such as Canva improves their capacity to develop captivating teaching resources, simplifies administrative tasks, and boosts their confidence in utilizing technology. This enhances the learning experience for students and also cultivates a more robust, digitally competent school atmosphere. The project provides university participants with practical experience in conducting training, enhancing their communication, leadership, and problem-solving abilities. Interacting personally with teachers fosters empathy and patience, while seeing the beneficial effects of their work cultivates a deep sense of purpose and achievement

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# FROM CLASSROOM TO COMMUNITY: FOSTERING DIGITAL INCLUSION AND CIVIC RESPONSIBILITY THROUGH THE CADC SERVICE-LEARNING INITIATIVE

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**Highlight:** This project requires students to enhance the basic concepts of computers and computer applications by giving them an experiential learning through the Computer Awareness Day with Community (CADC) program. The experiential learning incorporates elements of Service-Learning Malaysia University for Society (SULAM), where students apply academic knowledge practically through interaction with the community. The experiential learning consists of module development as the initial stage, followed by real-time community-based learning during the CADC, which enables students to apply the computing knowledge they have learned theoretically towards the community, as the aim of building the capacity of the digital generation in computer literacy. Moreover, a reflection survey was also conducted among the community to enhance the value and impact of the CADC program.

**Keywords:** Awareness, computer literacy, community, experiential learning

## Introduction

The integration of experiential learning into academic curricula plays a pivotal role in bridging theoretical knowledge with practical application. In this regard, students' participation in a community-based event, Computer Awareness Day, served as a meaningful opportunity to engage in real-world learning outside the conventional classroom setting. Organized by the students themselves, the event aimed to promote digital literacy among various demographic groups, including primary and secondary school students, university students, and senior citizens. Students assumed active roles in the planning, facilitation, and delivery of interactive sessions focused on fundamental computer skills, internet navigation, digital communication tools, cybersecurity awareness, and the earth science subject-related interactive learning. These responsibilities required students to draw upon their academic knowledge and adapt it to suit the diverse needs and backgrounds of the participants.

## Computer Awareness Day with Community (CADC) project

The Computer Awareness Day with Community (CADC) project hold significant educational and social value, both for the students involved and the community they serve. By participating in CADC, students are given the opportunity to apply theoretical knowledge, such as basic computing, software usage, and problem-solving, in practical settings. This not only reinforces their academic understanding but also improves their technical, communication, and teamwork skills. It bridges the gap between academic content and real-world challenges. Furthermore, the project addresses a critical societal need: digital literacy. Many community members, especially those in underserved areas, lack the basic skills needed to participate effectively in an increasingly digital world. This program empowers them, namely the primary and secondary school students, university students, and teachers, with essential knowledge, such as how to use computers, access online services, and practice digital safety, as well as experience the interactive learning related to the earth science subject.

**Description of Project**

The Computer Awareness Day with Community (CADC) project was a student-led initiative designed to promote digital literacy across a wide range of demographic groups, including primary and secondary school students, university students, and adult citizens (Table 1). As active organizers and facilitators, the students were responsible for planning and conducting a series of interactive sessions that covered essential computer skills, internet navigation, digital communication tools, cybersecurity awareness, and subject-specific learning related to earth science. Through this engagement, students applied their academic knowledge in real-world contexts, adapting their instruction to meet the diverse learning needs and backgrounds of community participants.

Table 1: Number of CADC participants and their education level

| Education level | Number of participants, n (%) |
| --- | --- |
| Primary School children | 40 (9) |
| MRSM students | 117 (27) |
| University students | 255 (59) |
| MSc/PhD | 20 (5) |

In addition, Figure 1 shows the findings from reflection surveys that require participants to assess whether the module and interactive learning has achieved the project objective. In general, most of the participants perceived that the module activities have captured their interest related to computer applications.
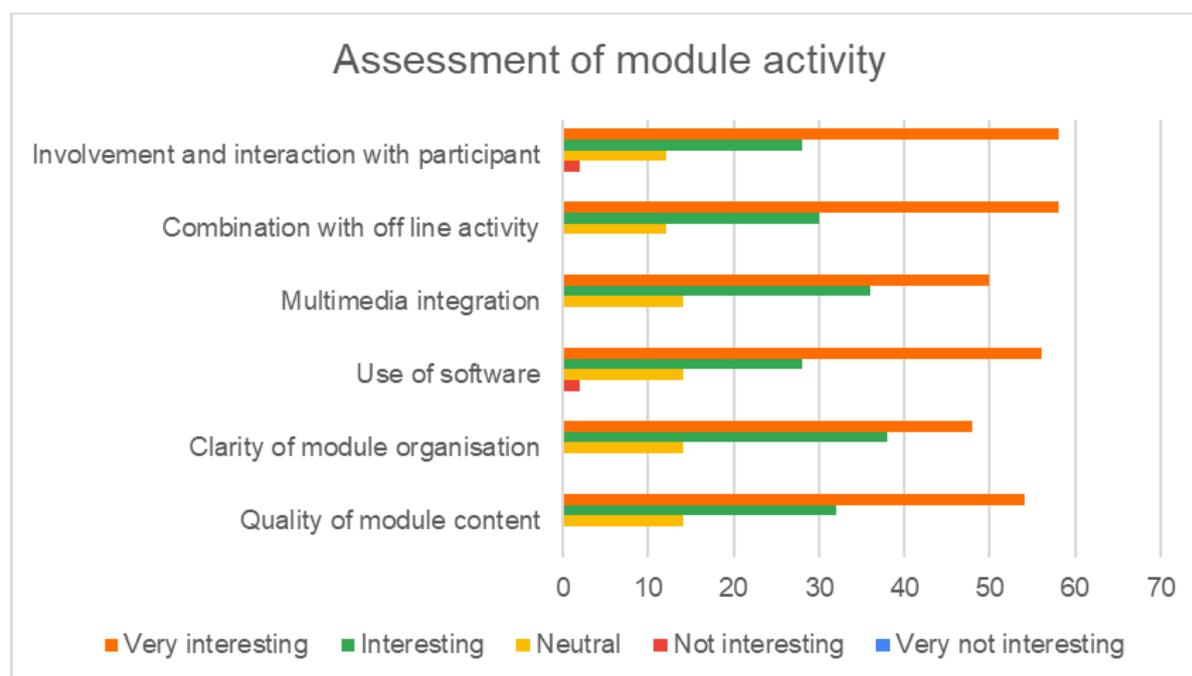


Figure 1: Feedback from participant related to module activity assessment

**Impact of the Project**

The CADC program helps community members improve their understanding and skills in using computers and various applications, which is crucial in today's digital age. Indirectly, the program helps bridge the digital divide which empowers community members by increasing their digital literacy. Through CADC, students are able to apply their academic knowledge in real-world situations where this practical approach makes their education more meaningful. It also helps the students develop important skills such as communication, teamwork and problem-solving, while fostering a sense of social responsibility.

### i. Commercial Value of Community/SULAM Project

Compilation of the modules used in CADC into a cohesive book will provide a valuable resource for an interactive learning experience of school children and young learners. The interactive nature of the modules ensures to be enjoyable and effective hands-on learning experiences.

### ii. Future Recommendation of Community/SULAM Project

It is recommended that in the future, this project could be embedded with other scope such as the use of artificial intelligence (AI) or machine learning to fulfil the needs of different target community demographics in enhancing either their quality of life, work or business.

## Conclusion

In conclusion, the Computer Awareness Day with Community (CADC) program has successfully engaged the groups of students in presenting interactive modules on Earth Science applications. This initiative as part of the Service-Learning Malaysia University for Society (SULAM) program has provided a valuable platform for students to apply their academic knowledge in real-world settings, enhancing their learning experience and fostering a sense of social responsibility. The program's commercial value is evident in its marketability to educational institutions and potential for generating revenue through partnerships and workshops. Overall, CADC has demonstrated significant positive impacts on digital literacy and community empowerment, creating a sustainable model for future educational initiatives.

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# SCHOOL NUTRITION PROGRAM – *NUTRISI SIHAT SI CILIK HEBAT*

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**Highlight:** School Nutrition Program - *Nutrisi Sihat, Si Cilik Hebat* is a nutrition awareness and education initiative designed for primary school children. Its goal is to empower school children with knowledge and skills about healthy eating habits, enabling them to make better food choices for their growth and well-being. The key focus areas includes understanding the concept of balanced and healthy eating, learning the five food groups in the Malaysian Food Pyramid 2020, applying the Malaysian Healthy Plate *(Pinggan Sihat Malaysia)* concept, recognising how school food environments can support or hinder healthy habits and promoting school-wide awareness through the School Nutrition Program (SNP), in collaboration with Faculty of Agro Based Industry, Universiti Malaysia Kelantan (UMK). Through interactive activities, engaging modules and collaboration with educators and health experts, this program aims to combat childhood obesity, prevent malnutrition and foster a healthier generation of young Malaysians.

**Keywords:** nutrition, obesity, malnutrition, healthier generation, healthy plate

## Introduction

School Nutrition Program – *Nutrisi Sihat, Si Cilik Hebat* is a school-based program aligned with Malaysia's national school nutrition policy. This policy provides structured guidelines on food and nutrition practices within educational institutions, aiming to promote healthier eating environments. To support effective implementation, the program seeks to improve understanding of these guidelines among school communities, contributing to the creation of a safer food environment and addressing pressing issues such as childhood obesity and malnutrition. The program further aims to educate children on nutrition and instil healthy eating habits, highlighting their impact on overall well-being. The educational module was developed by Mr. Mohd Shaiful Azman bin Abdul Rahim and Dr. Karimah Mukhtar under the health awareness component of the 'Service-Learning Malaysia - University for Society (SULAM)' project.

## Background of the project

Nutritional and health status significantly influence students' academic performance and cognitive development. Students with nutritional deficiencies, particularly in iron, iodine, and protein demonstrate lower learning potential compared to their well-nourished peers (Govindj et al., 2002). Ensuring proper nutrition among school-aged children is thus essential to support both their physical development and academic outcomes. However, children in under-resourced or rural areas often face challenges in accessing balanced, nutritious meals, which can adversely affect their growth, learning capacity and overall well-being.

To address these issues, the School Nutrition Program - *Nutrisi Sihat, Si Cilik Hebat* was developed as an early intervention initiative aimed at promoting healthy eating habits and increasing nutritional awareness among primary school children. The program draws from established models

such as Malaysia's Healthy Food at School (HiTS) initiative, which emphasizes the provision of wholesome meals in educational settings (Ministry of Health Malaysia, 2019). It also aligns with global efforts to combat malnutrition by ensuring children receive age-appropriate essential nutrients (Martini et al., 2023). By engaging both pupils and educators through interactive educational activities, the program seeks to equip children with the knowledge and skills to make healthier food choices, ultimately supporting their long-term health and educational attainment.

The program was implemented in SK Gemang and SK Lubok Bongor, two primary schools in the Jeli district, on December 4th and 5th, 2024. It was facilitated by 43 second-year students from the Food Security Program, Faculty of Agro-Based Industry, Universiti Malaysia Kelantan, as part of the SULAM course on Food Policy and International Trade. A total of 180 pupils participated, namely 90 from each school. At SK Gemang, the program focused on Standard 3 students as a pilot group, while at SK Lubok Bongor, it included students from Standards 3 through 6.

## Importance of the Project

At the end of the program, it was expected that the pupils in these two schools improve their knowledge and skills related to the concept of healthy eating habits and practices among children. They will always choose the foods based on the five food groups in the Malaysian Food Pyramid 2020 (Tan, 2021). The concept of the Malaysian Healthy Plate will also be practiced among them, and it is hoping the children will encourage their family members to practice Malaysian Healthy Plate (Che Abdul Rahim, Ahmad, Man, & Ahmad, 2022). Through participation of teachers and pupils, it is hoped that the schools will create environments that support healthy eating practices among children to address obesity and malnutrition. This is especially involved in the canteen that provides food for pupils and teachers.

## Description of the Project

The School Nutrition Program - *Nutrisi Sihat Si Cilik Hebat* is an educational initiative developed as part of the Food Policy and International Trade course, aimed at addressing nutritional challenges among primary school children. This student-led project responds to persistent issues of stunting and malnutrition in Malaysia, particularly among young children attending childcare centres at early ages (Haron et al., 2023). With nutrition as one of the course topics, university students were guided to design a community-based intervention project that applies classroom knowledge to real-world issues. Schools within the Jeli district were selected as community partners, with a focus on early prevention through primary-level education.

To enable measurable impact and program continuity, the project targeted Standard 3 students (aged nine), serving as a pioneer group for long-term observation and engagement. An interactive and age-appropriate module was developed to help children understand the value of a balanced diet and make informed food choices. In addition, teachers and school staff were trained to reinforce nutritional practices beyond the duration of the program, ensuring broader institutional support.

The initiative fosters a school culture of health and well-being through nutrition talks, games, and hands-on learning activities designed specifically for young learners. As shown in Figure 1, pupils actively participated in educational games involving food group categorisation, reinforcing key nutrition concepts in an enjoyable and memorable way. By empowering university students and educators alike, the program aims to enhance physical health, cognitive development and academic success among school children.

Figure 1: Participation of pupils in interactive games focused on selecting healthy foods

## Impacts of the Project

Among the expected impacts of this program is pupils gain a better understanding of the importance of balanced diets, food groups, and healthy eating habits, which empowers them to make informed food choices (Yahiya, 2012). However, this program will not be successful if the parents do not play a role in nurturing and supporting their kids to follow good diets. Thus, it is recommended in the near future to get along with the parents to join the program. Through hands-on activities, games, talk and interactive learning, pupils are more likely to adopt healthier eating practices, such as choosing fruits, vegetables and nutritious snacks over unhealthy options. However, as an ongoing project, the level of nutrition awareness cannot be assessed straight away after the program, but in the future year the same cohort of pupils will be assessed again through this project. When the program reaches its objective, it is expected that improved nutrition will contribute to better concentration, energy levels, and overall health, which can lead to enhanced academic performance and reduced absenteeism (Yahiya, 2012).

The program will empower the school communities by encouraging teachers, staff and parents to support healthy eating and fostering a school environment that prioritises student well-being. By integrating nutrition education into school routines and involving students in practical activities, the program helps establish long-term healthy eating habits that can extend beyond the school setting. The SULAM approach facilitates collaboration between university students, educators and local communities, thus promoting shared responsibility for children's health and nutrition. As part of the university's social responsibility, university students gain valuable real-world experience while promoting Universiti Malaysia Kelantan as an institution of choice for parents seeking a supportive and engaged learning environment for their children.

## Future Recommendations

Kids nowadays always follow their adults in terms of role model encouragement. Thus, teachers and university students can act as role models, demonstrating healthy eating habits and encouraging younger students to follow suit. The most important thing to make an impactful vision is by creating a supportive environment. By involving school staff and parents, the program fosters a supportive environment where healthy eating is encouraged both at school and at home. The program can also be assessed with regular reinforcement rather than conducting annually. Follow-up activities such as every three or six months can be done as reminders to help pupils maintain healthy eating habits over time.

## Conclusion

The nutrition awareness program successfully provided schoolchildren with fundamental knowledge and useful skills to make healthier choices. Through interactive workshops, engaging activities and hands-on experiences, pupils developed a clearer understanding of balanced meals and the role of nutrition in supporting their learning, growth and overall well-being. The involvement of educators and community partners further reinforced these messages, creating a supportive environment for lasting behavioral change. As the program concludes, it is anticipated that pupils will

continue applying the lessons learned, promoting healthier habits within their schools and communities. This initiative lays the groundwork for sustained improvements in child nutrition and contributes to broader public health outcomes.

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# TWISTER SHELF: REPURPOSING AND FURNITURE TRANSFORMATION

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**Highlight:** Twister shelf project was implemented as part of the Service-Learning Malaysia, University for Society (SULAM) initiative under the Furniture Manufacturing Technology (EWT4173) course. This service-learning project aimed primarily to repurpose old school furniture while simultaneously enhancing students' woodworking skills. Objectives included mastering techniques such as wood selection, precise measuring and marking, accurate sawing, and effective assembling. Students particularly focused on understanding joinery principles and gaining proficiency in operating woodworking machinery. The methodology involved collaboration between Pejabat Pendidikan Daerah Jeli, 10 students from the Furniture Manufacturing Technology course and 20 participants from Sekolah Menengah Kebangsaan Ayer Lanas, Jeli. Participants collectively transformed old furniture into an innovative and functional twister shelf. Throughout the project, students applied practical theoretical knowledge, promoting creativity, sustainability, and technical skills. Results demonstrated that repurposed furniture significantly contributed to environmental sustainability by preventing waste accumulation and reducing demand for new resources. Evaluations emphasized aesthetics, functionality, sustainability, and innovation, highlighting the successful transformation of discarded furniture into valuable assets. The project notably enhanced participants' woodworking abilities, including accurate use of tools and machinery, and fostered significant community engagement and cooperation. In conclusion, the project effectively underscored the dual objectives of promoting environmental stewardship and community enhancement through sustainable practices. By creatively repurposing surplus school furniture, this initiative provided an economically viable and ecologically beneficial solution, simultaneously enriching students' educational experiences and technical capabilities. The success of this project offers a replicable model for other educational institutions aiming to integrate practical skill development with sustainability and community collaboration.

**Keywords:** Service-Learning Malaysia (SULAM), Community, Furniture makeover, Environmental sustainability, Community cooperation and engagement

## Introduction

The increasing emphasis on sustainability and experiential learning in higher education has led to the integration of community-based projects within academic curriculum. One such initiative is the Twister Shelf project, implemented as part of the Service-Learning Malaysia – University for Society (SULAM) program under the Furniture Manufacturing Technology (EWT4173) course. This project represents a fusion of environmental stewardship, practical skill development, and meaningful community engagement.

The core aim of the project was to repurpose old school furniture into innovative and functional furniture, specifically a twister shelf. In doing so, it not only addressed the issue of furniture waste but also provided students with valuable hands-on experience in woodworking. Through activities such as wood selection, measuring and marking, sawing, and assembly, students gained deeper insights into joinery techniques and the operation of woodworking machinery. The project was carried out through

a collaborative effort involving 10 students from Universiti Malaysia Kelantan (UMK) Jeli Campus, 20 students from Sekolah Menengah Kebangsaan Ayer Lanas, Jeli and representatives from the Pejabat Pendidikan Daerah (PPD) Jeli. This partnership fostered knowledge exchange and community involvement, providing a practical platform for applying theoretical knowledge while promoting sustainability.

Overall, the Twister Shelf project successfully highlighted the potential of discarded materials to be transformed into valuable assets. It demonstrated how service-learning can be used as a powerful tool to enhance educational outcomes, strengthen community ties, and encourage environmentally responsible behaviours. This study aims to document the processes, impacts, and educational value of the project, and to explore how similar approaches can be adopted by other institutions seeking to combine sustainability, innovation, and community service.

## Literature Review

Service-learning is widely recognized as a pedagogical approach that enhances academic learning while fostering civic responsibility and community involvement. Eyler and Giles (1999) emphasize that service-learning encourages students to connect theoretical knowledge with real-world challenges, promoting deeper learning and social awareness. Similarly, Bringle and Hatcher (2000) highlight that institutionalized service-learning programs improve students' problem-solving skills and sense of social contribution, which align with the goals of the Furniture Manufacturing Technology (EWT4173) course.

In the context of upcycling and repurposing, the reuse of discarded materials is central to the circular economy. Stahel (2016) argues that extending the life of materials through repurposing not only reduces waste but also conserves resources. Fuad-Luke (2009) supports this by emphasizing that eco-design and creative reuse in furniture production can yield innovative outcomes while addressing environmental concerns. Skill development through woodworking education is crucial in technical and vocational learning. Kolb's (1984) experiential learning theory supports the notion that students learn best through hands-on projects, which allow them to apply abstract concepts in practical settings. Mahadzir and Phang (2013) further reinforce this, stating that project-based woodworking encourages creativity and technical mastery. The Twister Shelf project provided a platform for students to engage with woodworking machinery and techniques such as accurate measuring, cutting, and joinery, enhancing their technical proficiency.

From a sustainability standpoint, the furniture industry is increasingly adopting practices that minimize environmental impacts. Sustainable furniture design requires not only material efficiency but also innovation in reusing existing resources. By preventing discarded school furniture from ending up in landfills, the Twister Shelf project contributes to a more sustainable production cycle. Community engagement is another essential component of education for sustainable development. Zhang and Ma (2023) demonstrate that community-involved project-based learning enhances student motivation while addressing real societal needs. The collaboration between university students and school participants in this project fostered mutual learning, creativity, and a shared sense of accomplishment.

## Project Description

Students were examined the old school furniture for example tables, chairs or desks at Sekolah Menengah Kebangsaan Ayer Lanas, Jeli for reusable components like drawer handles, legs, hardwood panels and so on before determining what the new piece will be. Then, they create design sketches to visualize dimension and structure. All the materials were brought to UMK Jeli Campus Wood Workshop for easy processing. For material selection, they need to identify and separate usable materials from damaged or unusable parts. Then, they re-dimensioned salvaged parts for the new design and removed old nails, screws, paint, and dirt using sandpaper, scrapers or chemical strippers. The components were cut to new sizes and shaping based on design. Then, all the components were joined securely and assembled to form twister shelf. The shelf was sanding to smooth the surfaces and prepare for finishing. Lastly, stain and paint were applied to enhance appearance and protect the furniture.

## Conclusion

In conclusion, the Twister Shelf project under the SULAM initiative successfully demonstrated how service-learning can be leveraged to promote sustainability, skill development, and community engagement. By repurposing old school furniture into functional shelving units, the project not only reduced material waste but also instilled a strong sense of environmental responsibility among

participants. Students enhanced their technical competencies in woodworking, ranging from material selection and joinery to machine handling and finishing, while applying theoretical knowledge in a real-world context. The collaboration between university students, school participants, and local education authorities fostered meaningful partnerships and strengthened the connection between academia and the community. Overall, the project provided a replicable model for integrating practical education with sustainable development goals, offering long-term value both educationally and environmentally.

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# *JALINAN KASIH BERSAMA ANAK YATIM*: FOSTERING EMPATHY AND COMMUNITY BONDING THROUGH VOLUNTEERISM WITH ORPHANED CHILDREN AT DARUL HUFFAZ, BACHOK

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**Highlight:** This SULAM project held at Rumah Kebajikan Anak Yatim dan Dhuafa Lilbanat Darul Huffaz in Bachok, Kelantan, aims to address the emotional and social needs of orphaned girls who often lack exposure to external support and positive social interactions. The program included interactive group games, emotional development activities, an aerobic session, and a simple gift-giving ceremony to uplift the children's spirits. A total of 11 student volunteers from UMK participated, each contributing to creating a cheerful and supportive atmosphere. Furthermore, the program allowed volunteers to apply and enhance their soft skills, such as communication, leadership, and event coordination. The anticipated impact includes improved emotional well-being among the children and strengthened soft skills among the volunteers. For future sustainability, it is recommended that similar programs be organised periodically in collaboration with local NGOs and supported by government agencies to ensure ongoing emotional development and social exposure for children in orphanages.

**Keywords:** SULAM Project, Orphanage, Volunteerism, Community Engagement, Emotional Support, Soft Skills Development, Well-Being

## Introduction

The SULAM Project is an educational initiative that combines academic learning with community engagement. Through volunteer activities at Rumah Kebajikan Anak Yatim dan Dhuafa Lilbanat Darul Huffaz, students applied classroom knowledge in real-life settings while supporting an underserved community. This aligns with the national goal of producing holistic graduates with strong values and social responsibility. The program also enhanced students' soft skills and emotional intelligence, including empathy and compassion. Additionally, it is supported by the Sustainable Development Goals (SDGs) by promoting inclusivity, reducing inequalities, and strengthening university-community partnerships. The main objective of this project is to foster emotional development and social interaction among orphans through structured volunteer-led activities, while simultaneously providing university students with experiential learning opportunities to strengthen their soft skills and civic responsibility. Overall, the implementation of the SULAM project at this orphanage enriches students' learning experiences while promoting a more responsible and empathetic society. This initiative supports Malaysia's goal of producing socially responsible, globally aware graduates.

## The "Jalinan Kasih Bersama Anak Yatim" project

The *"Jalinan Kasih Bersama Anak Yatim"* project was conducted at Rumah Kebajikan Anak Yatim dan Dhuafa Lilbanat Darul Huffaz in Bachok, Kelantan. This Islamic charity home shelters orphaned girls and young women from underprivileged and low-income backgrounds who face serious socioeconomic challenges, including limited access to emotional, social, and educational support.

Many of them also lack consistent psychological care, putting them at risk of emotional distress, low self-esteem, and difficulties integrating into society. To address these concerns, a volunteer program was designed as an intervention to support the emotional and personal development of the residents. Activities such as Cheerful Aerobics, Emotion Jar, Nutrient Guessing Game, Salad Preparation, and Nutrition Sharing were conducted to foster confidence, cooperation, and self-expression in a safe and supportive environment.

From an educational perspective, the project also provided students with high-impact, real-world learning experiences outside the classroom. It enabled them to strengthen interpersonal skills like leadership, communication, teamwork, and problem-solving while engaging directly with the community. Ultimately, this initiative not only enhanced the well-being of the orphanage residents but also contributed to the personal and professional growth of the students involved. It exemplifies how university-community partnerships can cultivate a more caring, inclusive, and socially responsible society. This initiative aligns with Experiential Learning Theory (Kolb, 1984), which emphasizes learning through direct experience and reflection. By engaging with marginalized communities, students actively construct knowledge, develop empathy, and refine their interpersonal skills—transforming abstract classroom concepts into meaningful real-world understanding. The project also resonates with Social Development Theory (Vygotsky, 1978), where social interaction plays a fundamental role in the development of cognition and emotional growth. Through shared activities, both orphans and volunteers benefit from mutual learning and support, which enhances their socio-emotional competence and community awareness.

### Importance of the Project

The *"Jalinan Kasih Bersama Anak Yatim"* project is important because it provides emotional support, educational activities, and positive interactions for orphans. It helps build their confidence, teaches them new knowledge in fun ways, and shows them they are cared for. The project also encourages community bonding and allows students to practice empathy, leadership, and teamwork. It creates a meaningful impact on both the orphans and the volunteers, promoting a culture of compassion and service.

### Description of the *"Jalinan Kasih Bersama Anak Yatim"* project

| Picture/Activity | Description |
|---|---|
|  | The program began with a briefing session between the volunteers, the orphans, and the management of Rumah Kebajikan Anak Yatim dan Dhuafa Lilbanat. This was essential to ensure smooth program flow, clarify expectations, and build early rapport with the participants. |

These pictures show some of the activities we carried out throughout the program. Among the activities we carried out were cheerful aerobics with the orphans for 30 minutes for relaxing, this 30-minute aerobic session was selected as the opening activity to energize participants and break the ice in a fun and engaging manner. Physical movement helps release endorphins, reduce anxiety, and promote a cheerful atmosphere. It was also intended to promote healthy physical activity in an enjoyable and inclusive way.

Our second activity was the emotion jar which was a session to express feelings and identify their emotions. The Emotion Jar was conducted to create a safe and guided platform for the children to express their emotions. The justification for this activity lies in its psychological benefit: many orphans face emotional repression due to trauma or lack of support. This activity helped to foster emotional literacy, self-awareness, and empathy, while giving students insights into emotional development.





The third was a nutrient guessing session in the form of a poison box to testing their mind and each winner who could answer the question who was given a souvenir, this game-based learning activity involved guessing nutrients hidden in boxes. It was designed to educate children about nutrition in a fun and interactive way. This approach was justified because playful learning increases engagement and retention. It also encouraged critical thinking and provided a non-threatening environment for learning important health knowledge.

Our last activity was a demonstration of making a healthy salad to implement a healthy lifestyle and love green food. The salad-making session aimed to introduce the orphans to healthy eating habits and the importance of green food. This hands-on demonstration was justified as a practical method to promote awareness of balanced nutrition and hygiene. By showing simple and affordable salad preparation, it encouraged a proactive attitude towards health and sustainable food choices.
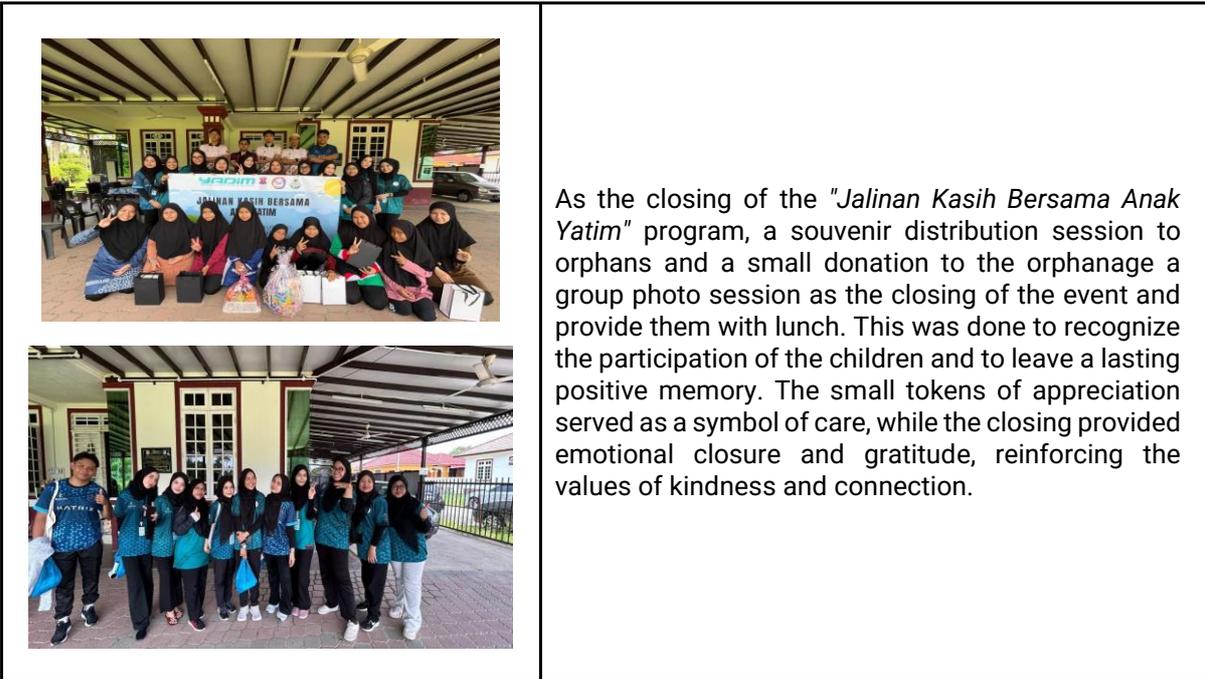
As the closing of the *"Jalinan Kasih Bersama Anak Yatim"* program, a souvenir distribution session to orphans and a small donation to the orphanage a group photo session as the closing of the event and provide them with lunch. This was done to recognize the participation of the children and to leave a lasting positive memory. The small tokens of appreciation served as a symbol of care, while the closing provided emotional closure and gratitude, reinforcing the values of kindness and connection.

## Impacts and Advantages of the Project

### i.   Impact and advantages to orphans

1. The program provided orphans with emotional support and positive interaction, especially through activities like the Emotion Jar, which encouraged them to express feelings in a safe and supportive space. This helped improve their emotional literacy and well-being.
2. Educational sessions such as the Nutrient Guessing Game and Salad Preparation gave the children valuable knowledge about healthy living in an interactive format. These activities increased their awareness of nutrition and equipped them with basic life skills that are often overlooked.
3. The program offered orphans exposure to positive role models. The presence of caring and respectful university students gave them inspiration and reassurance. This interaction helped build the children's self-esteem and fostered a sense of connection and belonging.
4. Through physical and group-based activities like Senamrobik Ceria, the children were engaged in fun exercises that promote physical health and social bonding. These sessions created a lively and joyful environment, helping the children reduce stress and enjoy quality time together.

### ii.   Impact and advantages to student

**1. Skill Development**
Students enhance key soft skills such as communication, leadership, teamwork, and creative presentation. Explaining nutrition topics to children teaches them to adapt to diverse audiences, while building confidence, empathy, and patience.

**2. Social Responsibility Awareness**
Through direct engagement with orphans, students gain a deeper appreciation of life, develop empathy, and become more socially conscious. Activities like the nutrient guessing game help nurture both knowledge-sharing and compassion.

**3. Professional Exposure**
Students from fields like education, health, nutrition, psychology, and medicine gain early hands-on experience managing programs, engaging with communities, and understanding real-world challenges—an advantage for resumes and future careers.

## Commercial Value of the Project

The *"Jalinan Kasih Bersama Anak Yatim"* project holds commercial value through its potential to attract CSR-focused collaborations with sponsors, NGOs, and government agencies. Its focus on emotional support, health education, and youth empowerment enhances the university's social image and opens doors for funding. The program can also be adapted into scalable modules, ensuring long-term sustainability and wider marketability.

## Future Recommendations

1. **Expand Collaboration Networks**
   Students can enhance collaboration with government agencies and private sectors (e.g., JKM, MAIK, JPP, health departments, NGOs) to secure financial aid, manpower, and professional input, ensuring program continuity and greater impact.

2. **Involve More Orphanages**
   The program should be extended to more orphanages, especially those with limited support, across areas like Bachok, Kota Bharu, and Pasir Puteh, to ensure wider and fairer distribution of benefits.

3. **Organize Skills-Based Workshops**
   Practical workshops (e.g., ICT, Canva, typing, leadership, communication, creative arts) can be conducted to prepare orphans with life and career skills, led by UMK students as part of their social responsibility.

## Conclusion

In conclusion, the volunteer program at Rumah Kebajikan Anak Yatim dan Dhuafa Lilbanat Darul Huffaz successfully fostered emotional bonds and meaningful engagement between students and underprivileged children. The activities supported the children's emotional well-being while enhancing their sense of belonging. Students also gained practical experience that contributed to their personal growth. This initiative highlights the role of universities in inclusive community development. For lasting impact, similar programs should be expanded through strategic partnerships with NGOs and government agencies.

## Acknowledgement

We would like to thank Rumah Kebajikan Anak Yatim dan Dhuafa Lilbanat Darul Huffaz in Bachok, Kelantan for wholeheartedly accepting our visit to implement the "Jalinan Kasih Bersama Anak Yatim", the orphans who gave their full commitment, the RSY Club under the auspices of YADIM for providing project funds, and our mentors and lecturer for their dedication and guidance to make this project a smooth success.

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# DESIGN AND DEVELOPMENT OF USABLE FURNITURE FOR DEWAN SERBAGUNA IN TAMAN SAMARINDAH COMMUNITY

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**Highlight:** This service-learning project aimed to empower students to contribute to community development by addressing fundamental needs, strengthening their technical and interpersonal skills, fostering a sense of civic responsibility, and ultimately promoting sustainable social impact through education. By guiding students through the whole engineering design cycle from community consultation to final implementation the project helped them reframe their roles as future engineers who innovate not only for industry but also for society. It provided a transformative platform where academic learning was directly applied to real-world challenges, allowing students to witness the tangible outcomes of their work. This initiative also demonstrated how university-community collaboration can serve as a powerful driver for inclusive development and experiential learning excellence.

**Keywords:** Service-learning, Community Development, Society Responsibility, Engineering Education, Project-Based Learning

## Introduction

In an era where education must adapt to rapidly changing societal needs, innovative teaching approaches such as Service-Learning Malaysia – University for Society (SULAM) offer a dynamic platform for integrating academic knowledge with meaningful community engagement. This project, carried out by 115 first-year mechanical engineering students from Universiti Malaysia Sarawak (UNIMAS) under the subject KNP1091 Workshop Practice, exemplifies how adaptive learning can foster both technical competency and civic responsibility. By embedding engineering education within a real-world community context, the initiative aligns with the theme Adaptive Learning for a Changing World: Embracing Innovation in Teaching and Learning. Similar service-learning implementations in Malaysian universities have demonstrated positive impacts on student civic engagement, functional skills, and ethical awareness (Adam & Mohamed, 2024; Hanum et al., 2021), while also enhancing environmental consciousness through structured community collaboration (Hanafiah, 2024). In engineering-specific courses, the integration of SULAM has been shown to foster higher-order thinking skills and real-world problem-solving capabilities (Mat Isa, Oh, & Liew, 2022; Mat Isa et al., 2023), while also encouraging students to critically reflect on their contributions to society (Wahab, 2024).

This project focused on the design and development of functional, ergonomic furniture for Dewan Serbaguna Taman Samarindah using a Project-Based Learning (PBL) approach. Through this initiative, students gained hands-on experience in design and fabrication, while also contributing to the enhancement of public infrastructure and strengthening university-community collaboration.

## Background of the Project

The SULAM project was implemented by 115 first-year mechanical engineering students from Universiti Malaysia Sarawak (UNIMAS) under the subject KNP1091 Workshop Practice, as part of an effort to bridge academic learning with meaningful societal contributions. The primary objective was to design and fabricate ergonomic, functional furniture for Dewan Serbaguna Taman Samarindah, addressing specific community needs through a structured Project-Based Learning (PBL) approach.

Community involvement was a key foundation of this project. The students and academic team initiated the process by conducting an official engagement with the *Pengerusi Kawasan Rukun Tetangga (KRT) Taman Samarindah*, who operates under the *Jabatan Perpaduan Negara dan Integrasi Nasional (JPNIN) Bahagian Samarahan*. The first meeting involved the Pengerusi and approximately seven KRT members, where discussions focused on identifying the practical needs of the *Dewan Serbaguna*. The committee highlighted the importance of developing furniture that would benefit around 2,000 community members who actively use the hall for social, recreational, and official functions. This feedback formed the foundation for the design direction of the project, ensuring that the students' outputs were relevant, purposeful, and community driven.

This project is significant as it supports adaptive learning that aligns the academic curriculum with real-world applications. It helps meet tangible community needs while enabling students to develop essential technical and soft skills. Additionally, it fosters civic engagement, innovation, and collaborative problem-solving, which are vital in preparing students to face the challenges of a rapidly evolving world. Importantly, this initiative was aligned with the Course Learning Outcome (CLO) of KNP1091 Workshop Practice, which is to demonstrate active involvement, responsibility, and effective communication as a member of a multicultural society through the creation of functional products. By working in diverse teams, engaging with community stakeholders, and delivering practical, user-focused solutions, students gained valuable hands-on experience while contributing positively to community development.

## Project Description

The project followed a comprehensive, community-driven design and implementation process involving multiple stages. The process began with a first official meeting between the academic team and the *Pengerusi Kawasan Rukun Tetangga* (KRT) *Taman Samarindah*, along with approximately seven KRT members. During this engagement, the team discussed and identified the most crucial furniture needs for *Dewan Serbaguna*, based on the usage demands of approximately 2,000 community members. The students gathered consensus from the community on the types of furniture that would enhance the functionality of the hall.

Following this, five student groups consist of 20 students developed design proposals using AutoCAD software, guided by ergonomic, durability, and safety considerations. These proposals were reviewed and refined with feedback from instructors to ensure feasibility and alignment with community expectations. Once approved, students proceeded to the fabrication phase in the Mechanical Workshop at the Faculty of Engineering, UNIMAS. Using practical workshop skills, students constructed the designed furniture, including stage stairs, jury chairs, a rostrum, and multipurpose seating.

Upon completion, the Pengerusi KRT and a community representative were invited to UNIMAS to inspect and evaluate the fabricated outputs. Their feedback was used as part of the grading and quality assurance process, reinforcing the collaborative and participatory nature of the project. Finally, a formal handover ceremony (Majlis Penyerahan) was held, where the completed furniture was officially handed over to the *Dewan Serbaguna*. The event was officiated by the Dean of the Faculty of Engineering and concluded with a community appreciation gathering (Jamuan) held in the *Bilik Serbaguna,* Faculty of Engineering, UNIMAS, celebrating the successful partnership between students, faculty, and the community.

## The Project Output

The project produced several functional furniture items based on the identified needs of the Dewan Serbaguna Taman Samarindah. These included stage stairs, badminton jury chairs, a rostrum, and multipurpose community seating. All items were carefully designed and fabricated by students with a focus on ergonomics, durability, and suitability for multipurpose use within a community hall setting. Each piece of furniture was developed through an iterative design process that involved

feedback from community stakeholders and technical evaluation by instructors, ensuring that the final products met both functional and safety requirements. The fabrication process also served as a valuable hands-on learning experience, enabling students to apply theoretical knowledge in real-world conditions.

These outputs significantly enhanced the usability and functionality of the hall, supporting a wide range of community activities such as sports tournaments, meetings, public events, and official ceremonies. The handover of the completed furniture from the students to the community was conducted in a formal ceremony, officiated by the Dean of the Faculty of Engineering, and is shown in Figure 1, symbolizing the culmination of a collaborative, service-oriented learning experience between the university and the local community. This event also served to strengthen the bond between UNIMAS and the residents of Taman Samarindah, reflecting the true spirit of service learning.



Figure 1: Handover of the completed furniture from the students to the community

## The Project Impacts

### i. For the community:

The project had a significant positive impact on the Taman Samarindah community. The newly designed and installed furniture greatly improved the functionality, safety, and aesthetics of the *Dewan Serbaguna*, making it more conducive for various community events and gatherings. The Pengerusi KRT and the community representative provided written positive feedback through a rubric-based product assessment, commending the students' efforts in meeting community expectations, the quality of the materials used, and the ergonomic design tailored to users' needs. Community members also expressed appreciation for being involved in the process from the beginning, valuing the inclusive and respectful collaboration demonstrated by the students and academic team. Many attendees at the handover event noted that the furniture was not only functional but also added long-term value to the hall as a shared public space.

### ii. For students:

The SULAM project was a transformative learning experience for the students. Through active engagement with the community, students were able to communicate effectively with real stakeholders, understand practical needs, and translate those needs into functional designs. They also learned to use appropriate technical tools (e.g., AutoCAD, workshop equipment) and practiced proper safety protocols throughout the fabrication process. Student reflections collected at the end of the project revealed high levels of satisfaction, with many expressing a sense of pride, enjoyment, and gratitude for the opportunity to contribute meaningfully to society. Moreover, the project achieved a 100% success rate for Course Learning Outcome 4 (CLO4): "Demonstrate active involvement, responsibility, and effective communication as a member of a multicultural society through the creation of functional products." This full achievement reflects the success of the SULAM initiative not only as a community engagement platform but also as a high-impact educational strategy that aligns with the goals of experiential and adaptive learning.

## Commercial Value

There is potential for commercialization of the project outcomes. The ergonomic and multipurpose furniture designs could be adapted for use in schools, community centers, and event management settings. With further development, branding, and scaling, these furniture solutions could be marketed as sustainable, locally produced products creating income-generating opportunities for

university-based ventures or local entrepreneurs. Furthermore, the use of locally available materials and sustainable design principles enhances the marketability of these products as environmentally friendly and community-supported solutions. The collaborative process between university and community also adds value through authenticity and shared ownership, which could appeal to public and private institutions looking for socially responsible procurement options.

## Future Recommendations

To expand the impact of this initiative, the project model could be replicated in other communities within Sarawak and beyond. Collaboration with industry partners is recommended to support the project through sponsorship, material contributions, or mentorship. The integration of digital tools such as CAD software and simulation platforms could enhance design precision and student learning. Periodic impact assessments should be conducted to gather feedback for continuous improvement. Additionally, training programs can be offered to local youth or community members in basic fabrication techniques, transforming the project into a skill-building platform. Lastly, commercialization opportunities should be explored through product standardization and partnerships with small and medium-sized enterprises (SMEs).

## Conclusion

In conclusion, this SULAM project has proven to be a powerful model of adaptive learning that bridges the gap between theoretical engineering education and practical community service. By engaging students in real-life problem-solving through a structured Project-Based Learning approach, the initiative successfully enhanced both student learning outcomes and community well-being. The development and installation of functional furniture not only improved the usability of Dewan Serbaguna Taman Samarindah but also demonstrated the value of integrating technical knowledge with civic engagement. Furthermore, the project opened possibilities for commercial application and future expansion, reinforcing the importance of sustainable, community-oriented engineering practices. Ultimately, this initiative showcases how innovative teaching methods can transform students into socially responsible engineers, ready to contribute meaningfully to a changing and evolving world.

## Acknowledgement

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# LEVELING UP YOUTH POTENTIAL: A SERVICE-LEARNING INITIATIVE THROUGH E-SPORTS TOURNAMENT WITH *KELAB SEKRETARIAT RAKAN MUDA* DURING FESTIVAL ANAK MUDA 2.0

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**Highlight:** "Leveling Up Youth Potential: A Service-Learning Initiative through E-sports tournament with *Kelab Sekretariat Rakan Muda* during Festival Anak Muda 2.0" is a community-engaged volunteer project that empowered students to develop leadership, digital skills, and real-world competencies by planning and executing an e-sports tournament. This effort not only increased youth engagement and confidence in Kelantan, but it also demonstrated how e-sports can be a revolutionary platform for education, community development, and career discovery.

**Keywords:** Youth empowerment, E-sports, Service-learning, Digital skills & Community engagement

## Introduction

In recent years, E-sports has evolved from a casual pastime into a global phenomenon, transforming how people play, learn, and connect. In Malaysia, the popularity of competitive mobile games like Mobile Legends: Bang Bang and PUBG Mobile has grown significantly, especially among youth (Jenny et al., 2017; Newzoo, 2023). What was once seen purely as entertainment has now emerged as a dynamic industry offering career opportunities in areas such as event management, broadcasting, digital marketing, and entrepreneurship (Adachi & Willoughby, 2013).

Recognizing this potential, our team collaborated with Kelab Sekretariat Rakan Muda to organize an E-sports tournament in conjunction with Festival Anak Muda 2.0. This community service initiative aimed to harness the power of E-sports to promote youth development, strengthen community engagement, and enhance practical skills. The tournament, which attracted 48 teams and 202 participants from both the university and the public, provided a valuable platform for students to apply classroom knowledge in real-world settings. The main objective of the project was to challenge the negative perceptions often associated with gaming such as addiction or social isolation and instead highlight its educational and social benefits. With proper guidance, structure, and inclusivity, E-sports can become a powerful tool for students and youth to showcase their talents, connect with others, and explore career opportunities within the expanding digital economy (UNICEF, 2017).

In addition, the initiative offered a transformative learning experience. It fostered essential values such as teamwork, discipline, strategic thinking, and leadership. University students also gained hands-on experience in event planning, communication, and technical operations, directly supporting the SULAM mission of developing well-rounded and socially responsible graduates. Ultimately, this project demonstrated that E-sports can be more than just competitive gaming it can also serve as a meaningful bridge between the university and the community, promoting lifelong learning, digital inclusion, and positive youth development.

## Background of the Project

Our SULAM project's background arises from the rising acceptance of e-sports among young Malaysians and the growing importance of digital skills in the modern workforce. E-sports has developed into a vibrant industry that provides job paths in event administration, broadcasting, digital marketing, and entrepreneurship. It is no more merely a kind of amusement. But gaming is frequently seen negatively, linked to addiction or social exclusion (PwC, 2022). At the same time, there is a need to provide students with opportunities to apply what they learn in class through real-world, community-based experiences. This project aimed to address both challenges changing perceptions about gaming and providing a platform for youth development.

In response, our team, consisting of students from the HPT30203 Volunteerism course, collaborated with *Kelab Sekretariat Rakan Muda* to organize an E-sports tournament "MOBILE LEGEND AND PUBG Competition" as part of *Festival Anak Muda 2.0*. The event was held on 16 May 2025 (Friday) at the Dewan Terbuka Keusahawanan (DTK), Universiti Malaysia Kelantan, from 8.00 a.m. to 6.00 p.m. A total of 48 teams participated, comprising 202 university students and public. The tournament provided a friendly and competitive environment where participants could showcase their gaming talents while developing important life skills such as teamwork, communication, and strategic thinking. This initiative also promoted online sports activities among youth and encouraged a healthier, more positive attitude toward gaming and digital engagement. By blending academic learning with community service, the project aligned with the goals of SULAM to nurture socially responsible, well-rounded graduates.

## Important of the Project

Electronic sports, sometimes known as e-sports, are a fast-expanding digital movement that is changing economic opportunities, community development, and education. They are more than just organised competitive video games. Our SULAM initiative is significant because it can capitalise on this potential by utilising e-sports as a platform to engage young people, encourage critical life skills, and get students ready for the needs of the digital economy of the twenty-first century. E-sports' capacity to foster the development of vital 21st-century skills is one of the main factors contributing to its significance. Students gain important qualities including discipline, leadership, communication, teamwork, and strategic thinking through organised competitions and team-based gaming. These abilities can be used in academic group projects, community service projects, and future employment in addition to the gaming environment. Our project reinforced learning outside of the classroom by giving participants the opportunity to hone these competencies in a practical environment.

Additionally, e-sports offer a special way for students to get involved, particularly those who might not participate in conventional sports or extracurricular activities. E-sports provides these students with a welcoming environment that complements their interests, increasing their self-esteem, motivation, and feeling of community both on campus and off. This was made clear during our competition, which brought together students from all backgrounds in a supportive, competitive setting that prioritised respect and cooperation. Additionally, the project contributes to the advancement of STEM-related skills and digital literacy. Students are exposed to fields including game design, programming, streaming technologies, audio-visual production, and cybersecurity as e-sports are being incorporated into school curricula. These digital skills set pupils up for success in a technologically advanced environment and are becoming more and more important in today's job.

Lastly, a variety of employment paths are made possible by e-sports. Event planners, content producers, digital marketers, shoutcasters, and management of e-sport teams are among the jobs supported by the business. Students were exposed to these new options through our initiative, which gave them practical experience in marketing, technical assistance, event management, and public involvement. In addition to improving their employability skills, students who organised and participated in the tournament investigated potential careers in the media, technology, and creative industries. In conclusion, this SULAM initiative is significant because it rethinks the ways in which creative approaches can be used to accomplish professional development, education, and youth involvement. In keeping with the goals of Festival Anak Muda 2.0 and the spirit of Service Learning Malaysia–University for Society, it shows how e-sports can be a potent tool for holistic learning, community development, and digital empowerment.

**Description of the Project**

The "MOBILE LEGEND AND PUBG Competition" project is an e-sport tournament that was organized in conjunction with the "Festival Anak Muda 2.0". Collaborated with *Kelab Sekretariat Rakan Muda*, the program was held on 16 May 2025 (Thursday) at the Dewan Terbuka Keusahawanan (DTK), Universiti Malaysia Kelantan, from 8.00 a.m. to 6.00 p.m. A total of 48 teams participated, comprising 202 university students and ousiders. This competition aims to arouse enthusiasm among the younger generation about E-sports in the current era. This is said to be so because not all students know that video games are one of the sports that are competed at the highest level like SEA Games, ASEAN Games, SUKMA. This project focuses on teenagers because most of those who are skilled in this field are young talents. This is said to be so because most of them are more interested in E-sports but they do not know the opportunities to go further in this sport. For example, as we can see in the MLBB professional league, the Malaysia Pro League (MPL), most of the players representing each team have young players who are currently 23 years old and below. This is also proven when a player, Ahmad Shahrul Zaman or better known as SEKYS, who is only 18 years old, has successfully won the world champion title in Riyadh with the Selangor Red Giants team. This indirectly proves that most school students are capable of becoming one of the national players in this Esports sport and bringing the country's name to a high level.

Finally, this project explains the main focus of this competition, which was created to uncover new talents at University of Malaysia Kelantan (UMK) and also outside teenagers so that this talent can be polished and developed to a higher level. This is said to be so because through this tournament, the state youth sports department can identify students and any teenagers who have potential to be brought to be players at a more competitive and professional level. In fact, through this program, it can also open the eyes of the community that Esports is not only video games but it can generate income and become one of the careers for young people nowadays. Therefore, this project brings various benefits and advantages to young people regarding E-sports and indirectly can achieve various objectives and impacts not only for young people but also the community will be aware of the benefits of Esports in the community.

The Esports Championship organized at UMK has an impact on either community, not just young people. This is proven when we can see through them, this talent can be developed to a higher level. It also gives them the opportunity to try becoming athletes in the world of Esports and collect experiences from professional leagues. Esports projects need to be continued and carried out for teenagers to be champions in the Esports world.



Figure 1: All players that involved



Figure 2: Registration Player



Figure 3: Team Volunteers



Figure 4: Poster of Tournament

Figure 5: Marshall FAM                    Figure 6: Emcee for the Program

**Impacts and Advantages of the Project**

**i.    Enhancing Critical Thinking and Problem - Solving Skills**

E-sports games, and mobile games especially, require the player to operate in a working space that is often dynamic, must analyze situations quickly, anticipate opponents' moves, come to decisions with limited thinking time, and adjust strategies in real-time. Engaging in this type of play requires a range of cognitive functions that call upon deep thinking (critical thinking), problem-solving skills that match academic tasks, such as mathematical reasoning, scientific analysis, and logic. Engaging in e-sports games which is Mobile legend Bang Bang (MLBB) and PUBG Mobile that require quick evaluation of risk, mobilizing priorities, and working with the group to combat complex in-game situations, naturally develops mental agility and intellectual discipline; retention of these skills has still to be studied as a predictor of students' achievement once they disengage with the e-sports experience. Young people who participate in e-sports have the potential to develop both their academic performance as well as their confidence in examinations, classroom discourse, and real-world problem solving that requires both analytical and creative thinking (Adachi & Willoughby, 2013).

**ii.    Improving Communication and Leadership**

In team-based e-sports games, players need to work together by communicating often so they can share information, assign roles, coordinate action, and modify strategies in real-time, which helps develop key communication skills such as clarity, active listening, persuasive speaking, and giving constructive feedback, that can be applied not only in educational group assignments, but also in future organizations and workplaces where collaboration and how teams work together is crucial to the team's success. Additionally, students learn to take on leadership roles within their gaming teams as team captains, strategists and organizers and practice how to deal with group conflict, inspire and motivate peers, take responsibility for their decisions and their consequences, and the qualities of leadership that will help them with their own personal development and develop the skills necessary to take charge and lead others with confidence in school, social, or work environments (Lee & Schoenstedt, 2011).

**iii.    Increasing Digital Inclusion and Technology Awareness**

E-sports initiatives that focus on mobile devices, especially smartphones, fulfill an essential digital inclusion role for community members, particularly youth who may not have regular access to advanced technology, by creating opportunities for getting familiar with mobile applications, gaming platforms (including e-sports, and of course, smartphone online social interaction tools). By actively participating in mobile video games and online team challenges, individuals gain first-hand experience with the digital tools they use and have opportunities to build competence and confidence using devices for various purposes such as strategic gaming, information seeking, and collaborative activity - ultimately developing fundamental skills and knowledge for navigating and participating in the fast-changing digital environment we now occupy, and as a result, fewer performance distinctions develop between connected and un-connected communities. In addition, engaging in e-sports through mobile devices enables youth to acquire real world digital skills, such as being able to manage communication channels within game applications, understanding safe internet practices, and analyzing how various gaming applications operate. These interactions will provide youth with a great foundation for digital literacy and being a digital citizen. These experiences will help foster an interest in digital technology as a whole and better prepare youth for educational and career paths in the areas of social media content, mobile application development, and as digital entrepreneurs.

## Commercial Value of the Project

E-sports companies, especially mobile gaming platform-based ones, hold enormous economic potential due to the increasing utilization of mobile phones and the high degree of digital engagement among youth and young adults in the current technology-driven society. With the expansion of competitive game titles like Mobile Legends: Bang Bang and PUBG Mobile, there now exists an enormous and rapidly growing market where players, content producers, and hosts may earn revenue in varied manners such as advertisement, brand sponsorship, merchandise, tournament fees, and monetization of online media. With the mobile gaming market growing both locally and internationally, more people have been able to turn their hobby for e-sports into a career as a professional influencer, streamer, team manager, or even as a content creator and gaming services creator.

Platforms like YouTube, TikTok, and Facebook Gaming make these lucrative careers possible through the ability of players and commentators to acquire followers and generate revenue from advertisements, paid subscription, in-game gifting, and sponsorships. Some create their own brand by working with gadget makers, mobile game publishers, or clothing companies, and there is also a commercial culture extending much wider than just playing the game. The financial potential of an e-sports project extends beyond the participants themselves and includes schools, communities, and local companies that support and enable such efforts. If properly structured and promoted, e-sport tournaments, real or virtual, can command paying competitors, viewers, sponsors, and suppliers, all of which factor into revenue accruals and a viable event model. Local business people, particularly technology, food, and lifestyle entrepreneurs, tend to see youth-related events as a wonderful way to promote brand awareness, so they sponsor events, put products in them, or have cross-promotions.

Also, branded products such as personalized team jerseys, phone cases, stickers, and event memorabilia can be given away or sold as part of a promotional campaign to raise money and create brand awareness. Schools or youth organizations that sponsor these programs can profit by charging a registration fee, accepting government or private subsidies, or selling digital marketing services based on their events. In the long run, regular participation in the mobile e-sports business can even generate employment in areas of digital content development, event management, marketing strategy planning, and e-sports training, reflecting the profitability and economic value addition of the business.

Also, the mobility and accessibility of mobile technology enhance an e-sports venture by making it more marketable as it eliminates the expense of gaming PCs or consoles and allows more from different backgrounds to join, particularly from rural or poor communities. This broadens the scope of outreach and engagement among audiences, making the venture extremely desirable for youth marketeers, advertisers, and community patrons seeking low-cost and innovative means of engaging youth audiences. The widespread sharing of tournament summaries, memes, takeaways, and individual gameplay via social media platforms is a source of organic promotion, viral content, and increased exposure for participants and event committees.

In addition, the need for digital storytelling, graphic design, shoutcasting (commentary), and mobile streaming infrastructure propels the creation of businesses related to e-sports that supply the commercial ecosystem. By recognizing these various sources of revenue and leveraging the existing digital pipelines, stakeholders can create a strong, marketable, and profitable e-sports project that not only entertains but also empowers, educates, and economically uplifts societies.

## Future Recommendations

Firstly, making a regional E-sports talent database would be super useful for gathering and showing off profiles of local E-sports players, streamers, game developers, and content creators. This database can function as a talent directory for scouts, sponsors, event organizers, and schools, helping them find new talent more efficiently. It would also give recognition to grassroots players who may not have access to mainstream platforms, helping to include everyone and support career growth in the E-sports ecosystem. Next, mixing E-sports with STEM (Science, Technology, Engineering, and Mathematics) education is a cool chance to help young people build both brain skills and tech skills. By adding game design, coding, and virtual reality into E-sports workshops and school programs, students can get into STEM subjects in a way that's fun and relatable. For instance, participants could learn how to design simple games, understand the technology behind E-sports platforms, or explore careers in computer science and software development. This method not only boosts digital skills but also sparks creativity and problem-solving, linking E-sports to education goals and what future jobs will need.

Finally, meaningful collaboration with tourism and cultural agencies can transform E-sports into a tool for cultural promotion and destination marketing. By adding local traditions, stories, or folklore into games or tournament themes, communities can show off their unique heritage in a modern digital way. For instance, traditional Malaysian games could be turned into cool virtual versions, or E-sports tournaments could happen during cultural festivals to draw in both local and international fans. These mixed events not only get the community involved and proud but also help keep cultural traditions alive and boost tourism. When promoted effectively, these projects can play Sports not just as a digital industry but also as a link between youth culture, innovation, and cultural identity.

## Conclusion

In conclusion, this SULAM initiative demonstrated that E-sports is more than just a recreational activity it is a meaningful platform for educational growth, community engagement, and youth empowerment. By organizing an E-sports tournament in collaboration with Kelab Sekretariat Rakan Muda during Festival Anak Muda 2.0, the project provided university students and local youth with an inclusive space to explore their talents, build teamwork, and develop strategic thinking. The integration of academic learning with real-world application allowed students to experience firsthand the planning, communication, and leadership skills needed in event management and digital engagement. This initiative also aligned closely with the SULAM goal of producing well-rounded graduates who are socially responsible, technically competent, and community focused.

Beyond the competition itself, the project helped shift public perceptions of gaming by highlighting its educational and career-building potential. It promoted digital literacy, encouraged the adoption of positive values such as discipline and collaboration, and introduced participants to emerging career opportunities within the digital economy. For students who may not participate in traditional sports or clubs, E-sports offered a new and engaging platform to feel included and valued. As Malaysia continues to embrace digital transformation, projects like this serve as timely models of how higher education institutions can use innovative approaches to connect academic content with societal needs. Ultimately, this project reaffirmed the role of E-sports as a tool not only for entertainment, but also for lifelong learning, youth development, and community building.

## Acknowledgement

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# FROM CLASSROOM TO ROOFTOP: ENHANCING COMMUNITY AWARENESS IN RENEWABLE ENERGY THROUGH STUDENT-LED ROOFTOP SOLAR PHOTOVOLTAICS DESIGN PROJECT

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**Highlight:** This paper presents student-led projects aimed at bridging classroom learning and real-world application through the design of rooftop solar photovoltaic (PV) systems for public and private buildings in Malaysia. Implemented as part of the EMJ44703 Renewable Energy System course in Universiti Malaysia Perlis (UniMAP), the project combined technical learning with community outreach under the Service-Learning Malaysia – University for Society (SULAM) program. Students conducted on-site assessments, analysed energy usage patterns, solar irradiance potential, and roof design limitations, and produced customized grid-connected solar PV system proposals tailored to local building needs. Each design adhered to MS1837 2018 Installation of Grid Connected Photovoltaic System guidelines and included system sizing, component selection, cost analysis, and estimation of energy savings under the Net Energy Metering (NEM) 3.0 program. Having completed the technical deliverables, the students interacted directly with the building owners and shared their experiences through social media to raise public awareness about renewable energy and its benefits. This project equipped students with practical experience in designing sustainable energy systems while building community understanding and support for Malaysia's clean energy transition. The initiative exemplifies how experiential education may act as a catalyst for grassroots solar adoption and sustainability awareness.

**Keywords:** Solar photovoltaic, renewable energy, rooftop solar

## Introduction

Malaysia's push toward renewable energy is gaining momentum, supported by government incentives such as the NEM 3.0 program. While technological advancements and policy frameworks are essential, building community awareness and participation remains a critical component in accelerating clean energy adoption, especially in urban and semi-urban areas. Higher education institutions play a key role in this transition by equipping students with practical skills and real-world exposure. This project, conducted under the EMJ44703 Renewable Energy System course in UniMAP and guided by the Service-Learning Malaysia – University for Society (SULAM) initiative, aimed to connect academic learning with real-life application (Hanafiah, 2024). Faculty of Electrical Engineering & Technology students were tasked with designing rooftop grid-connected solar PV systems for public and private buildings, based on on-site energy audits and solar resource assessments. The project not only provided students with valuable hands-on experience in system sizing and cost analysis but also served as a platform to raise community awareness about the benefits of solar energy. Through direct engagement with building owners and dissemination of findings via social media, the initiative contributed meaningfully to both technical education and community awareness in Malaysia's renewable energy landscape.

## Project Background and Significance

The SULAM project is rooted in addressing real community energy challenges, especially high electricity costs in buildings such as mosques, schools, and residential houses. Initiated in Semester 2 of the 2023/2024 academic session, the project has been conducted twice to date. Students from Universiti Malaysia Perlis (UniMAP), particularly those in the EMJ44703 Renewable Energy System course, designed grid-connected solar PV systems tailored to local energy needs. The project sites are located across Perlis, Kedah, and Penang. These projects involved site visits, data collection, and solar potential evaluations to produce realistic and practical proposals. The initiative supports national goals and SDGs, especially SDG 7 (Affordable and Clean Energy), and promotes community awareness on renewable energy adoption (Govindarajan et al., 2023, Chachuli et al., 2021).

This project is significant because it introduces sustainable, long-term energy solutions to communities with limited resources. It reduces dependence on fossil fuels, cuts down electricity bills, and promotes environmental conservation. More than that, it fosters knowledge transfer, connects universities with society, and encourages green practices within underrepresented or rural communities. The initiative also strengthens student learning by enabling them to apply technical skills in real-world scenarios.

## Project Description and Implementation

Students engaged with selected sites such as mosques, schools, and residential buildings to perform feasibility studies and design solar PV systems. The activities included rooftop assessment, energy profiling, module and inverter selection, cost analysis, and alignment with MS1837 and the NEM 3.0 policy (Husain et al., 2021, Energy Commission, 2025). The deliverables often included schematic diagrams, energy savings estimates, and community engagement sessions such as briefings and awareness programs to share findings and educate the public. Table 1 shows the breakdown of community engagement activities conducted during the 2023/2024 and 2024/2025 academic years.

Table 1: Breakdown of community engagement by semester of academic year.

| Site type | Semester 2 2023/2024 | | Semester 2 2024/2025 | |
|---|---|---|---|---|
| | No. of group | Student per group | No. of group | Student per group |
| Private residential | 7 | 5 | 15 | 5 |
| School | 0 | 5 | 1 | 5 |
| Place of worship (temple and mosque) | 5 | 5 | 6 | 5 |
| Private industrial premises | 3 | 5 | 5 | 5 |
| Total students | 75 | | 135 | |

Figure 1 shows the engagement sessions involved direct interaction with local stakeholders at different sites, including mosques and residential buildings. The diverse photos reflect meaningful collaborations with community, showcasing the project's outreach, and educational impact. This hands-on approach not only enriched the students' technical learning experience but also strengthened community trust and interest in adopting sustainable energy solutions.

Figure 1: Student engagement sessions with building owners/committees.

Upon completion of the project, students shared their experiences through social media platforms to raise public awareness about renewable energy and its benefits. Example of this outreach is included in the Appendices, featuring YouTube videos where students reflect on their involvement and promote clean energy solutions.

## Impacts on Community and Student Learning

For the community, the projects offered cost-saving opportunities, environmental benefits, and increased awareness of solar energy. If implemented, these systems can significantly reduce operational expenses and inspire wider adoption of clean energy. For students, the projects provided invaluable hands-on experience in technical design, financial evaluation, and stakeholder communication. They also developed key soft skills such as teamwork, problem-solving, report writing, and public engagement.

## Commercial Viability and Market Potential

The proposed solar PV systems present commercial viability. They offer a clear return on investment within a decade and can be replicated or expanded to other community institutions. The projects open pathways for partnerships with solar providers and government agencies and can evolve into consultancy or green business models. Some proposals highlighted potential collaboration with installation firms, donors, or NGOs to scale the impact.

## Future Recommendation and Expansion Strategy

Future expansions should include more community buildings such as rural schools, religious institutions, and residential areas. Collaboration with government bodies, local councils, or NGOs can support technical and financial aspects. There is also a strong need for public awareness campaigns and educational workshops to increase understanding of renewable energy. Incorporating advanced technologies like battery storage, energy monitoring, and hybrid systems can further improve project outcomes. Digital platforms to document progress and educate the public are also recommended.

## Conclusion

This project successfully demonstrated how experiential, student-centred learning can bridge academic knowledge with real-world application in the field of renewable energy. Through hands-on design of rooftop solar PV systems and direct engagement with local communities, students not only gained practical engineering skills but also contributed to raising awareness about sustainable energy solutions. The initiative highlights the effectiveness of integrating technical education with community

service under the SULAM framework, fostering both professional growth and societal impact in support of Malaysia's clean energy transition.

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https://www.youtube.com/watch?v=Ly1uhvlEt7o

# TRANSFORMING KAMPUNG WAI, PERLIS: EMPOWERING COMMUNITY TOURISM THROUGH SOCIAL MEDIA LITERACY

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**Highlight:** This community empowerment project bridged the digital divide in Kampung Wai Perlis by equipping locals with social media literacy skills to promote their ecotourism potential. Through workshops, collaborative content creation, and a strategic digital launch, the initiative enhanced Kayak Dahagi's online presence while fostering sustainable tourism growth.

**Keywords:** Social Media Literacy, Community Empowerment, Ecotourism, Digital Marketing, Content Creation, Sustainable Development

## Introduction

In today's digital landscape, promoting rural tourism promotion through community empowerment and digital literacy is a strategic step towards sustainable growth (Kosasih & Sulaiman, 2024). Internet access, particularly social media, grants communities the stage to engage more viewers, share their own unique cultural narratives, and mobilize local issues. Despite such opportunities, rural communities remain limited by digital literacy and visibility, which bind them from actively participating in the digital economy (Arcuri et al., 2023). Empowering these communities with structured learning interventions not only enhances their autonomy but also facilitates national efforts to bridge the digital divide. Kampung Wai, a peaceful village in the Perlis state of Malaysia, is gifted with rich natural scenery, cultural heritage, and traditional practices. Among its promising attractions is the ecotourism enterprise Kayak Dahagi, which offers boat trips and kayaking experiences that allow visitors to explore the mangrove and local biodiversity. However, as far as its representations in online tourism fronts are concerned, Kampung Wai remains underrepresented. The lack of exposure of the community to social media facilities and content creation mechanisms has hindered its presentation to the global community and its capacity to attract eco-tourists.

This SULAM (Service-Learning Malaysia – University for Society) project aimed to fill this gap by blending digital learning and field experience. By bringing together students from the university, the citizens of Kampung Wai, and local ecotourism businesses, this project sought to enhance social media literacy within the group and equip the community with a readiness to take charge of its digital marketing. In doing this, the project not only presents the tourism potential of the village but also builds sustainable community empowerment through bridging academic education to real-world applicability, thereby enhancing their learning through civic engagement.

The main objectives of this project, including (i) to increase the community's level of skills to promote local tourism using social media, (ii) to foster university-community collaboration with local ecotourism operator Kayak Dahagi, offering boat and kayak tours to help advance the promotion of natural sites of the village, (iii) to create engaging digital content that highlights the cultural, historical, and environmental assets of the village, and finally (iv) to develop sustainable, locally initiated methods for digital promotion and tourism marketing.

This SULAM project was first-hand embedded in the core course code of KMK30303 Engineering Technology Management. As part of the course's mini project, a multi-participatory

learning approach was adopted from the beginning, involving 73 of Third Year degree level students from three academic programmes under the Department of Chemical Engineering and Technology: Food Technology, Industrial Chemical Process, and Industrial Biotechnology, Kayak Dahagi, Perlis Ecotourism Club members, and Kampung Wai residents as key community stakeholders.

## Overview of the SULAM Project Implementation

The project was structured and executed into the following four (4) phases:

1. **Community Engagement & Needs Analysis**: A survey was conducted by the lecturers to assess local strengths, limitations, and readiness, as well as to assess the degree of digital literacy among residents and identify tourism assets. Kayak Dahagi is the only business operator that offers local ecotourism activities and promotion challenges insights around the place.
2. **Social Media Capacity-building Workshop**: Practical workshop was conducted by a renowned Perlis content creator as an exposure to the students, focused on social media use, basic digital marketing methods, photography, video editing, Facebook, Instagram, and TikTok content planning, and storytelling for tourism promotion.
3. **Co-Creation of Content**: The students and the community worked together to develop promotion materials with activities such as kayaking, boat view tours, and cultural immersion. The promotion materials were aligned with Kayak Dahagi branding to ensure consistency. This collaboration not only improved the quality of promotional assets but also strengthened community-student relationships.
4. **Digital Campaign Launch and Community Event**: The project culminated in two key activities: (i) enhanced online presence, where the social media pages were heightened with fresh content and monitored for engagement. Targeted engagement strategies were implemented by each student's group to attract eco-tourists. Promotional materials were then launched in the students' developed social media platforms, via Facebook, Instagram, TikTok and YouTube, respectively. Additionally, an (ii) on-ground community event was complemented to foster engagement between the students, Perlis Ecotourism Club, and villagers from different walks. The local gathering fostered deeper connections between the stakeholders, reinforcing the project's impact beyond the digital space. Moreover, Kayak Dahagi's online presence was boosted with a targeted strategy to attract eco-tourists and domestic travellers, while creating meaningful community-university partnerships.

## Significance and Impact of the project

The Transforming Kampung Wai project yielded tangible benefits for the community, students, and local ecotourism enterprises, demonstrating the power of digital literacy in rural empowerment. For the community, it established trust in utilising digital platforms, especially in promoting tourism (Deb et al., 2024) and gave Kayak Dahagi a systematic digital branding plan. The social media content created started gaining interest from prospective visitors and local media, thereby enhancing the visibility of Kampung Wai. For students, the project offered experience-based learning activities that cultivated soft skills such as teamwork, communication, leadership, and digital marketing, all within a community-based real-world context (Cho et al., 2024).

Commercially, the increased digital presence accrues directly to Kayak Dahagi by rendering it more saleable to local travellers, especially younger groups that are socially engaged. The branding contents, images, and footage created under the project are now deployable as a reusable marketing package that can be utilised to maintain repeat promotions and even increase future local income through ecotourism (Mowat, 2021).

In the future, the project can be built upon with follow-up projects, including further training of community "digital ambassadors," collaborations with tourism boards or influencers, and establishing a community-maintained website or booking site. Further cohorts of students can then build on this work through the refreshment of content, watching analytics, and adding e-commerce capabilities for local goods. These initiatives would further solidify Kampung Wai as a model for sustainable, community-driven tourism promotion in Malaysia.

## Conclusion

In conclusion, the Transforming Kampung Wai project successfully demonstrated that social media literacy can empower rural communities to unlock their ecotourism potential. By equipping residents with practical digital skills, fostering collaborative content creation, and enhancing Kayak Dahagi's online presence, the initiative not only boosted local tourism but also strengthened community agency and cohesion. The project's phased approach, from needs assessment to hands-on workshops and a digital launch, ensured that the outcomes were both measurable and sustainable. Moving forward, expanding this model to neighbouring villages, integrating e-commerce tools, and establishing a community digital hub will amplify its impact. Partnerships with NGOs, government bodies, and the private sector can provide the necessary resources to scale these efforts, while advanced training and storytelling techniques will keep Kampung Wai's digital presence dynamic and engaging. By documenting and sharing this success story, the project can stimulate similar initiatives across Malaysia, bridging the rural-urban digital divide and advancing inclusive economic growth. Finally, success is ultimately gauged by the ability of the community to sustain and scale these initiatives independently. With sustained support and planning, Kampung Wai can serve as a model for ecotourism, and digital empowerment can transform rural livelihoods, proving that even the most remote communities can thrive in the digital age.

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# *HARI TEKNOLOGI & MASYARAKAT 2024 (HTM2024):* EMPOWERING YOUTH THROUGH STEM ACTIVITIES WITH RUMAH KANAK-KANAK ARAU

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**Highlight:** The HTM2024 SULAM initiative engaged university students and children from Rumah Kanak-Kanak Arau through a full-day outreach program centered around STEM exploration and creative technology exhibitions. This program nurtured social responsibility, technical creativity, and soft skill development in students while fostering curiosity and confidence among the participants. The impact of the program was notable, as it significantly increased the children's motivation in science and technology. Notably, one participant later achieved outstanding academic results, scoring 7As in the SPM examination, highlighting the lasting influence of the initiative.

**Keyword:** STEM, youth empowerment, community engagement, SULAM, design thinking

## Introduction

HTM2024: Hari Teknologi & Masyarakat 2024, conducted on 6th July 2024, marked a milestone in community-university collaboration under the NMK31703 Design Project course. Involving over 50 students from three Engineering Technology programs (Electronic System, Network Design, and Telecommunication Design) and guided by ten lecturers, the project integrated academic knowledge with real-world social applications. The event, organized in collaboration with Engineering Technology Club (UeTech), was specifically designed to bring STEM learning and interactive fun to 73 children from Rumah Kanak-Kanak Arau. NMK31703 is a newly introduced course emphasizing project-based learning and community engagement through SULAM (Ministry of Higher Education, 2020). The HTM2024 initiative represents the course's pilot integration of theoretical design with service learning, reflecting UniMAP's strategic direction toward producing holistic and socially responsible graduates (UniMAP, 2024).

## Importance of the Project

This community outreach effort addressed the educational and emotional needs of underserved children by offering them access to hands-on STEM activities in an inclusive and joyful setting. This collaborative community endeavour to ignite young minds in STEM with engaging through a series of interactive segments. At the same time, university students gained real-world experience in planning, leading, and implementing a large-scale event that aligned with both academic learning outcomes and SULAM objectives (Kuk & Banning, 2019).

## Project Description

The community program, a vibrant collaboration between Universiti Malaysia Perlis (UniMAP) and the Perlis Social Welfare Department (JKM Perlis), was a resounding success, bringing together children, university students, and faculty for a day of engaging and educational activities. The event was thoughtfully designed to spark an interest in Science, Technology, Engineering, and Mathematics

(STEM) from a young age through a variety of interactive modules. The day was further enriched by the participation of UniMAP student mentors who guided the young participants, fostering a spirit of fellowship and peer learning.The day commenced with "Senaman Santai," a light and refreshing exercise session designed to revitalize the participants and create a positive and energetic atmosphere. This warm-up activity ensured that the children were enthusiastic and ready for the day's challenges. The session, led by dynamic instructors, involved simple and fun movements suitable for all ages, promoting physical well-being as a prelude to the mentally stimulating activities that followed.

A major highlight of the event was the "STEM Explore Race," a gamified challenge that transformed the learning of basic science and engineering concepts into an exciting adventure. Participants, divided into 10 teams, navigated through various stations where they tackled hands-on challenges and solved puzzles related to STEM principles. This interactive race format not only made learning enjoyable but also encouraged teamwork, critical thinking, and problem-solving skills among the young contenders as they eagerly competed to be the first to complete all the challenges. The "Technology Design Exhibitions" provided a glimpse into the innovative minds of UniMAP's final-year engineering technology students. This segment served as a platform for the university students to showcase their capstone projects, which ranged from practical inventions to solutions for real-world problems. The exhibitions were a source of inspiration for the younger participants, offering them a tangible look at the exciting possibilities within the field of engineering and technology. The children had the opportunity to interact with the student inventors, ask questions, and witness firsthand the application of the concepts they had just explored.

Adding a recreational dimension to the day, the "Moonton Play Activities" were a series of sponsored stations that cleverly blended fun with learning. These activities, designed to be both entertaining and educational, provided a relaxed environment for the children to further engage with creative and strategic thinking. While the specific nature of the activities was tailored for the event, they drew inspiration from the engaging and interactive world of modern games to reinforce the day's learning objectives in a playful manner.



(a)                                    (b)
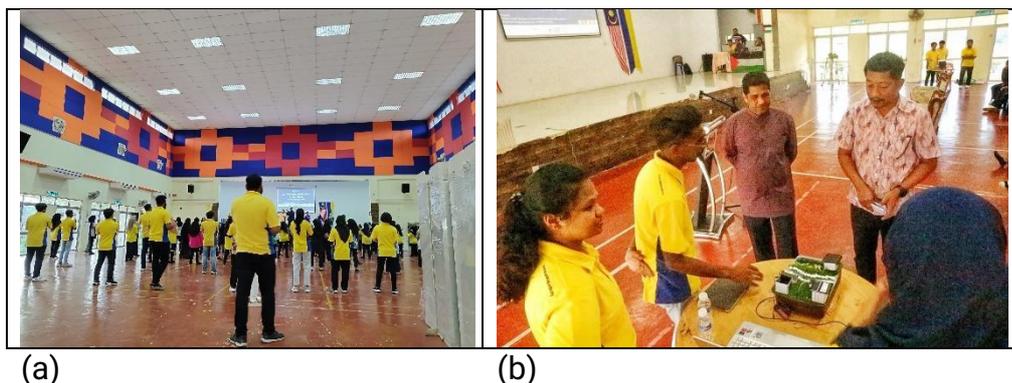
Figure 1: Pictures of some activities in HTM2024 (a) Refreshing exercise (b) Technology Design Exhibitions

The event culminated in a memorable closing ceremony, graced by the presence of En. Rusdi bin Ishak, the Deputy Director of JKM Perlis, who officiated the event. The ceremony was also attended by esteemed faculty members from UniMAP and local stakeholders, all of whom came together to celebrate the successful collaboration and the enthusiastic participation of the children. The closing event underscored the commitment of all parties involved to continue fostering educational and community-focused initiatives in the future.

## Impact and Educational Value

The HTM2024 service-learning project yielded significant developmental outcomes for both student volunteers and participants. For the university students, the project facilitated the development of key soft skills, including empathy, leadership, and communication. Concurrently, the program was designed to benefit the participating children from Rumah Kanak-Kanak Arau by enhancing their technological literacy and engagement through interactive learning modules, a principle supported by service-learning literature (Astin et al., 2018).

To evaluate the program's impact on the children, an outcome-based survey was administered

to all 58 participants (n=58). The results indicate a highly positive reception and effective knowledge transfer. Analysis of the survey data, as detailed in Table 1, revealed several key findings:

1. Program Satisfaction: A vast majority of participants viewed the program favourably, with a combined 96.6% rating it as either "Excellent" (77.6%) or "Good" (19.0%).
2. Interest in STEM: The program was highly effective in stimulating interest in STEM fields, with 96.6% of participants reporting that they gained valuable insights that enhanced their interest.
3. Knowledge and Skill Acquisition: A significant majority (77.6%) strongly agreed that they had gained new knowledge and skills, thereby improving their understanding of the subject matter.
4. Practical Application: The program successfully translated learning into practical consideration, with 74.1% of participants expressing strong agreement that they could apply the acquired knowledge in their daily lives.

Collectively, these findings provide strong quantitative evidence that the program effectively achieved its primary objectives of fostering interest, improving comprehension, and demonstrating the practical application of STEM concepts among its young participants.

Table 1: Participants Feedback

| Questions | Feedback from participants | | |
|---|---|---|---|
| This program increased my interest in STEM | Excellent 77.6% | Good 19% | Medium 3.4% |
| I gained new knowledge and skills from this program, and it can help enhance my understanding | Strongly Agree 77.6% | Agree 15.5% | Neutral/Didn't Agree 5.2%/1.7% |
| I intend to apply the knowledge and resources gained from this program in my everyday life | Strongly Agree 74.1% | Agree 19% | Neutral/Didn't Agree 5.2%/1.7% |

## Commercial and market value

Beyond social engagement, the showcase of student design projects functioned as a strategic platform for commercialization and tech-to-market translation. Engagement with public audiences offered students preliminary user feedback on their designs, potentially influencing market-readiness improvements (Coffey & Lavery, 2018). Notably, one of the showcased projects, titled "Natural Disaster Detection System for Coastal Safety", captured the serious attention from the Deputy Director of Perlis Social Welfare Department (JKM Perlis). His expression of interest in integrating the system into JKM's disaster management framework represents a significant step towards institutional adoption and a potential pilot program, validating its real-world impact and strong potential for government-level commercialization.

## Future recommendations

Future implementations of the HTM2024 program are recommended to expand beyond a one-off event into a continuous engagement strategy. Collaborative workshops focusing on basic electronics or introductory coding using microcontrollers can enhance long-term STEM literacy among children. Establishing monthly STEM corners at Rumah Kanak-Kanak Arau can sustain engagement and skill development. Furthermore, involving students from education, multimedia, and business programs in future cycles can offer a multidisciplinary perspective, enhancing the quality, creativity, and sustainability of the program.

## Conclusion

In conclusion, HTM2024 definitively demonstrated that service learning is a powerful catalyst for creating mutual value. By seamlessly integrating academic application with hands-on community

collaboration and youth empowerment, the program has not only enriched student learning but has also delivered tangible benefits to society. This successful model establishes a robust and proven framework for developing scalable and sustainable SULAM initiatives in the future.

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# TINY TEETH, BIG SMILES: EMPOWERING ORPHANS THROUGH ORAL HEALTH EDUCATION AND EXPERIENTIAL LEARNING AT RUMAH BAKTI NUR SYAHEERA

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**Highlight:** This project bridges dental education and community service through the Service-Learning Malaysia University for Society (SULAM) initiative. Implemented at Rumah Bakti Nur Syaheera, an orphanage in Kuala Lumpur, the project involves Year 4 dental students from Universiti Sains Islam Malaysia (USIM). Through hands-on activities, oral health education, and preventive care, the project aims to improve oral hygiene among orphaned children while providing students with an experiential platform to cultivate empathy, leadership, and real-world problem-solving skills. The project not only contributed to a positive shift in oral health behaviour among children but also nurtured socially responsible dental graduates ready to serve underserved communities.

**Keywords:** community engagement, dental public health, experiential learning, oral health promotion, orphanage, preventive dentistry, service learning, SULAM

## Introduction

The growing emphasis on community-based education has prompted higher learning institutions to adopt innovative teaching methods that transcend traditional classroom boundaries. Service-learning, particularly in health sciences, offers a meaningful framework that combines academic instruction with community engagement to address real-world issues. In Malaysia, the Ministry of Higher Education introduced the SULAM (Service-Learning Malaysia University for Society) model (Ministry of Higher Education Malaysia., 2020) to align student development with societal needs. Against this backdrop, the Faculty of Dentistry at Universiti Sains Islam Malaysia (USIM) initiated a community-based learning programme at Rumah Bakti Nur Syaheera (RBNS), a privately funded orphanage in Kuala Lumpur; to address gaps in oral health awareness and care among orphaned and underprivileged children.

Children in foster care institutions often lack access to adequate dental care due to various barriers such as limited financial resources, low caregiver-to-child ratios, and insufficient health literacy among caretakers. These systemic challenges result in higher rates of untreated dental caries and poor oral hygiene among institutionalised children. The "Tiny Teeth, Big Smiles" project was conceptualized as a response to this reality. By involving USIM dental students directly in health education and preventive care activities, the project aimed not only to improve oral health conditions among the children but also to provide dental students with valuable experiential learning opportunities. This extended abstract explores the rationale, implementation, outcomes, and future directions of the project.

## Background of the project

Rumah Bakti Nur Syaheera (RBNS), an orphanage located in Kuala Lumpur, is a home to 26 children ranging from infancy to adolescence, most of whom were placed in care due to being orphaned or facing extreme financial difficulties. These children are often excluded from continuous oral health care and education. Recognising this gap, the Faculty of Dentistry at USIM initiated the SULAM project to foster health equity by delivering targeted oral health promotion activities in a community-oriented framework. This project is running from June 2024 to April 2025, this year-long project is structured in several phases: planning, implementation, and evaluation. Activities include oral health screenings, interactive educational modules, motivational interviewing, hands-on demonstrations of toothbrushing techniques, distribution of oral care kits, and post-intervention follow-ups.

The facility receives occasional food donations however, access to dental hygiene supplies and oral health education is minimal. During initial site visits, USIM students discovered that the children typically brushed their teeth only once daily, often without proper supervision or the use of fluoridated toothpaste. Caregivers, while well-meaning, lacked the resources and specific training needed to instil consistent oral hygiene habits. These observations were reinforced by a preliminary screening by dental professionals, which revealed early signs of dental caries, particularly among younger residents. Although advanced lesions were rare, the need for immediate preventive care was evident. Moreover, interviews with caregivers and an assessment using a validated questionnaire revealed that while general hygiene knowledge was high, there was limited emphasis on oral care practices. These findings underscored the need for a targeted intervention that would not only treat immediate dental concerns but also foster sustainable oral hygiene behaviours among both children and caregivers.

The project addresses two critical needs: (i) improving oral health awareness among disadvantaged children and (ii) enhancing the soft and professional skills of dental students through experiential learning. This aligns with the Malaysian Ministry of Higher Education's vision of producing graduates who are not only academically competent but also socially responsible. Through SULAM, students learn to communicate effectively, apply theoretical knowledge in practical settings, and appreciate the socio-cultural contexts of oral health behaviours.

## Importance of the Project

The significance of this project lies in its dual impact, addressing a public health concern while enhancing student learning. From a public health perspective, the initiative sought to reduce oral health inequalities (Shanthi et al., 2017) by reaching a vulnerable population with limited access to dental services (Unnikrishnan et al., 2022). Globally, children in institutional care are more likely to suffer from poor oral health due to financial constraints, inadequate dietary practices (DeLacey et al.,2020), and lack of caregiver support (Erwin et al., 2024; Gamal-AbdelNaser et al., 2024). By intervening early, the project aimed to prevent the development of severe dental conditions and improve the quality of life for these children.

Academically, the project provided dental students with an opportunity to apply theoretical knowledge in a practical setting. Through planning, implementation, and evaluation phases, students learned about public health strategies, patient education, behaviour change models, and the challenges of healthcare delivery in resource-limited environments. This real-world exposure cultivated critical thinking, empathy, communication, and leadership skills—attributes that are essential for future dental professionals.

## Description of the Project

The project was structured into three primary phases: (i) situational analysis, (ii) programme implementation, and (iii) programme evaluation. In the initial phase, students conducted site visits to RBNS to observe living conditions and assess oral health status among residents. Clinical screenings were performed by USIM dental professionals, revealing low overall caries prevalence but several cases requiring restorative or preventive care. Simultaneously, a questionnaire adapted from Sofi and Yassin (2022) was distributed to all six caregivers to gauge their knowledge and involvement in children's hygiene practices. Results showed high scores in general hygiene but highlighted a need for improvement in oral health practices.

The programme implementation phase took place in October 2024 and included multiple interactive components. Educational content is tailored to be age-appropriate and culturally sensitive, delivered through creative methods such as role plays, storytelling, and games. Students are supervised by faculty members and receive training on ethics, communication, and behavioural science-based health promotion techniques. A treasure hunt game was designed to educate children on healthy eating and oral hygiene in a fun, engaging way. An "Educational Wall" featuring colourful banners with key messages about dental care and sugar control was also introduced as a permanent resource for children and caregivers. The cornerstone of the intervention was the "Buddy Gigi" system, where older children with better oral health habits were assigned as role models to younger peers to encourage regular brushing. This peer-led system promoted accountability and community reinforcement of healthy behaviour.

Hands-on toothbrushing drills were conducted, allowing children to practice proper brushing techniques under the guidance of students and faculty. The program also included the application of fluoride varnish and simple restorations for children with early-stage lesions by a dental specialist. All activities were supervised by the faculty team to ensure safety and clinical appropriateness.



Figure 1: Activities of the RBNS SULAM Project

**Impacts and Advantages of the Project**

The project delivered substantial benefits to both the community and the student participants. For the children, increased oral health knowledge translated into improved daily practices. Caregivers reported a higher frequency of tooth brushing, increased confidence in seeking dental care and reduced sugary snack intake in the weeks following the intervention. The "Buddy Gigi" system fostered a sense of ownership among the older children and provided consistent reinforcement of oral hygiene routines.

From an educational standpoint, students gained firsthand experience in planning and executing a public health initiative. They developed critical competencies in community engagement, cross-cultural communication, enhanced teamwork, deeper understanding of social determinants of health and interprofessional collaboration. The project emphasized the importance of adaptability, as students had to modify teaching strategies based on children's ages, language proficiency, and cultural sensitivity. The project encouraged reflective thinking and critical analysis, which are vital components of holistic dental education. Lastly, institutional impact that strengthened the university's image as a community-centric institution and fostered partnerships with non-governmental organizations. Feedback from reflective journals and debriefing sessions showed enhanced empathy and a deeper appreciation for the social determinants affecting health.

Institutionally, the program demonstrated USIM's commitment to social responsibility and community partnership. It also laid the groundwork for future interdisciplinary initiatives involving public health, social work, and behavioural sciences.

## Commercial Value and Marketability

Although the project was primarily educational and humanitarian, several components have potential for commercialization. The oral health education materials, including posters, brochures, and banners, could be packaged and distributed to schools, NGOs, and other orphanages. The "Buddy Gigi" system could be formalised into a replicable peer mentorship model, supported by instructional guides and digital tracking tools. Additionally, oral health kits tailored for children in institutional care could be developed and marketed under a social enterprise model, creating a sustainable funding mechanism for similar outreach efforts.

## Future Recommendations

Looking forward, there are several strategies to scale and sustain the impact of the project. Firstly, the model should be extended to other orphanages and community homes across Malaysia. Partnerships with the Ministry of Health and NGOs can facilitate broader implementation. Secondly, digital transformation is essential. Developing an app or web-based platform for oral health education, habit tracking, and caregiver support could significantly enhance reach and engagement. The platform could feature interactive games, educational videos, and daily reminders to brush teeth. Thirdly, institutionalisation of SULAM as a core curriculum component is recommended. Encouraging interdisciplinary collaboration by involving students from medicine, psychology, nutrition, and education could enrich project outcomes and provide a more holistic approach to health promotion. Finally, future iterations should incorporate robust research components, including longitudinal data collection to assess behavioural and clinical outcomes over time, thereby contributing to the academic literature on oral health promotion in institutionalised settings.

## Conclusion

In conclusion the "Tiny Teeth, Big Smiles" project embodies the core principles of SULAM by effectively linking academic learning with meaningful community service. Through a well-structured program targeting an underserved population, the initiative not only improved the oral health behaviours of children at RBNS but also enriched the educational experience of USIM dental students. By prioritising prevention, education, and empowerment, the project exemplifies how universities can act as catalysts for social change. The program's scalability, educational value, and potential for market translation make it a model worth replicating in other community settings. As Malaysia continues to pursue equitable health outcomes for all, initiatives like this offer a sustainable and impactful pathway forward.

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# JALINAN HUFFAZ

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**Highlight:** The dynamic Jalinan Huffaz program, which is held at Masjid Al-Karomah, aims to improve the creativity, teamwork, and character development of young tahfiz students between the ages of 9 and 12. In addition to developing critical thinking and interpersonal skills, participants gained unity and a sense of group identity through interactive Explorace, team-building games, and creative tasks. A range of challenge-based checkpoints in the program, which involved 52 students, promoted teamwork, problem-solving, and active engagement. The reflection session also reinforced the values of self-confidence, communication, and cooperation while allowing students to share their own personal takeaways. This program is a significant attempt to foster the holistic development of tahfiz education by encouraging spiritual excellence and critical life skills in a fun and welcoming setting.

**Keywords:** Masjid Al-Karomah, Creativity, Teamwork, Character Development, Problems Solving

## Introduction

The Jalinan Huffaz program, conducted on 17th May 2025 at Masjid Al-Karomah, was designed to promote holistic growth among tahfiz students aged 9 to 12 years. A total of 52 participants took part in this half-day program, which aimed to develop teamwork, creativity, communication, and problem-solving skills through interactive group-based activities. While Qur'an memorization forms the core of tahfiz education, this program expanded the learning experience by integrating soft skills and values aligned with Islamic teachings. Masjid Al-Karomah, known for its role in youth and community development, provided a suitable environment for combining spiritual enrichment with active learning. The program opened with registration, breakfast, and an ice-breaking session that included group formation and the creation of team logos and slogans. These initial tasks encouraged bonding, confidence, and creative thinking.

The main component of the event was the Explorace, a five-station challenge designed to stimulate critical thinking, physical coordination, and teamwork. Activities included a Malaysian map quiz, communication games, and tourism-related riddles, all of which promoted collaboration in a fun and engaging manner. The session ended with a group reflection, where students shared their experiences and lessons learned. This helped reinforce personal growth, emotional awareness, and appreciation for team efforts. The program concluded with a prize-giving ceremony and photo session to celebrate the participants' achievements.

## Background of the Project

In response to the increasing demand for well-rounded character development among young tahfiz students between the ages of 9 and 12, the "Jalinan Huffaz" curriculum was developed. Despite their intense focus on memorizing the Qur'an, these pupils frequently do not have access to organized activities that foster their creativity, teamwork, and communication abilities. This project was created to encourage civic engagement by enlisting university students to plan and lead learning-through-play.

activities, in accordance with the SULAM (Service-Learning Malaysia – University for Society) framework. The program, which is held at Masjid Al-Karomah, combines team building, intellectual challenges, and spiritual principles to promote individual development and communal harmony.

## Important to the Community

Tahfiz students, who are frequently just interested in religious study, benefit much from this project in terms of their social and emotional growth. "Jalinan Huffaz" helps young people develop their problem-solving, teamwork, and self-confidence by offering innovative and engaging modules. In addition to helping the kids, university volunteers foster leadership, empathy, and communication among the facilitators. Additionally, by encouraging inclusive, values-driven learning, the program advances the Sustainable Development Goals (SDGs 4: Quality Education and 16: Peace, Justice, and Strong Institutions). It guarantees that pupils from religious schools are not left behind in terms of their personal growth and fortifies communal ties.

## Description of the Project

Over the programs of a half-day session, the program included a number of interesting, developmentally appropriate activities. After registering and enjoying a light breakfast, students were split up into groups and given the task of coming up with group slogans and logos to promote unity and creativity. An Explorace featuring five challenge checkpoints, such as geographical tests, physical exercises, games requiring critical thinking, and riddles pertaining to Malaysian tourism, was the main event's centrepiece. The purpose of these exercises was to balance mental and physical activity. Following a brief break, students discussed their experiences and important lessons during a reflection session. A group portrait and prize-giving ceremony marked the end of the event. Throughout the program, university students functioned as mentors and facilitators.

## Impacts and Advantages of the Project

Both the university facilitators and the participants received from the "Jalinan Huffaz" program. It gave the tahfiz kids a unique chance to participate in enjoyable, interesting activities outside of their regular religious curriculum, which improved their communication, cooperation, and self-confidence. Numerous people expressed their enthusiasm and gratitude for the educational experience. The program improved the organizational, social, and leadership skills of university volunteers by providing them with invaluable practical experience in organizing and carrying out a community event. In line with SULAM's mission of practical and civic learning, it also improved their comprehension of various educational contexts and bolstered their sense of social duty.

## Commercial Value of the Project

The "Jalinan Huffaz" initiative has economic possibilities even if its main goals were volunteerism and educational enrichment. For usage by other educational institutions, religious organizations, or non-governmental organizations, the activity modules—particularly the Explorace idea and introspective sessions—could be assembled into instructional kits or templates. These lessons can be carried as pre-made Islamic character development and team-building exercises. Teachers, facilitators, and participants can also be given training seminars on how to carry out similar programs successfully, which would generate income and support inclusive and value-centered learning.

## Future Recommendations

A number of possible strategies can be used to boost "Jalinan Huffaz's" influence, including strengthen cooperation with additional mosques, tahfiz centers, and non-governmental organizations to expand outreach and resource exchange. Digital learning resources such as focused evaluates or interactive Islamic learning applications can be used to update the curriculum. Creating a flexible kit would also enable the project to be replicated by other community or educational organizations. Enhancing engagement and delivery can also be achieved by providing student facilitators with training in child psychology and activity design. The project's sustainability and continuity would be guaranteed by institutionalizing it as a semester-long service-learning course. Additionally, gathering post-program feedback and carrying out impact assessments will aid in improving the strategy and recording best practices for later use.

## Conclusion

In conclusion, the "Jalinan Huffaz" SULAM project has successfully connected religious education with overall personal growth of young tahfiz students, using innovative, collaborative and reflective activities facilitated by university volunteers. Furthermore, the project enhanced the social, emotional and cognitive skills of the participants while also fostering leadership, empathy and oragnizational abilities among the facilitators. With its potential for growth, marketability and lasting impact, the project highlights the power of community engagement in promoting inclusive, valuesbased learning. Future improvements through digital integration, partnerships and structured training can further expand its reach and sustainability.

## Acknowledgement

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# PROGRAM KEMBARA KREATIF SI CILIK 2025: BRIDGING TOURISM EDUCATION AND COMMUNITY ENGAGEMENT THROUGH EXPERIENTIAL LEARNING

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**Highlight:** *Program Kembara Kreatif Si Cilik 2025* was a community-based learning program held on May 17, 2025, in *Rumah Kanak-Kanak Mini Kelantan* (Mini Children's Home). This volunteer initiative sought to provide less fortunate kids early exposure to tourist education while also developing their creativity, communication skills, and self-esteem. The initiative, organized by students from Faculty of Hospitality, Tourism and Wellness, Universiti Malaysia Kelantan. This programme included interactive and engaging activities such as a Mini Tour Guide simulation, a Travel Agent role-playing game, and a hands-on floral bouquet-making session. These activities were created to provide fundamental tourist knowledge in a fun, engaging way while also encouraging soft skill development. The course adhered to the objectives of Service-Learning Malaysia - University for Society (SULAM), which combined academic learning with community impact. The results revealed considerable benefits for both the children and the volunteer students: youngsters received knowledge and life skills, while students used classroom theories in a real-world context, increasing civic duty and leadership. Additionally, the bouquet-making activity demonstrated potential for commercialization, providing entrepreneurial insights. This initiative demonstrates how education, creativity, and social outreach may be blended to promote holistic development.

**Keywords:** SULAM Project, basic needs, child protection, volunteer support

## Introduction

In today's educational scene, there is a rising emphasis on combining academic knowledge with practical experience. Community-based learning, particularly through SULAM (Service Learning Malaysia - University for Society), has developed as a successful strategy for producing socially responsible, industry-ready graduates. SULAM allows students to interact with communities, utilize their academic knowledge, and contribute to social well-being while learning vital skills outside of the classroom (Ministry of Higher Education Malaysia, 2023). In this spirit, the *Program Kembara Kreatif Si Cilik 2025* was designed to benefit both the community and the students. The project was held in Rumah Kanak-Kanak Mini Kelantan, a care home that offers secure refuge, food, education, and emotional support to children from difficult or traumatic backgrounds. The home serves both temporary and long-term residents, and it goes beyond meeting physical requirements to focus on emotional, social, and psychological growth. The comprehensive care concept includes activities like arts and crafts, physical education, and organized character-building workshops.

Recognizing this mission, the program was created to provide children with a unique and valuable opportunity to engage in tourism education and creative learning in which they may not normally encounter. The program emphasized play-based and experiential approaches, in line with Kolb's (2015) experiential learning theory, which holds that active engagement promotes greater

comprehension and long-term memory. Tourism, being one of Malaysia's most active industries, provides several opportunities for youngsters to learn about geography, culture, communication, and career paths. Volunteer students who participated in the programme applied knowledge from their tourism, enterprise, and education courses to design and deliver interactive learning experiences. In doing so, they enhanced their planning, teamwork, communication, and leadership abilities. The project served as a platform for mutual growth: children benefited from education and empowerment, while students developed real-world competencies and empathy. Objectives of the program:

1. To provide early exposure to tourism knowledge and cultural understanding among children through engaging, age-appropriate activities.
2. To develop children's creativity, communication, and confidence through experiential learning and simulation-based activities.
3. To foster social responsibility and real-world learning among university students through meaningful community involvement.

## Background of the Project

Tourism education is commonly overlooked in early childhood, especially among children from low-income families.  Many youngsters in Kelantan's care facilities have little exposure to the outside world owing to budgetary and societal restraints.  *Rumah Kanak-Kanak Mini Kelantan* is a necessary refuge for children from unstable or traumatic family circumstances, offering not only basic essentials like housing, nourishment, healthcare, and education, but also emotional and psychological assistance. However, inadequate finances prevent access to enrichment activities that increase global exposure, such as travel, cultural literacy, and vocational knowledge.

The *Program Kembara Kreatif Si Cilik 2025* was initiated in response to this gap, with the goal of fostering basic tourist education as well as vital soft skills such as communication, creativity, and teamwork through an immersive and child-friendly approach. The program aimed to bridge the gap between formal academic training and hands-on, real-world learning experiences, allowing both youngsters and university students to participate in meaningful and transformational educational exchanges. This project was founded on the ideas of SULAM (Service Learning Malaysia-University for Society), a framework approved by the Ministry of Higher Education Malaysia to promote experiential learning and civic participation among tertiary students. By combining academic knowledge with community service, the program established a platform for reciprocal growth: youngsters were exposed to tourism and creative learning activities, while university students improved their leadership, empathy, and applied learning abilities. This collaborative strategy demonstrates the power of community participation in promoting holistic development and providing long-term educational benefit for many socioeconomic groups.

## Importance of the Project

Dining This program addresses vital needs on numerous levels, with advantages for children, university students, and the larger society.

1. **The importance of the project to children at Rumah Kanak-kanak Mini Kelantan**
   For the children at *Rumah Kanak-Kanak Mini Kelantan, Program Kembara Kreatif Si Cilik 2025* provides a one-of-a-kind and much-needed educational opportunity that extends beyond the traditional classroom. Many of these children come from underprivileged and unstable families, which limits their access to enrichment programs and other social activities. The program exposes children to tourism-related information, cultural appreciation, and creative entrepreneurship activities that are frequently lacking from their everyday routines. The program not only promotes cognitive development, but it also dramatically improves emotional and psychosocial well-being by encouraging connection, creativity, and organized play in a secure and supportive atmosphere.

2. **The importance of the project to volunteer students**
   For the volunteer students engaged, the program provides a profound learning experience. It bridges the gap between academic learning and practical application by letting students to put their theoretical knowledge into practice in real-world communities. Students studying tourism and business, in particular, benefit from the opportunity to practice leadership, public speaking, communication, teamwork, and creative problem-solving skills that are necessary for their future careers but are not always effectively developed through traditional lecture-based instruction. Furthermore, working with those in need develops empathy, cultural sensitivity, and

a greater sense of social responsibility, all of which are important qualities for future professionals in any sector.

3. **The importance of the project to society**

   At the societal level, this program is a significant investment in the long-term development and empowerment of impoverished children. By emphasizing early exposure to tourism and entrepreneurial education, the program helps to break the cycle of poverty and restricted opportunity, raising the next generation of confident, creative, and knowledgeable people. Furthermore, the program is consistent with national development priorities. It aligns with the Malaysia Education Blueprint 2015-2025, which prioritizes fair access to excellent education and comprehensive student development. Furthermore, it contributes to the aims of the *Pelan Induk Transformasi TVET Negara 2030* by raising early knowledge of vocational and technical routes, with tourism as a significant industry.

In short, *Program Kembara Kreatif Si Cilik 2025* is a scalable example of how higher education institutions may work with community-based groups to provide high-impact, low-cost programs that benefit all stakeholders. It illustrates how education, when combined with community involvement and national agendas, can be an effective vehicle for social transformation, inclusion, and long-term development.

## Description of the Project

Dining the *Program Kembara Kreatif Si Cilik 2025* was held in *Rumah Kanak-Kanak Mini Kelantan*, with the primary goal of facilitating meaningful connection between university students and children from impoverished backgrounds. The project was carried out by third-year students of Bachelor in Entrepreneurship (Tourism) program and was designed as a volunteer-driven, community-engagement effort using the SULAM (Service-Learning Malaysia-University for Society) paradigm. Drawing on their academic knowledge and entrepreneurial tourism training, the students created a variety of age-appropriate and tourism-related educational activities to encourage learning through creativity and play.

Three core activities were implemented. The first activity was a Mini Tour Guide Simulation, which exposed children to popular Malaysian tourist spots, traditional delicacies, and local customs. Following the instructional phase, participants were invited to act as tour guides, presenting what they had learned to their peers, a method that improved public speaking, self-confidence, and knowledge retention. The second activity, travel Agent Simulation, required youngsters to design and present their own domestic trip packages using photographs of destinations, accommodation, and places to eat. This practice improved persuasive communication, cooperation, and problem-solving abilities in a collaborative situation. The last activity was a Bouquet-Making Craft Workshop, which aimed to improve fine motor coordination and creativity. Children created floral arrangements using simple craft materials, with the additional aim of introducing basic entrepreneurial thinking by discussing the potential of handmade products as marketable items.

Overall, the program provided a platform for children's cognitive and emotional development, while also allowing university students to apply theoretical knowledge in a real-world, community-based setting.

Figure 1: *Program Kembara Kreatif Si Cilik 2025* activity at *Rumah Kanak-Kanak Mini Kelantan*

**Impacts of the Project**

The *Program Kembara Kreatif Si Cilik 2025* provides major educational and developmental advantages to both the community and the participating university students. One of the most noticeable outcomes is an improvement in the children's communication and presenting abilities. Role-playing exercises, such as the tour guide simulation and travel agent presentations, taught children to speak publicly, communicate ideas effectively, and explain information fluently. This experience not only improves their language skills, but it also boosts self-esteem and lowers communication anxiety, which is especially crucial for children from impoverished homes.

In addition, the program encourages creativity and critical thinking. Children had to plan, organize, and solve problems when building vacation packages and presenting cultural knowledge about tourism destination. These exercises helped them to come up with inventive and original concepts while also taking into account practical aspects like audience preferences and logistical considerations. These cognitive processes are critical in developing an inventive mentality from a young age. The programme also strongly supports collaboration and leadership development. Children worked in pairs or small groups, learning the importance of collaboration and helping one another. Certain individuals were assigned leadership tasks, such as presenting on behalf of their group, which promoted responsibility and initiative. These group-based techniques gave an excellent opportunity to improve interpersonal and social-emotional abilities.

Furthermore, the project pioneered the notion of cross-disciplinary learning by combining geography, history, culture, language, and fundamental business principles. This multidisciplinary approach provided children with a comprehensive awareness of Malaysia's cultural and tourism location, as well as exposure to entrepreneurial thinking and decision-making techniques. The program offered university students an unusual opportunity for experiential learning. Instead of depending primarily on theoretical classroom training, students were able to apply what they had learned about tourist product creation, event management, and cultural awareness in a real-world context. This type of service-learning reinforced knowledge retention and enhanced understanding through direct application and reflection. The practical experience also helped them build important soft skills like leadership, teamwork, flexibility, and community participation, which are highly appreciated in both the tourist and entrepreneurial sectors.

Lastly, the activities fostered cultural literacy and general knowledge among all participants. By introducing children to the diverse attractions, foods, and customs of different Malaysian states, the programme helped expand their worldview and appreciation for national heritage. Learning through interactive methods such as storytelling, crafts, and games made the experience both memorable and enjoyable, reinforcing the principle that education can be both meaningful and fun. In summary, the programme generated holistic benefits for cognitive, emotional, and social development, while simultaneously enhancing the academic and professional growth of university students through community-based experiential education.

**Commercial Value**

This program demonstrates commercial potential through creative activities like bouquet-making, where handmade crafts can be marketed as community or school products. Interactive modules such as the Tour Guide and Travel Agent simulations also have strong replication value and can be packaged into educational kits for other institutions. This opens up opportunities for social entrepreneurship models that offer both community impact and income potential. By nurturing children with basic skills training, they can be guided toward becoming young entrepreneurs, while university

students gain inspiration for future business ventures. With strategic partnerships involving NGOs, schools, and tourism bodies, the program can be expanded and scaled. Its products and activities such as art sales, e-books, and online learning modules can be marketed both physically and digitally, showcasing the project's commercial value and long-term profitability potential.

## Future Recommendations

To enhance the sustainability and long-term impact of the *Program Kembara Kreatif Si Cilik*, several strategic recommendations are proposed. First, the program should be established as an annual community involvement effort, with an alternate theme each year, such as Cultural Exploration, Eco-Adventure, or My City, My Pride. Themes diversity will not only keep the children interested but will also help them better appreciate Malaysia's varied tourism location. This repeating format will strengthen ties between the university and *Rumah Kanak-Kanak Mini Kelantan*, promoting continuity and community trust.

Second, the implementation of a "Buddy System" is recommended, in which every child is paired with a university student for a series of supervised activities. This organized mentoring can help both parties establish a stronger emotional connection, individualized learning, and empathy and interpersonal skills together. To solve logistical and budgetary restrictions, particularly for children with limited mobility or finances, the program may include virtual tourism features. Using simple digital technologies such as slideshows, virtual reality (VR), and instructional films, children may digitally visit tourist locations and cultural heritage, providing immersive and meaningful learning experiences without the need for travel.

Additionally, preliminary training seminars for student volunteers should be held. These sessions would concentrate on child psychology, inclusive communication, and cultural awareness, ensuring that interactions are carried out with dignity, empathy, and educational efficacy. Finally, the program might be expanded to include additional child welfare facilities in Kelantan and nearby regions, as well as official integration into academic curriculum for tourism, business, and education programs. Strategic partnerships with NGOs and tourist organizations would expand its reach, relevance, and resource base.

## Conclusion

The *Program Kembara Kreatif Si Cilik 2025* demonstrates the transformational power of community-based learning through tourism education. By working with impoverished kids in Rumah Kanak-Kanak Mini Kelantan, this SULAM program effectively combined academic knowledge with social duty, benefiting both university students and the local community. The program not only introduced the children to various aspects of tourism in a fun and creative way, but it also helped them develop important soft skills like communication, creativity, and cooperation.

The initiative offered students with a genuine platform to apply their academic knowledge in real-world circumstances, improving their understanding of tourism and business while developing empathy and leadership skills. The campaign also emphasized the importance of inclusion, cultural appreciation, and active civic involvement. Furthermore, the programme's activities illustrate the efficacy of experiential learning in improving cognitive and emotional development. Such programs may be developed and sustained with careful planning and strong coordination between academic institutions and charity groups to reach more underserved populations.

In summary, *Program Kembara Kreatif Si Cilik* is a model of relevant educational outreach that contributes to national priorities in tourism awareness, graduate employability, and social equality, with prospective future replication and expansion.

## Acknowledgement

extended to the academic schools and students who are enrolled in the SULAM (Service Learning Malaysia – University for Society) program. Their active participation in the planning and execution of educational as well as motivational programs has not only been a valuable learning experience for the children but has also helped the students to foster social responsibility, leadership, and empathy. This alliance between home and academic community has created worthwhile, enduring relationships that have continued to ensure their impact. Were it not for the efforts of all stakeholders combined, the achievements and growth witnessed within the Mini Children's Home would not have been possible.

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# EMPOWERING FUTURE DREAMS: A SERVICE-LEARNING APPROACH HOTELPRENEUR CAMP TO FOSTER HOSPITALITY SKILLS AND SOCIAL INCLUSION AMONG ORPHANED CHILDREN

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**Highlight:** The volunteer service project supports orphans emotionally, socially, and educationally through meaningful interactions, mentorship, and fun learning activities. It also introduces children to hotel operations, encouraging creativity and helping them develop important soft skills like leadership, communication, and teamwork. The project aims to boost their confidence, build healthy relationships, and inspire them to follow their dreams. Most importantly, it helps them feel valued and included, while promoting a kinder, more united community.

**Keywords:** Hospitality Education, Creative Learning, Self-worth, Confidence Building, Dream Pursuit, Social Inclusion, Community Development.

## Introduction

This The 'Hotelpreneur Camp' program, held on 16 May 2025, was an initiative under the Service-Learning Malaysia - University for Society (SULAM) framework, aimed at integrating academic learning with meaningful community engagement. The program took place at *Rumah Kebajikan Anak Yatim* and Dhuafa' Al Qamariah which involved the participation of 24 young girls aged between 7 to 12 years old. Carrying the theme 'From Guest to Boss: Discover Your Inner Hotelpreneur', the program provided early exposure to the world of hospitality and entrepreneurship in a fun, interactive, and experience-based manner. Through this initiative, university students had the opportunity to apply their classroom knowledge in real-life settings while contributing to the personal development and empowerment of the local community. The program not only supported the learning outcomes of students but also aligned with the core objectives of SULAM in fostering human values, social responsibility, and strengthening the connection between higher education institutions and society.

## Background of Hotelpreneur Camp

The 'Hotelpreneur Camp' was developed to provide young children with early exposure to the hospitality and entrepreneurship sectors. Many children, particularly those from welfare homes, have limited access to information or experiences related to career opportunities in these fields. This program aimed to introduce them to the basic concepts of hotel operations and business in an engaging and age-appropriate manner. Through a variety of interactive hands-on activities such as role-play at the check-in counter, towel folding, pastry decoration and creating their hotel logo and brochure, the children were able to learn new skills in a creative and enjoyable environment. These activities were designed not only to educate but also to encourage self-confidence, teamwork and creative thinking. The program served as a platform to inspire the children to explore their potential and consider new aspirations for their future.

A service-learning program is a pedagogical approach that integrates community service with academic study to enrich learning, teach social responsibility, and strengthen communities (Erikson & Anderson 1997). The main differences between service-learning and community service are that service-learning combines curriculum objectives and standards with community service in which students are encouraged to carry out service projects that meet real community needs. On the other hand, community service primarily focuses on applying service projects in the communities with no direct link to curriculum objectives and doesn't necessarily involve intentional or prescribed learning goals (Edwar 2002).

## The Importance of the Project

To bridge the gap between academic learning and practical experiences, community initiatives, also known as SULAM (Service-Learning Malaysia - University for Society), are essential. Through these projects, students can put the knowledge and abilities they have learnt in the classroom to use by addressing real-world community issues. Students gain a deeper comprehension of social concerns as well as the skills necessary to become more responsible, engaged, and sympathetic citizens through active engagement. Additionally, SULAM projects improve links between local communities and universities. Students contribute to real assistance and constructive change, particularly for marginalised or disadvantaged groups, by collaborating closely with community members. In addition, the community gains access to fresh perspectives, information, and materials that students and faculty contribute.

SULAM also promotes the growth of soft skills, which are critical for future professional success and include problem-solving, teamwork, leadership, and communication. Additionally, these experiences strengthen students' sense of civic responsibility and motivate them to make contributions to society outside of the classroom. In general, SULAM programs are significant because they support whole-person education, give people in the community greater authority, and help make society more loving and welcoming.

## Project Description

The project's goal was to present fundamental ideas in hospitality and entrepreneurship in a way that young students could understand. The curriculum prioritised hands-on, activity-based learning over conventional teaching techniques to produce an unforgettable and captivating experience. Participants engaged in a variety of activities, such as creating promotional materials for their fictional hotel, folding unique towels, decorating bread, and simulating a hotel check-in.  A role-play check-in counter is a practice activity where one person acts as a guest who made an online booking, and the other acts as the check-in staff. The guests come to the counter to check in, and the staff welcome them, ask for their name or booking details, and check the booking in the system. Then, the staff confirms the information, gives the room key, and shares any important information like the room number or breakfast time.

Towel artistry is the creative way of folding towels into shapes like swans, bears, hearts and spa styles. To make a swan, roll both sides of the towel to the centre, fold it in half and curve the top to form the neck. For the bear, roll the towel from both ends, fold it, twist to make your body, and use a small towel for the head. A heart is made by rolling both sides of a towel inward and bending it into a heart shape. The spa fold is simple, which involves folding both sides of the towel to the centre, then folding it neatly for a clean and relaxing look.  In addition, the activities carried out are the decoration of pastry that uses bread and is decorated using attractive food ingredients. The activity is very interesting because it uses a lot of food ingredients that allow children to decorate their sandwiches according to their creativity. This pastry decoration gives children the opportunity to process bread their way. This activity is also carried out under guidance from us as facilitators before they make their sandwiches.

Creating their hotel logo and brochure is a fun and creative activity where students design a unique logo that represents their hotel's theme, style, or values. The logo might include symbols like a sun, wave, mountain, or elegant letter design to show comfort, luxury, or nature. The brochure includes important hotel information such as room types, facilities, location, and contact details, with pictures and a nice layout to attract guests. Students also explain why they chose their logo.

## Impact and Educational Benefits of the Project

The participants and the student facilitators saw good and significant effects from the Hotelpreneur Camp. The event gave the kids a unique chance to learn about the hospitality and entrepreneurship industries entertainingly and interestingly. Through role-playing and practical exercises, it inspired students to express their creativity, use their imagination, and gain confidence, indirectly sharpening their soft skills by improving communication, teamwork, leadership, empathy and problem-solving abilities. Additionally, the experience enhanced it which is critical for their personal development. From an educational standpoint, the program effectively presented fundamental ideas like branding, customer service, and hotel management in a way that young children could easily comprehend. Their views may be expanded beyond their existing surroundings, and early interest in potential career choices may be sparked by these new exposures. This will gain real-world experience in hospitality, entrepreneurship and community engagement by applying academic concepts in a live setting.

The project provided university students with a valuable opportunity to apply their academic knowledge in a practical, real-world setting. Beyond enhancing essential soft skills such as leadership, planning, problem-solving, and teamwork, it significantly contributed to their civic engagement. By working directly with underprivileged children, the students gained a deeper awareness of the social challenges faced by marginalised communities. This hands-on experience fostered empathy and patience, encouraging students to adapt their communication styles to be more inclusive and compassionate. Most importantly, it strengthened their sense of social responsibility, cultivating a mindset that values giving back to society and actively contributing to community development. Through this engagement, the students did not just learn about society they became part of the solution, exemplifying the true spirit of civic-minded higher education. All things considered, the Hotelpreneur Camp showed how service-learning programs such as SULAM can produce a mutually beneficial learning environment for the students and the community.

## Future Recommendations

This project can grow to help more children by expanding to additional orphanages and welfare homes across different regions. We should enhance the program with practical workshops like cooking, arts, and computer skills, while bringing in inspiring role models to motivate the kids. Partnering with local businesses and schools can provide valuable career exposure through workplace visits and hands-on learning. Recognizing children's progress with certificates and small rewards will encourage their participation and build confidence.

To keep helping children in the long run, we need to build strong, ongoing relationships. This means having volunteers visit regularly, setting up a mentoring program where children can get continuous guidance, and creating activities that continue throughout the year like skill-building competitions or creative projects. We should also keep track of how children are doing after they leave the program to see what's working best. By making these efforts consistent and measurable, we can create a program that doesn't just help children temporarily but truly supports their growth and gives them tools to build better futures. This kind of lasting support can make a real difference in helping underprivileged children overcome challenges and reach their full potential.



Figure 1: Towel Artistry

## Conclusion

The Hotelpreneur Camp demonstrated how meaningful connections, and innovative learning can change young lives by effectively bridging the gap between education and empathy. In addition to fostering self-worth, teamwork, and confidence in the orphans, the project sowed the seeds of aspiration for their futures by introducing them to hospitality and entrepreneurship in an entertaining and captivating manner. For college students, the experience reaffirmed the importance of service-learning, fostering critical soft skills like leadership and flexibility while fusing academic knowledge with practical application. The success of the program demonstrates the ability of neighbourhood-based projects to promote social inclusion and motivate the following generation. More benefits for kids will be guaranteed in the future if this momentum is maintained through extended outreach, industrial partnerships, and long-term mentoring. Finally, the Hotelpreneur camp demonstrates how kindness and ingenuity can build a better, more cohesive community one dream at a time.

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# INTEGRATING TRADITION AND SPACE: INTERIOR DESIGN FOR COMMUNITY-BASED CUPPING THERAPY TRAINING CENTRES

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**Highlight:** As the global wellness market continues to expand into alternative healing practices, cupping therapy *(bekam)* spreads through Malaysia as a natural therapeutic practice from the inside out. However, Malaysian cupping therapy training facilities have not been assessed through a therapeutic formal spatial and experiential lens due to culturally relative and medicinal factors. This study aims to explore how interiors may supplement and advocate for this culturally significant alternative treatment of cupping therapy through medical intervention and interior architectural spatial design. Utilizing principles of biophilia, healing through spatial study, and inserting the essence of Malay *bekam* knowledge and combining with Malaysian design interiors vibe, the established idea of *bekam* training centers can transcend into more than just a formal education space but a community engagement and application contingent space. This project assesses in-depth research from a site inventory, interviews with the practitioners and customers, and renderings to determine the involvement of lighting in interior, materials used, natural elements, and zoning can construct a healing space for the practitioner and the customer (community). With a community-oriented mindset and understanding of non-Western ideas, these traditional healing practices can preserve their cultural significance while simultaneously being more easily applied to the modern world. Ultimately, the findings demonstrate that when the interior space is well-functioning and emphasizes elements pertinent to Malay culture, the number of therapeutic cupping *(bekam)* treatments will always rise. Lastly, when the interior design space satisfies the standards of a certified clinic, clients will feel safer and more relaxed during cupping therapy.

**Keywords:** Cupping therapy, interior design, traditional healing, community wellness, Malay architecture, spatial healing, holistic design.

## Introduction

Cupping therapy, or *bekam*, is a healing practice hundreds of years old and firmly rooted in Malay-Muslim culture. This knowledge is rich in cultural value and therapeutic value and has been adopted by local healers of Malaysian descent local practitioner *(perawat)*. Nonetheless, as far as available space is concerned, it is still largely ignored in modern architectural discourse. The resurgence of interest in traditional medicine in Malaysia demonstrates the desire for community-based training space and formalise cupping therapy as professional practice while related to culture and origins. This project came out from SULAM, in conjunction with academic knowledge and community needs.

This project specifically highlights the need to provide more ample spaces for cupping *(bekam)* therapy training centres, as it is often done in small or cramped rooms and atmospheres or informal spaces. The project is an inclusive design intervention that combines community application, cultural sensitivity and interior spaces. The main goal of this project is to create a spatial design for community-based cupping *(bekam)* therapy training centres combining modern-Malaysian interior architectural

ideas with Malay traditional healing knowledge. Under this direction, several important goals are sought.

First, particularly in a training context, the purpose of this study is to understand and document the specific spatial planning and functional requirements of cupping therapy *(bekam)* practices. First, unlike most clinical settings, bekam involves ritualised procedures, culturally based symbolism, and social interactions that are not adequately supported as health care interior design standards. Second, the study seeks to suggest modern-Malaysian interior design strategies including Malay traditional healing practices, with the integration of natural materials, natural light, proper ventilation, culturally relevant spatial configurations, and multi-sensory traditional elements incorporates into modern way of life also could improve relaxation, reduce stress, and enhance overall healing outcomes. This is looking at how thoughtful spatial planning might simultaneously have philosophical, symbolic, emotional, and pragmatic uses that prioritizes comfort, harmony, and sensory engagement can create environments that support both physical health and emotional well-being. This training centre for cupping therapy seeks to enhance the user experience for both clients and professionals by designing spaces that are not just useful but also functional, culturally accepting, and sensory-supportive.

Lastly, the research aims to present modern Malaysian interior design solutions incorporating Malay traditional healing elements such as the use of natural materials, natural light, air ventilation, traditionally and culturally suitable spatial planning, and multi-sensory elements into modern living can also advance relaxation, stress reduction and increasing healing outcomes. This is to consider how intentional spatial planning may also have philosophical, symbolic, emotional, and pragmatic functions; that can encourage comfort, harmony, and sensory engagement to create spaces that may facilitate both physical wellbeing and emotional wellness. In conclusion, this cupping *(bekam)* therapy training centres is trying to enhance the user experience for both clients and practitioners, by designing spaces that are not only practical but also functional, culturally responsive, and sensory-specific. In addition to this, improving customer (community) engagement which is the primary focus of this paper as starting design practice. By embedding participatory design approaches, the outcomes developed from the process of zoning the layout plan will be culturally relevant, contextually aware, and socially relevant.

## Traditional Healing Spaces and Cultural Identity

Conventional Malay architecture provides valuable insight to the spatial and environment principles associated with healing. As Nasir (1997) articulates, the Malay house has incorporated social, spiritual, and ecological/ environmental elements in a cohesive form. The elevated floors, permeable walls, and multifunctional communal spaces reflect both functional adaptations and a philosophy of openness, balance, and community. The factors provide a culturally valid context that can be elevated into the contemporary setting of cupping *(bekam)* therapy training centres. A spatial planning that enhances on balances between comfort, cleanliness, and privacy is crucial for cupping therapy. There are few standardized layouts that foster learning and treatment in cupping therapy sessions. Most of today's practice rooms are spontaneous and informal, including the layout for cupping (bekam) therapy training centres. Any areas that are utilized for cupping therapy will require the planning of practical aspects (storage, cleanliness, supervision), psychological needs (calm, trust) and the physical flow of activity (patient-practitioner relationship). Also, the training aspects will need a clear zone between theoretical and practical aspects of the experiential training. Ideally this is done with moveable walls to accommodate varying group sizes (Siregar R, Setyawan A, Syahruramdhani S., 2021).

Kellert et al. (2008) claim biophilic design offers a compelling theoretical context on how to design healing dimensions. The idea is focused around how to include nature in design. The characteristics in different examples are like natural forms, textures and materials, as well as natural ventilation and sunlight which might enhance emotional well-being and healing outcomes. Also, biophilic strategies are a way to restore that connection to nature in enclosed building context which is applicable to *bekam* which usually happens in natural or semi-natural settings (i.e. shaded outdoor areas). Rashid and Zimring (2008) contend that user-centered environments, notably in healthcare settings, lead to develop positive wellbeing and better trust between practitioners and customers. In community architecture, participatory approaches will change the design process from a top-down system to an inclusive one, adaptive healing process from the customers and based on the context of knowledge from local practitioners. This is significant for traditional healing as knowledge relies on oral and experiential formats. Ensuring the design process embeds this participatory ethic provides functionality and meaning for its users.

114

**Interior Design for Cupping Therapy Training Centres**

The project introduces the SULAM Design Concept which focuses on developing a Community Based Cupping Therapy *(bekam)* and Training Centre that integrates traditional values with community driven learning approaches.

**Community-Centred Design Philosophy**



1st FLOOR PLAN      GROUND FLOOR PLAN
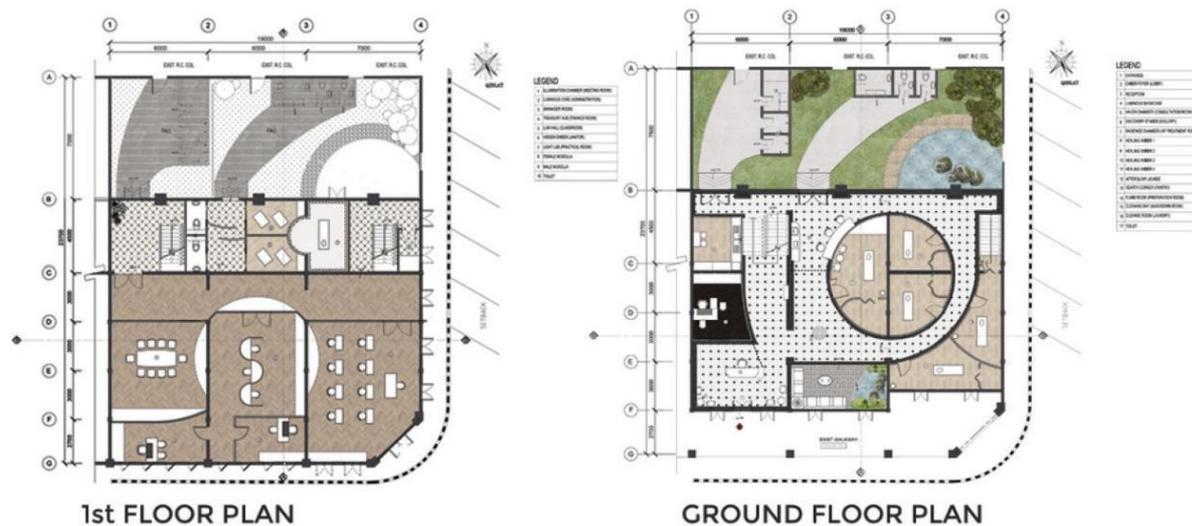
Figure 1: Spatial planning proposal for based cupping *(bekam)* therapy training centres combining modern-Malaysian interior architectural ideas.

The community functions as co-developers alongside the project team to create the space. Bekam practitioners along with the trainer's leaders together with trainees serve as users who will contribute essential knowledge which will determine how design changes affect layout plans and materials and daily *bekam* rituals. Several functional spaces exist within the cupping therapy *(bekam)* training centers that operate in specific capacities:

1. Welcome Lounge (reception area) & Cultural Display: The reception area together with the cultural display forms a welcome lounge that establishes the complete therapeutic environment. The cultural display functions as a storytelling platform where traditional healing practices receive homage while displaying authentic cupping tools to educate the public about therapy methods.
2. The Consultation and Therapy Suites: These spaces highlight the ergonomic and proportion beds equipment which enable the local healer practitioners to work with customers in private cubicles that receive natural light and soft healing sounds to create the most calming environment.
3. The SULAM (Service-Learning Malaysia) practical work in classes promotes world engagement through volunteer activities. The open-plan classrooms feature movable partitions which support both practical and theoretical learning modules.
4. The Multipurpose Pavilion serves as a venue for community talks and health awareness programs as well as cultural activities. The space was developed through horticultural therapy collaboration to teach medicinal plant education while providing a sensory retreat.

Spatial arrangement enables efficient customer and local healer practitioner movement while maintaining customer privacy and creating suitable areas for education and administrative work. The functional spatial planning and zoning system supports the holistic healing mission by creating balanced spatial connections which fulfill the users' practical and emotional and cultural requirements.

**Interior Strategy**

The fundamental aspect of interior design techniques requires selecting suitable materials because it enables the use of sustainable materials which stem from local traditions and local resources. Designers choose bamboo, wood and terracotta materials because they have low environmental impact and create natural connections. The selected materials consist of renewable components which decompose naturally to establish a comforting healing environment based on

holistic principles. The implementation of natural ventilation along with passive cooling and daylighting strategies decreases the building's requirement for artificial systems which leads to enhanced user comfort and energy savings during building operation (Naaz, Shaila & Jain, Khushi., 2024).

Lighting design functions as an essential element for healing support and the development of comfortable spaces. The proper blend of natural and artificial lighting supports positive emotions and better focus alongside biological clock regulation to create relaxation and enhance overall well-being. Learning and therapy spaces benefit from natural light which reaches them through smart window and skylight and light well system placements. Soft warm lighting in therapy rooms generates a peaceful environment that lowers stress and enhances relaxation. The educational areas use bright cool lighting to establish maximum visibility conditions for learning tasks that lead to better concentration and active participation. Dimmable lighting solutions enable users to adjust between different lighting conditions so they can match both activities and time periods. A cupping *(bekam)* therapy training centres that prioritizes balanced lighting and material choices can enhance user sensory experiences while promoting education through its healing and wellbeing environment.

## Impacts on Community and Learning Experience

A community-based cupping *(bekam)* therapy training centres will implement the proposed design intervention to create deep educational, social and cultural benefits for its local community members and academic partners. Through the formal establishment of *bekam* practice and training facilities, this initiative brings dignity to traditional healing traditions that modern medical systems tend to neglect. The project strengthens traditional practitioner healers in the local community through the provision of specialized training facilities that enable both practice and knowledge transfer. The official recognition of space for *bekam* practice enhances traditional practitioner healers' standing in society while promoting the intergenerational sharing of knowledge. The project establishes a strong community identification and shared responsibility through its integration of traditional wellness practice facilities within local cultural norms.

Cupping *(bekam)* therapy training centres operates as both a facility that delivers therapeutic services and an educational institution. The facility maintains a sustainable operation model which enables community members to receive cost-effective and culturally relevant alternative healthcare services directly. University students along with academic participants could acquire practical experience through the project's living laboratory for cultural healthcare applications. Students participate in participatory design sessions, ethnographic site studies and interdisciplinary collaboration to acquire critical thinking skills and design sensitivity while developing empathy beyond traditional studio education.

The project has yielded great success in recontextualizing intangible cultural heritage using spatial planning as storytelling space methods. The center serves as a manifestation of the Malay principles of wellness through the inclusion of Malaysian arts, with a focus on natural and biophilic aspects. Malay wellness considers the *"seimbang antara jasmani, rohani dan persekitaran"* as fundamental to wellness which is the relationship between physical health, spiritual well-being and environmental balance (Baharudin, D. F., Mahmud, Z., & Amat, S., 2015). The restorative environment includes exposure to natural light, sound quality and incorporates herbal gardens, because this restores natural healing aspects, which is an important aspect of Malay wellness related to spatial planning systems (Nasir, 1997; Laderman, 1991).

The center provides a dual function of recovery and education while demonstrating how universities can establish genuine partnerships with local community to protect their cultural heritage. The potential profitability of this cupping therapy program remains uncertain until its implementation. The cupping *(bekam)* therapy training centres plans to provide students with certification training and short courses that support revenue generation and affordable alternative medical services to the public.

## Future Recommendations

A wide range of possible activities are proposed to guarantee that community-based training centres for cupping treatment will long continue to function and have a far-reaching impact. Our proposals work to enhance the technological, institutional, and intellectual context which drives traditional wellness practices in Malaysia alongside components of community participation, and strategy for the design of space. The proposed building structure is based on modular building blocks, which are highly flexible and adaptable from their nature. This allows the design to be reproduced and emulated in a variety of contexts whether geographical or demographical and particularly in low-lying

and semi-urban areas, where accessibility to modern health care is low (Nasir, 1997). Its modularity enables phased construction and community-led customization that suits local need and capacity. With the increasing rise in cupping therapy *(bekam)*, there is a need for cost effective and quality training. The digital learning facilities such as virtual simulations, theory modules and remote certification pathways. The incorporation of this dimension is consistent with modern e-learning principles in conventional medical education (Baharudin, Mahmud, & Amat, 2015) and facilitates the further inclusion of learning for life in traditional health practices.

The future research recommendations suggest a collaborative approach between architectural, medical and anthropological and Islamic studies faculties to create culturally informed therapeutic spaces. The integrated research approach will lead to the discovery of advanced healing methodologies and enhanced spatial designs and the preservation of traditional knowledge systems (Laderman, 1991). Through this approach, the healthcare field can develop fresh spatial designs which respect heritage values and address current performance standards (Kellert, Heerwagen, & Mador, 2008). The research recommendations establish community-based cupping therapy centers as a prototype for wellness facilities that merge research evidence with inclusivity and cultural preservation and economic development and educational enhancement.

## Conclusion

The research shows that the functions of interior architecture extend beyond not just only spatial planning, but as a cultural and therapeutic medium that can meaningfully support traditional practices such as cupping therapy. The goal of the study highlights the concern for design when initiatives are developing cultural continuity, alongside the comfort of users and strengthening community voice through engagement and understanding of spatial planning requirements. The literature review positions the compelling ties between healthcare participatory architecture approaches, biophilic design theory and traditional Malay spatial philosophy. When these approaches engage with the transformation of cupping therapy training facilities, the entire space and space experience could improve and bring together healing spaces and cultural identity as a focus. The research supports an interior design approach which extends beyond basic clinical functions because it recognizes *bekam* as both a medical procedure and sociocultural healing practice. The study advocates for spaces that provide complete sensory experiences through meaningful traditions and educational elements alongside healing practices. Future research should expand on this analysis to create stronger bonds between academic institutions, healing practitioners, interior designers and community members.

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# VOLUNTEERISM INITIATIVE WITH MAWAR KELANTAN: AI INNOVATION WORKSHOP IN TOURISM AND ENTREPRENEURSHIP

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**Highlight:** The "AI Innovation Workshop in Tourism and Entrepreneurship" was a community-based volunteer initiative organized in collaboration with the Charity Association of Single Mothers and Women in Kelantan (MAWAR). The program aimed to empower women, particularly single mothers, by introducing them to artificial intelligence (AI) tools such as ChatGPT, CoPilot, and Suno AI, with practical applications in tourism, entrepreneurship, and education. Participants were provided with hands-on exposure to digital tools that can support business ideation, content creation, virtual itinerary planning, and educational enhancement. The workshop addressed the digital divide by equipping an underserved demographic with foundational digital competencies, thus enhancing their economic potential and social inclusion. Additionally, the initiative served as a service-learning platform for university students, enabling them to apply academic knowledge in real-world settings while developing essential soft skills such as leadership, communication, and empathy. The program exemplifies the transformative potential of AI in fostering inclusive growth and sustainable community development.

**Keywords:** Volunteerism, Single Mothers, Women, AI, Digital

## Introduction

In partnership with the Charity Association of Single Mothers and Women in Kelantan (MAWAR), this volunteer program was designed to empower women by raising their awareness of artificial intelligence (AI) and digital literacy. The program's main goal was to introduce the real-world uses of AI tools such as ChatGPT, CoPilot and Suno AI, especially in the domains of business, tourism, and education. Throughout this program, the community of MAWAR received guidance on how to use these technologies to help educational growth, encourage local tourism and boost entrepreneurship. In addition to promoting digital inclusiveness, we believe this program can give more opportunities for both personal and professional development.

## Background of the Project

In the era of rapid globalisation, many great challenges have been faced by single mothers and women. According to Mansor (2024), around 830,000 single mothers and women face challenges related to economic, social and psychological stressors. Most of them are between the ages of 40 and 55 years old, and 60% of this group is low-income (B40). A total of 332,000 people have difficulty in obtaining permanent employment opportunities due to family commitments and a lack of skills for a job. Therefore, by conducting this "AI Innovation Workshop in Tourism and Entrepreneurship" program, we aim to empower single mothers and women in Kelantan with the knowledge and skills to harness AI and digital tools to allow them to explore new opportunities.

Charity Association of Single Mothers and Women in Kelantan (MAWAR) is a non-governmental organization (NGO). The association was officially established on 15 March 2011 and is headquartered at 5337-B, KM 2, Jalan Sultan Yahya Petra, Kota Bharu, Kelantan. The organization of this association has an objective that focuses on single mothers as well as women from underprivileged groups. This association was established out of concern for the plight of rural women who often face economic challenges, social constraints or societal stigma. Usually, these people do not get the attention and support they deserve to improve their standard of living. Hence, one of MAWAR's goals is to empower women through various programs that help to have a positive impact on those who are affected economically, socially and psychologically.

The collaboration between MAWAR and the students from University Malaysia Kelantan (UMK) under the course of HPT30203 Volunteerism, through the Service-Learning Malaysia – University for Society (SULAM) programme, is one of the programs that is in line with the aspirations of both parties. SULAM is a service-based learning initiative that provides opportunities for students to contribute their advantages and objectives to the community and achieve positive effects from the organisation of high-impact projects. The collaboration between MAWAR and these students indeed helps single mothers and women to learn more about the changes in this modern world with various advanced technologies, so that these people are not left behind further and are always in a state of education, experience and quality.

This "AI Innovation Workshop in Tourism and Entrepreneurship" which aims to increase digital intelligence among women and single mothers illustrates that the basic concepts of artificial intelligence (AI) and digital skills help to improve the quality and performance of a person in daily life which is indeed the desire to succeed and always be in a situation free from problems is an obligation for this group. According to Lloyd and Payne (2023), digital skills are becoming one of the most important and emphasised things to access any job opportunities and developments in the labour market nowadays. Hence, this program is indeed focused on imparting basic knowledge of technology to individuals in the low-skilled category against the changes in comedy nowadays. This exposure is indeed an opportunity for them to better understand the demands of skills, whether it is challenges in work or in social life.

## Importance of the Project

The SULAM project or service to the community is very important for the purpose of creating a positive and meaningful impact on the community because it increases their understanding and experience by participating in programs organised by the students. Helping the community, especially the poor in terms of finances, education, learning, strength and even love, not only has a positive impact on them but also on the organisers by learning from the community itself. Directly, the SULAM project not only affects the community but also affects the organisers themselves. Referring to the "AI Innovation Workshop in Tourism and Entrepreneurship", this program is focused on the community of single mothers and women in Kelantan (MAWAR). This SULAM project is important to them as they are considered those who are less supported by men, especially in the absence of a spouse to assist with daily responsibilities. Furthermore, they are generally less exposed to the proper and efficient use of digital technology, especially in this emerging world of innovation with the use of artificial intelligence (AI). In today's world, where technology plays a crucial role in tourism, business and even education, the lack of digital literacy can lead to feelings of frustration and exclusion. Hence, this program is crucial in helping them adapt, build confidence and participate meaningfully in the digital age.

The "AI Innovation Workshop in Tourism and Entrepreneurship" provides hands-on exposure and presentation to the community by showing them how AI is used and how it works to help in their daily lives. Apart from that, explanations and advice on the use of AI are also provided so that they use it in the right and ethical way. All elements that play a role in life as an employee, businesswoman, student, mother and so on are shown to them by using AI tools such as ChatGPT, CoPilot and Suno AI. With the presence of AI tools, this community can do their daily work smoothly and easily.

## Description of the Project

This "AI Innovation Workshop in Tourism and Entrepreneurship" aims to empower single mothers and women of the Charity Association of Single Mothers and Women in Kelantan (MAWAR) by equipping them with relevant digital competencies focused on Artificial Intelligence (AI). Conducted on 17 May 2025 at UMK Kampus Kota, specifically in the classroom of B104D, this project involved 31 participants and was supported by 11 dedicated students under the course of HPT30203 Volunteerism.

The session was introduced by Dr. Mohammad Pirdaus Bin Yusoh as our guest speaker, with the use of ChatGPT, CoPilot and Suni AI as practical tools to enhance tourism-related innovation, including generating content ideas for business, education, creating virtual itineraries, and promoting local attractions in more creative and accessible ways. The project yielded numerous benefits: it opened new income-generating opportunities, strengthened participants' confidence and digital independence, and raised awareness of AI's potential, especially in tourism and business. For students, the project bridged academic learning with hands-on civic engagement, allowing them to develop leadership, communication, and problem-solving skills. This collaborative effort fostered strong community ties, supported sustainable tourism innovation, and embodied the core values of the SULAM framework in addressing real-world challenges through academic-community collaboration (Ministry of Higher Education Malaysia, 2020).



Figure 1: D-Day of "AI and Innovation Workshop in Tourism and Entrepreneurship" held at B104D, University Malaysia Kelantan, Pengkalan Chepa

## Impacts of the Project

As students in the field of tourism, we organised a program entitled "AI Innovation Workshop in Tourism and Entrepreneurship", aimed at introducing the fundamentals of Artificial Intelligence (AI) to women and single mothers. The implementation of this workshop had a positive impact on the target community while also enriching our learning experience and contributing to our professional skill development. This dual-benefit approach not only provided valuable knowledge to the participants but also gave us the opportunity to deepen our understanding through hands-on, experiential learning outside the classroom.

From the community's perspective, the workshop opened a pathway for women and single mothers to understand the basic concepts of AI and its potential to improve their quality of life. Key sessions included talks and live demonstrations on how AI can be applied in tourism, employment, entrepreneurship, and education. During the workshop, we introduced several AI tools such as ChatGPT, Copilot, and Suno AI. These tools were selected for their user-friendly features and practical applications. Participants were shown how ChatGPT can assist in planning travel itineraries, generating

business ideas, finding job opportunities, and supporting their children's learning. Copilot was presented as a tool for enhancing productivity in writing, document preparation, and business content creation. Meanwhile, Suno AI was showcased as an innovative tool for generating music using AI technology, particularly beneficial for those interested in digital content creation, marketing, or promoting tourism products through media and sound. This exposure successfully enhanced digital literacy and empowered women and single mothers to use technology practically and responsibly.

For us, as organizers and facilitators, the workshop served as a highly valuable form of experiential learning. It provided a platform for us to apply theoretical tourism concepts to real-life community contexts. Additionally, we strengthened various soft skills such as communication, leadership, event management, teamwork, and creative problem-solving. This experience also broadened our understanding of AI's growing role in transforming the tourism industry, particularly in travel planning, destination marketing, information delivery, and digital tourist engagement. Moreover, the workshop taught us the importance of conveying technological knowledge in a simple and accessible language, especially when engaging with women and single mothers who may have limited exposure to digital tools. This reinforced our ability to communicate in an inclusive and user-friendly manner, in line with the principles of hospitality and community-based tourism.

In conclusion, the "AI Innovation Workshop in Tourism and Entrepreneurship" provided mutual benefits, empowering women and single mothers in the community with knowledge of emerging technologies, while offering us, as students, a meaningful opportunity to engage in real-world learning. This experience not only expanded our understanding of the intersection between AI, tourism, and entrepreneurship but also shaped us to become more community-conscious individuals. This initiative highlights the importance of producing tourism graduates who are not only academically excellent but also responsive to community needs and capable of driving innovation and empowerment within the society they serve.

## Commercial Project Value

This project may not directly give benefits in terms of profit gain. However, in terms of marketing and reputation, this project offers wide potential. By organising this "AI Innovation Workshop in Tourism and Entrepreneurship" project with the community of MAWAR, we help to position ourselves as those who highly care about innovation and business growth, as well as education and sustainable development.

As tourism students, we are also deeply aware of the importance of community-based tourism and the role that local stakeholder, especially women and single mothers, can play in shaping meaningful experiences for visitors. Hence, we hope to foster digital exposure and inspire creative tourism initiatives that are rooted in local identity by equipping the community of MAWAR with basic knowledge of AI. Through this project, we are also able to build meaningful connections with the local communities, especially with marginalized groups such as single mothers and underrepresented women. The efforts that we put into making this project a successful one contribute to long-term goodwill, trust and recognition.

## Future Recommendations

To ensure the long-term sustainability and positive impact of the SULAM initiative, future efforts should focus on empowering single mothers and women through exposure to practical applications of artificial intelligence (AI) tools, especially in the context of tourism. The following recommendations are proposed to strengthen digital literacy, improve confidence in AI usage, and promote innovation-driven opportunities within the tourism sector.

1. **Development of a Beginner-Friendly AI Training Module for Tourism**
   The program can be expanded by creating a structured and simple AI module designed to guide single mothers and women on how to use AI tools for tourism purposes. This includes content creation, writing basic travel guides, and generating captions or itineraries. The training should be conducted through hands-on workshops to ensure the concepts are understandable and applicable to real-life tourism contexts.

2. **Encouraging Community-Based Tourism Content Creation Using AI**
   Participants can be encouraged to explore AI tools to create tourism-related content that promotes local attractions in Kelantan. Examples include blog articles, social media posts, or digital posters. This approach not only helps single mothers and women practice what they've learned but also contributes to the visibility of Kelantan as a tourism destination through community-led digital content.

3. **Establishment of a Community Digital Tourism Showcase Platform**
   A digital platform can be developed to compile and display content produced by the participants. This may include promotional write-ups, videos, or even local business highlights. AI can assist single mothers and women in editing, translating, and refining the content to suit wider audiences. The platform could also serve as a digital portfolio to support future income-generation efforts.

4. **Continuous Mentorship and AI Learning Opportunities**
   To ensure sustainability, the project should offer advanced learning sessions and mentoring that expand on initial AI exposure. These could cover areas such as generating marketing materials, business proposals, or customer communications using AI tools. Ongoing support will help single mothers and women become more confident and independent in applying technology to enhance their livelihoods.

5. **Building Strategic Collaborations with Local Tourism Stakeholders**
   Future expansion can involve partnerships with tourism agencies, digital content creators, and local entrepreneurs. These collaborations can offer women and single mothers' access to marketing channels, real-world project opportunities, and industry insights. AI tools can help participants develop promotional materials, presentations, or social media campaigns that align with industry needs.

## Conclusion

This "AI Innovation Workshop in Tourism and Entrepreneurship" program successfully exposed the community of the Charity Association of Single Mothers and Women in Kelantan (MAWAR) to AI, helping them build skills and grow their interests in the current technology. By conducting this volunteerism program, it proved that digital technology can be mastered by all ages, not just the young generation.

This program also proves the effectiveness of community service-learning approaches such as SULAM, which not only have a positive impact on the community, but also create more caring, ethical and knowledgeable students. It is a two-way platform that provides mutual benefits between participants and the organisers of this program, which is students of the HPT30203 Volunteerism course.

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# ENHANCING LIFE SKILLS THROUGH HOSPITALITY-BASED SERVICE LEARNING: A SULAM INITIATIVE WITH ORPHANS

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**Highlight:** A volunteer service project supporting orphaned children focuses on providing them with hospitality-related life skills and promoting their emotional and social growth. It focuses on the overall well-being of participants through structured, engaging, and empowering experiences. These activities range from cooking classes, ethics training, and engaging role-playing, all aimed at helping children rediscover their self-esteem, increase their confidence in social settings, explore possible career opportunities, and ultimately foster a more resilient and compassionate community.

**Keywords:** Community Engagement, Hospitality Education, Social Confidence, Life Skills Development

## Introduction

*"Sentuhan Mesra, Sajian Ceria"* is a SULAM project by HPT20303 students at Universiti Malaysia Kelantan, implemented at the Darul Aitam Orphanage Welfare Home, managed by Kelantan Islamic Religious Council (MAIK) for the welfare and care of orphans. Through modules such as ethics workshops, hospitality professional role plays, and cooking sessions, this project provides initial exposure to the hospitality industry to 20–40 orphans. It helps improve self-confidence, communication, and collaboration skills. At the same time, hospitality students are able to apply academic theories in community service, in line with the SULAM spirit of forming graduates who are caring and empathetic.

## Background of the project

This community engagement program is carefully designed to introduce orphans at the MAIK Darul Aitam Orphanage to basic hospitality skills, including table manners, mock dining, acting out hotel guest roles, and basic food preparation. Targeting 20 to 40 participants, the initiative features practical activities such as cooking demonstrations, etiquette workshops, and hospitality-themed role-play sessions. The interactive experience aims to provide early exposure to the hospitality industry, spark interest in hospitality-related careers, and help participants build self-confidence and important social skills. In addition, the initiative offers students valuable opportunities to apply theoretical knowledge in a real-world setting, effectively bridging the gap between academic learning and practical experience. By working directly with vulnerable groups such as orphans, students also improve critical soft skills such as empathy, leadership, teamwork, and communication. Through engaging and meaningful activities, the program not only fosters social awareness and inspires career aspirations in the hospitality field but also strengthens a sense of self-worth among participants. It stands as an effective example of how higher education can serve both educational and social missions, empowering future professionals while positively impacting society.

**Important of the Project**

The "Friendly Touch, Happy Meal" project is more than just a community service activity it is a transformative platform that connects marginalized youth, especially orphans, with university students through service learning. The project embodies the SULAM philosophy by combining academic knowledge with meaningful social contributions, while providing a two-way impact to the community and students. For orphans, who often face socioeconomic challenges and lack exposure to career opportunities, the project offers a rare learning experience. Through activities such as cooking demonstrations, role-playing as hotel guests, and table etiquette workshops, they not only learn technical skills in hospitality but also soft skills such as self-confidence, communication, collaboration, and social etiquette in a fun and safe environment. This builds their self-esteem and opens up opportunities to envision a brighter future in careers such as chefs, hoteliers, or food entrepreneurs. From the students' perspective, the project gives them the space to step out of their academic comfort zones and contribute directly to society. It fosters the values of empathy, leadership, flexibility, and civic responsibility qualities essential for professional and personal development as caring and competitive citizens.

Overall, this project demonstrates the power of service-based learning in higher education. It is a dynamic example of how universities can become agents of social change where knowledge is not just taught in the classroom but implemented in communities that truly need it, qualities that are indispensable not only for their professional development but also for becoming compassionate, community-minded citizens. Ultimately, *"Sentuhan Mesra, Sajian Ceria"* exemplifies the transformative power of service learning in higher education. It stands as a dynamic model for how universities can act as agents of social change—where knowledge meets kindness, and where learning is not confined to lecture halls but extended into the lives and hearts of those who need it most.

**Description of the Project.**

The "Sentuhan Mesra, Sajian Ceria" project is designed to provide orphans with valuable exposure to hospitality skills while helping them build self-confidence, life skills, and an interest in future careers in the service industry. It follows the core goals of SULAM (Service-Learning Malaysia – University for the Community) by combining academic learning with real-life community engagement. The project begins by identifying 20-40 orphan participants and understanding their needs. Next, student volunteers receive training on how to communicate respectfully and work with children from disadvantaged backgrounds. The project's main strengths lie in its structured and engaging activities:

1. Etiquette and hospitality seminars, where participants learn table manners and how to use cutlery properly.
2. Cooking sessions, where children prepare a full meal from starters to tomato rice with red chicken, and dessert (sago gula Melaka). These activities teach them teamwork, hygiene, and food presentation.
3. What makes this project unique is the immersive simulation approach is participants wore uniforms and served real meals in a hotel-style dining setup. This hands-on experience closely mirrors the real hospitality environment, making the learning more practical and memorable.

This activity is both educational and fun, ensuring full participation from the children of Rumah Kebajikan Darul Aitam MAIK. At the same time, the student volunteers gain practical experience in organizing, planning, and managing community-based programs while improving their leadership and soft skills. The project lasts for 1 day and involves close collaboration between volunteers and the orphanage staff to ensure smooth implementation. In total, 10 university students and 20-40 orphans are involved. Through this SULAM project, the orphans benefit emotionally and socially, while the students build empathy, civic responsibility, and real-world experience. This project is a successful example of how universities and communities can work together for mutual growth and inclusion.

## Advantages of the Project

The *"Sentuhan Mesra, Sajian Ceria"* SULAM project has brought meaningful benefits to both the orphanage community and the student volunteers. For the community, the project helped build strong connections between the students and the children, caretakers, and staff of Rumah Kebajikan Anak-Anak Yatim Darul Aitam. These interactions created mutual respect, empathy, and understanding, helping to form a more inclusive and caring environment. The project also raised public awareness about the lives and struggles of orphaned children, helping to reduce social stigma and encouraging society to be more proactive and supportive of vulnerable groups.

Based on post-program feedback, 90% of participants reported increased self-confidence, while 80% expressed interest in hospitality careers. These experiences not only boosted their confidence but also opened their minds to possible careers in the service industry, giving them motivation and hope for the future. For student volunteers, the project offered a real-world learning experience that extended beyond traditional classroom learning. They had the chance to reflect on their own values and perspectives while engaging with children from challenging backgrounds, which helped develop their emotional maturity and ethical awareness. Through this journey, students strengthened essential soft skills such as empathy, patience, communication, and cultural sensitivity—skills that are highly valuable for leadership and personal development. In addition, the experience of planning and running the activities improved their teamwork, time management, and creative problem-solving abilities. These are transferable skills that will benefit them in their academic, professional, and civic lives. Overall, the project succeeded in building both community impact and meaningful student growth.

## Commercial Value of the Project

Although the "Sentuhan Mesra, Sajian Ceria" SULAM project does not currently bring in any profit or commercial value, its true strength lies in its educational and social impact. The project did not involve any sales or income-generating activities. Instead, all expenses such as food, materials, and logistics were covered by student contributions (RM50 per person). Staying true to the SULAM spirit, the main goal was to provide hands-on learning and meaningful community service rather than focusing on making money. The main activities, like mock dining, cooking sessions, and role-play in hospitality, were meant to build character, life skills, and interest in future careers. While no products or services were sold, the experience helped both the children and students grow in empathy, communication, and confidence.

However, the modules and structure created in this project have strong potential for future marketability. With further development, these activities could be turned into community based culinary education programs or hospitality training workshops. In the long term, the project could even evolve into a **social enterprise**, generating income while continuing to support underprivileged groups through education and empowerment. For now, it remains a non-commercial, student-led effort focused on social impact and community growth.

## Future Recommendations

One key strategy is to implement this project as an annual program involving new student cohorts, ensuring its continuity and long-term impact. We also aim to collaborate with hotels and NGOs to support materials, mentorship, and sponsorships. First, the program can be extended to include other vulnerable groups, such as at-risk youth, children in rural areas, or urban poor communities. This would widen the impact and allow more people to benefit from hospitality education. Also, instead of a one-time program, it could be carried out in multiple phases. A step-by-step module will help participants better understand and apply the skills they learn over time. Adding a social entrepreneurship element can also bring long-term value. For example, food or handmade products made during the workshops could be sold at local events or markets. This would help raise funds for the orphanage and expose participants to real-world business skills.

To improve the delivery of the project, student volunteers should receive extra training in areas such as community engagement, communication, and project management. This would help them run the program more effectively and professionally in the future. Lastly, forming partnerships with external parties such as hotels, NGOs, education foundations, and government agencies can provide funding, mentorship, and career exposure. These collaborations will strengthen the program and make it more impactful. With these recommendations, the project has strong potential to grow into a long-term, scalable initiative that creates real change in both education and society.

Figure 1: Group photo of student volunteers and participants from Rumah Kebajikan Darul Aitam MAIK during the *"Sentuhan Mesra, Sajian Ceria"* SULAM project.



Figure 2: Hands-on hospitality activities including food preparation, table setting, and roleplay sessions conducted as part of the project

## Conclusion

In conclusion, "Sentuhan Mesra, Sajian Ceria" is a strong example of how higher education can create real change when it connects with the needs of the community. This project proves that universities can play an important role in building skills, confidence, and values among both students and community members. It has helped participants grow in many ways personally, socially, and academically and has laid the foundation for a more caring, inclusive, and socially responsible generation.

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# OUR DREAM DESTINATION: INTERACTIVE SULAM PROJECT BETWEEN STUDENTS AND PDK COMMUNITY

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**Highlight:** The Our Dream Destination volunteer program provides a space for friendly interaction between university students and Community Rehabilitation Centre (PDK) residents through tourism-themed activities. It aims to improve the quality of the social experience of PDK participants and foster the value of empathy among volunteers.

**Keywords:** Volunteering, PDK, dream tourism, social interaction, community awareness

## Introduction

Our Dream Destination is a structured initiative strategically developed to deliver interactive, enjoyable, and meaningful experiences for the residents of PDK Al-Kauthar in Kelantan. This program adopts a symbolic tourism approach, allowing participants to explore their ideal travel dreams through creative modalities such as colouring and canvas hand-stamping, as well as personal sharing sessions. By engaging with individuals from the community, particularly persons with disabilities (OKU), the project aims to enhance their social engagement, promote inclusion, and foster self-confidence through fun and creative activities (Hashim et al., 2021). Beyond its direct impact on the participants of PDK, this project also serves as a platform for students to develop essential soft skills, including empathy, teamwork, communication, and leadership. As noted by Mohamad et al. (2020), student-led community service projects not only strengthen civic responsibility but also prepare students for real-world challenges through experiential learning. Thus, Our Dream Destination transcends the notion of community service it embodies a reciprocal learning process that promotes both individual development and collective well-being.

## Background of the Project

The Our Dream Destination project is a community engagement initiative conducted under the SULAM programme community project in collaboration with the residents of the Al-Kauthar Community Rehabilitation Centre (PDK) in Kelantan. The project is designed to facilitate meaningful social interaction between university students and persons with disabilities (PWD) through an informal and recreational approach grounded in the concept of symbolic tourism. This is operationalised through creative activities such as art making, storytelling and simulation of travel experience that are designed specifically to attract the imagination and emotions of the PDK participants. Beyond enhancing the social experiences and emotional well-being of the PWD community, the project also contributes significantly to the development of empathy, communication and other essential soft skills among participating students. The background of the project lies in the desire to promote community awareness of the necessity of inclusivity in addition to strengthening the relationship between institutions of higher education and the community. According to Caulfield and Woods (2013), experiential learning approaches, such as community engagement projects, effectively bridge academic knowledge with real-world applications, fostering personal and professional growth among students.

A total of 11 university students took an active role as organisers and facilitators of the programme, while 15 students from PDK Al-Kauthar participated as the main beneficiaries. The event featured a range of creative and engaging activities including colouring tourism-themed illustration, palm printing on a canvas titled "Dream Destinations", and storytelling sessions where participants shared their vision of ideal travel experience. These interactive components aimed to foster positive emotional experiences and enhancing social confidence among participants. Simultaneously, the initiative offered student volunteers a practical platform to develop and apply essential soft skills particularly in communication, collaboration, and emotional intelligence within a real-world community engagement context.

## Importance of the Project

The "Our Dream Destination" community/SULAM project holds significant value for both the students of University Malaysia Kelantan and the residents of the Al-Kauthar Community Rehabilitation Centre (PDK). Far beyond a conventional volunteerism activity, this project was strategically to offer individuals with these disabilities (OKU) an inclusive, enjoyable, and meaningful experience. By integrating a symbolic tourism theme, the programme aimed to stimulate imagination, foster social interaction, and promote a sense of belonging through creative, tourism-inspired activities tailored to their abilities and interests (Darcy, 2002). The programme provided participants from PDK with opportunities to engage in creative expression, enhancing self-esteem, and develop communication and interpersonal skills through a range of structured activities. These included dynamic aerobics, ice-breaking exercises, colouring sessions with tourism-related themes, fine motor skill development tasks, and guided storytelling focused on articulating their dream destinations. Beyond promoting an inclusive and supportive environment, the use of tourism as a metaphor offered participants an imaginative a form of "travel" allowing individuals with disabilities (OKU) to connect with broader social and cultural narratives in engaging and meaningful way.

This project served as a transformative experience for the participating university students fostering empathy within a virtual and community-based setting. It contributed significantly to the development of essential soft skills including leadership, teamwork, communication, and experiential program management. Moreover, the initiative indirectly nurtured a heightened sense of civic awareness and social responsibility among the students, aligning closely with the core objective of the SULAM's framework. In doing so, it supported the vision of producing cultivating graduates who are not only academically competent but also socially conscious and community oriented. Furthermore, this project makes a meaningful contribution to strengthening the linkages between institutions of higher learning and local communities, while simultaneously fostering public awareness regarding the importance of social inclusion. It highlights the capacity university students not only to learn within formal classrooms settings but also engage meaningful with society acquiring firs-hand insights into the lived experiences of marginalized communities. In essence, "Our Dream Destination" represents a commendable initiative aimed at bridging the gap between society and academia. Beyond enhancing the well-being and happiness of OKU participants, the programme plays a pivotal role in shaping students into more responsible, empathetic, and socially conscious individuals.

## Description of the Project

Our Dream Destinations is a community engagement initiative undertaken by 11 students from Universiti Malaysia Kelantan at the Al-Kauthar Community Rehabilitation Centre (PDK) in Pengkalan Chepa, Kelantan. Conducted on Sunday, 18 May 2025, the program was strategically designed to deliver an enriching and inclusive education experience for person with disabilities (OKU), employing a symbolic tourism-themed framework to foster engagement and empowerment. Throughout the program, a series of interactive and purposeful activities were conducted in collaboration with the PDK community. The initiative commenced with a morning aerobics session, aimed at enhancing physical wellbeing while cultivating a cheerful and inclusive atmosphere among all participants. This was followed by an ice-breaking activity entitled "Let's Name Interesting Places" which was designed to foster communication and social interaction among participants. Furthermore, a tourism-themed picture colouring session and targeted fine motor skills exercises were implemented to stimulate tactile sensitivity and support the development among individuals with disabilities.

These activities were deliberately structured to promote inclusive, enjoyable, and contextually appropriate engagement for members of the PDK. Simultaneously, the initiative served as a practical learning platform for the participating students, enabling them to cultivate essential soft skills such as effective communication, leadership, and experiential program management within a community-

based setting. The implementation of the program was closely supported by four instructors from PDK Al-Kauthar, who provided continuous supervision and guidance to ensure its seamless execution and the well-being of all participants. Implemented through the SULAM framework, this project not only yielded meaningful benefits for the OKU community but also fostered the development of empathy, social responsibility, and civic engagement among the participating students. A total, of 11 students from University Malaysia Kelantan and 15 participants from PDK Al-Kauthar were involved in this initiative, exemplifying the potential of strategic collaboration between higher education institution and community organizations to promote inclusive and transformative learning experiences.

## Impacts of the Project

The "Our Dream Destination" project generated substantial benefits for both the members of PDK Al-Kauthar and the student volunteers. For the PDK, the program offered a safe, supportive and emotionally enriching environment in which they could express themselves creatively through symbolic tourism-themed activities. These engagements facilitated the development of key interpersonal and functional skill, including communication, hand-eye coordination, and emotional expression, while also encouraging social interaction and enjoyment. Participation in these activities elicited feelings of joy and self-worths among the PDK members, positively influencing their overall psychological well-being and promoting their social inclusion within the broader community.

For the student volunteers, the program served as a significant platform for experiential learning, enabling the development of a broad range of essential soft skills. Participation in the initiative enhanced students' empathy, communication, collaboration, and leadership capabilities, while providing them with direct exposure to the lived experience and specific needs of the OKU community. Through hand-on involvement in the planning and execution of community-based activities, students acquired practical insight into program implementation and collaborative engagement. This immersive experience deepened their understanding of the challenges encountered by persons with disabilities and fostered the cultivation of a more compassionate and socially responsible and community-oriented mindset.

The initiative further instilled a heightened sense of civic responsibility and deeper appreciation for inclusive practices among the student participants. It encouraged them to become more socially aware of the value of diversity and the critical role of inclusivity in fostering cohesive and resilient communities. This heightened social consciousness is in shaping graduates who are not only academically accomplished but also equipped to contribute meaningfully to society. These findings align with the study by Mohamad, Baharun, and Sedhu (2024), which underscores the transformative impact of SULAM activities on students' development particularly in enhancing soft skills, moral values, and active societal participation through experiential learning frameworks.

## Future Recommendation

To ensure the long-term sustainability and wider applicability of the "Our Dream Destination" initiative, the adoption of strategic and innovative approaches is imperative. One such strategy involves leveraging digital technology specifically virtual tourism platform, augmented reality (AR), and virtual reality (VR) which can offer the PDK participants the opportunity to experience destinations in a highly immersive and interactive manner, irrespective of geographical constraints (Guttentag, 2010). This technologically driven method is contemporary developments in e-tourism and remote education, enhancing accessibility while enabling broader engagement from participants and external observers alike. Such integration not only enriches the experiential dimension of the program but also supports inclusive and scalable community outreach.

Secondly, the initiative could be scaled through development of a dedicated mobile application or integration with social platform, enabling broader engagement from community members, students, alumni, and the general public. Such a digital ecosystem would facilitate remote volunteering, user-generated content, and charitable contributions, thereby fostering a participatory culture beyond physical boundaries. Employing a blended engagement model combining online and offline participation can mitigate barriers related to distance and scheduling, while simultaneously expanding the program's reach. Through these digital channels, the project can cultivate a dynamic support network that not only enhances the volunteer experience but also emplifies the social impact on the PDK community.

Third, the development of a structured volunteer training module is essential to ensure the effectiveness and sustainability of the initiative. The module should encompass key areas such as effective communication with persons with disability, empathetic engagement strategies, and inclusive tourism planning. By equipping volunteers with necessary knowledge and competencies, the training would enhance the quality of interaction and foster meaningful connections between students and PDK community. Furthermore, such a pedagogical approach reinforces the sensitivity through experiential learning. Ultimately, well prepared volunteers are more likely to serve as respectful, impactful contributors to inclusive community development.

Lastly, fostering strategic partnerships with key stakeholders such as tourism authorities, disability advocacy NGOs, and academic researchers specializing in inclusive education and digital innovation can significantly enhance the sustainability and scalability of the initiative. Collaborations with these entities offer access to critical resources including funding, technical expertise, and increased public visibility. Such alliances not only strengthen the program's operational capacity but also position it to evolve into a long-term, high-impact community outreach initiative. By leveraging multi sectoral support, the advancement of inclusive tourism practices within both academic and societal spheres.

## Conclusion

In conclusion, the "Our Dream Destination" initiative holds considerable potential for expansion and cultivation of long-term social impacts through integration of innovative strategies and strategic partnerships. By embracing digital technologies, implementing comprehensive volunteer training leveraging online engagement platforms, and forging robust collaborations with key stakeholders, the program can significantly broaden its reach and ensure its sustainability. Beyond enhancing the quality of lives for members of the PDK community, such initiative serves as transformative learning experiences for student participants to cultivating empathy, civic responsibility and deeper commitment to social inclusion. Ultimately, these efforts contribute to the formation of a more compassionate, tolerant and socially conscious society.

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# EDUXPLORE *BELAJAR SAMBIL BERKELANA BERSAMA MAAHAD TAHFIZ PUBIMAS AL AMIN*

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**Highlight:** This program aims to support the children of the Maahad Tahfiz Pubimas Al Amin school and foster a sense of concern and love among the volunteer members. Through interaction with university student volunteers, they will be guided through a motivational approach, interactive games, and experience sharing. This program was also created to foster human values, empathy, and social responsibility among students. This program is expected to build close community relationships and instil the value of empathy among the participants.

**Keywords:** Volunteerism, Eduxplore, Interactive games, Sharing Experiences, Sense of Concern

## Introduction

The Program of *Jalinan Kasih Bersama Anak-Anak Maahad Tahfiz Pubimas Al-Amin* is a volunteer initiative driven by students from the Faculty of Hospitality, Tourism and Wellbeing, Universiti Malaysia Kelantan (UMK). This program is thoughtfully designed to engage with the students from Maahad Tahfiz Pubimas Al-Amin, with the primary aim of fostering meaningful connections rooted in love, compassion, and humanity. It seeks to build a bridge between these *tahfiz* students and the wider community, particularly among university students, encouraging mutual understanding, support, and social responsibility. Volunteering activities are very significant in shaping students' holistic and responsible personalities toward the surrounding community, besides creating a sense of humanity. In today's era of globalization, where human values are increasingly being tested, students must not only strive for academic excellence but also cultivate empathy, a strong sense of camaraderie, and a genuine commitment to community service. Therefore, this program aims to engage the students in the reality of *tahfiz* student life by sharing several activities such as motivational talks, sports, talent shows, experience sharing sessions, and various other beneficial leisure activities.

This program initiative serves as a platform to cultivate a spiritually and emotionally balanced, inclusive community. It features engaging activities with *tahfiz* students, providing them with opportunities to express their ideas, showcase their talents, and receive motivational support to boost their self-confidence. At the same time, participants will gain meaningful experiences that develop key soft skills such as communication, leadership, teamwork, and event management.

## Background of the Project

The community that we choose is Maahad Tahfiz Pubimas Al-Amin to provide immersive experiential learning. It came to our attention as a result of several informal discussions with the institution's managerial staff and several observations made on site that students appear to have very limited access to learning opportunities outside the classroom as nature walks as well as activities that involve group interactions which are very important in fostering soft skills, general awareness, and the students' attitude toward nature. Guided by the objectives of the SULAM program, which integrates academics while incorporating service to the community, an initiative called "Belajar Sambil Berkelana"

(Learning While Exploring) was designed to enable the *tahfiz* students to have positive encounters with nature while paying particular attention to environmental preservation. This program aims to improve students' leadership and nurture their techniques of working and engaging with one another through numerous hands-on and informative programs. At the same time, this initiative benefits university students by giving them the chance to plan, manage, and implement community engagement activities aimed at strengthening the university's ties with local religious educational institutions and other community partners.

## Importance of the Project

The SULAM project is very important. One reason is that it can develop well-informed graduates. The SULAM project provides students with practical experience in applying their knowledge to real-world problems. This experience can help them further develop important skills such as critical thinking, problem-solving, and communication. In addition, they also gain a deeper understanding of the course content and a stronger sense of social responsibility. From this program, there were several important, such as:

1. **Promotes Hands-On Learning**
   *"Belajar Sambil Berkelana"*, the program fuses learning with travel and interactive experience, thus making the learning process more interesting, unforgettable, and powerful, especially for students of religious institutions such as Maahad Tahfiz. It surpasses traditional classroom methods and an added advantage is the fact that it gives students a medium through which they can develop soft skills that include teamwork, problem-solving, and communication through activities such as Explorace and icebreaker games.

2. **Promotes Social Engagement and Self-Assurance**
   Also, the program makes use of team-based games and challenges that allow self-assured, social and collaborative growth, thus enabling students to become socially self-sufficient and collaborative, which would be particularly beneficial in the tahfiz school environment where learners may be socially and informally constrained.

3. **Community Involvement and Outreach**
   Integrating universities with their host communities has been identified by the SULAM (Service-Learning Malaysia - University for the Society) approach as one of the ways to create closer engagements between universities and the local community. It denotes the university's stand as a welfare-contributing agent and helps students get hands-on experiences in such roles as facilitators and organizers.

4. **Encourages Comprehensive Growth**
   Activities such as *Teka Silang Kata, Pengembaraan Minda,* and *Kelompok Kata* are designed to boost cognitive and emotional intelligence. They stimulate the growth of new vocabulary, critical thinking while at the same time bringing on creativity and leadership in the participants.

5. **Fosters Indelible Mark and Keepsakes**
   The initiative is not only promoting kindness and continued community involvement but is also creating a lasting positive impression on the students of Maahad Tahfiz and the university facilitators by giving out certificates, arranging photo sessions, and having exciting games.

## Program Summary: EduXplore – Learning While Exploring

The EduXplore: Learning While Exploring programme, held on 19 May 2025 at Maahad Tahfiz Pubimas Al-Amin, Kota Bharu, was a community outreach programme by student volunteers from Universiti Malaysia Kelantan (UMK). Between 9:00 PM and 11:30 PM, the programme aimed to introduce tahfiz students to an enjoyable, interactive, and learning experience with teamwork, creativity, and language implementation through game-based learning. The evening began with an ice-breaking and registration at 9:00 PM. Here, the facilitators welcomed themselves and outlined the sequence of the program and games. The symbolic "bus ticket" was provided for each group of participants to represent their travel through the EduXplore learning journey. The first session was to provide a casual and interactive atmosphere so that the students could get acquainted with the facilitators and make themselves at ease in participating in the activities.

At 10:00 PM, the Mini Explorace competition began. This was the main event of the evening, designed to combine education with movement-type and language-based activities. Players travelled between checkpoints in teams, completing diverse tasks designed to stimulate their minds and develop communication skills. The four checkpoints were:

1. Ping Pong Channel – coordination and problem-solving.
2. Word Cluster – vocabulary building and group brainstorming.
3. Mind Expedition – comprised of reasoning-based puzzles to test creativity.
4. Crossword Puzzle – testing language comprehension and teamwork.

The facilitators were fully involved in explaining each game in terms of short sentences, pictures, and motivation. These issues were framed not only to be fun but also to expose the students to the actual application of language, problem-solving, and teamwork. After the Explorace, each participant was given a small slip of paper to jot down appreciation or feedback notes that they read out to the facilitator they believed had the greatest influence on them, an unassuming but genuine method to encourage connection and reflection. The program concluded with the closing ceremony at 11:00 PM through final remarks, souvenir and certificate distribution, and group photo taking. The ceremony was an appreciation point for the effort of volunteers and the students' efforts, as well as symbolizing the meaningful partnership between UMK and the Tahfiz centre.

Overall, EduXplore was a successful program that provided Tahfiz students with a rich out-of-classroom experience, blending education and play. It allowed the students to foster new ways of thinking, enhance their confidence, and promote active involvement in group endeavours. At the same time, UMK student volunteers gained hands-on experience in community participation, leadership, and cooperation, all in sync with the goals of SULAM (Service-Learning Malaysia – University for Society). The program enriched the bridge between the university and local religious education community, showing the ways through which innovative education strategies could foster inclusivity and holistic student development. EduXplore was not merely an event it was a shared experience of development, growth, and connection for all participants.

## Impacts of the Project

The EduXplore program, "Belajar Sambil Berkelana," held on 19 May 2025 at Maahad Tahfiz Pubimas Al-Amin, Kota Bharu, was a community outreach initiative that blended education, culture, and creativity in a memorable evening event. Designed and implemented by student facilitators, the project delivered significant benefits both to the local community and to our own learning journey as organizers. The primary goal of the program was to foster interactive, engaging learning outside the traditional classroom setting. Through activities like "Saluran Ping-Pong," "Kelompok Kata," "Pengembaraan Minda," and "Teka Silang Kata," participants engaged in language-based games that strengthened communication, teamwork, and problem-solving skills. These games were not only fun but also educational, allowing students from the Maahad Tahfiz to practice vocabulary, sentence structure, and logical thinking in a relaxed and encouraging environment.

From a community perspective, the program successfully promoted inclusivity, social interaction, and holistic learning. It offered a rare opportunity for tahfiz students, who usually follow a structured and religious-based curriculum, to participate in dynamic and creative educational activities. The event helped to bridge social and academic gaps by bringing students from different backgrounds together, encouraging collaboration, and instilling confidence. Moreover, the program strengthened the relationship between academic institutions and the surrounding community by demonstrating that education can be both enjoyable and impactful. As student organizers, we experienced meaningful personal and academic growth through this project. Planning and executing EduXplore required careful coordination, time management, communication, and teamwork skills that are crucial for both academic success and future careers. We learned how to structure an educational event, design meaningful content, and engage diverse learners. This hands-on approach allowed us to apply classroom theories into real-world practice, reinforcing concepts from education, management, and communication courses.

Furthermore, the project enhanced our leadership and public speaking abilities. We had to guide participants, explain activities, resolve minor challenges, and maintain positive energy throughout the event. These experiences built our confidence and taught us to think critically and adapt quickly under pressure. One of the greatest takeaways was the emotional impact the event had on both the participants and us. The joy, laughter, and appreciation expressed by the students and teachers of

Maahad Tahfiz reminded us that learning is most powerful when it connects people. Seeing the students actively participate and enjoy the experience validated our efforts and inspired us to continue using education as a tool for empowerment and community development.

In conclusion, EduXplore was more than a one-night program, it was a transformative experience for everyone involved. It left a positive imprint on the community and enriched our educational journey through real world experience, collaboration, and purposeful engagement. This project exemplifies how youth-led initiatives can make a difference while cultivating essential life and professional skills.

## Future Recommendations

1. **The Comprehensive Health Program and Personal Development**.
   It's crucial to plan volunteer projects that emphasise the emotional and physical health of tahfiz students. These include health discussions, group exercise, Islamic-based mood management seminars, and good eating. Students' psychological health and stress management can both be enhanced by such activities. According to a study by Hasanah and Haris (2023), spirituality significantly affects tahfiz students' subjective well-being, with spiritual activities assisting them in managing stress and enhancing their mental health.

2. **Module for Enhancing Self-Esteem and Confidence**
   It is crucial to create an Islamic self-development curriculum that prioritises leadership, communication, self-confidence, and self-esteem in order to empower tahfiz students to make more brave contributions to society. Students who receive leadership training grounded in Islamic principles might enhance their ethical decision-making abilities and have a better understanding of their place in the community.

3. **Advice for Future Objectives and Dreams**
   Tahfiz students can plan their academic or post-tahfiz careers with the support of career counselling and motivational workshops, allowing them to pursue goals in technology, education, entrepreneurship, or religion. These kinds of programs are crucial for giving students the information and abilities they need to be successful in a range of fields (Shahin, Ilic, Gonsalvez, & Whittle, 2020).

4. **Community Engagement**
   That Is Inclusive In addition to promoting social harmony and stability, planning community events like guidance sessions, social engagement programs, and community service projects with tahfiz kids can lessen the stigma associated with them as a marginalised minority. Tahfiz students and the public can work together more effectively and mutually through planned community projects (Seshadri, 2023).

5. **Develop Strategic Partnerships with Outside Groups**.
   Tahfiz students can benefit from more extensive training, exposure, and sponsorship opportunities by establishing alliances with private companies, governmental agencies, non-governmental organisations, and academic institutions. These partnerships have the potential to improve students' educational experiences and provide them with more job options (Education Development Centre, n.d.).

## Conclusion

In conclusion, the *Jalinan Kasih Bersama Anak-Anak Maahad Tahfiz Pubimas Al-Amin* Program is not just a program in the form of a visit or volunteer activity, but rather a platform for the formation of character and noble values among students and participants involved. This program has opened up a wide space for students to appreciate the true meaning of empathy, love, and social responsibility towards society in need of attention and moral support. Through the organization of activities such as motivational sessions, sports, and talent shows, participants are not only able to uncover their potential but also to experience the value of appreciation, recognition, and a spirit of belonging that encourages them to continue to strive in life. This two-way interaction between university students and Tahfiz students is expected to leave a positive long-term impact, not only on the individuals involved but also on society.

This program is also in line with the university's interest in promoting service-based learning and healthy student development. It also repositions higher education institutions as social change agents who can make an active difference in community building, especially among the less privileged. It is to be wished that initiatives such as this are sustained and further developed in the future so that additional student groups and outside communities may be served by it. Hopefully, all of the time and commitment expended will be a beginning point for the creation of a generation of students who are not only informed and competent, but noble-spirited and willing to work for the good of society.

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# STUDENT-LED, COMMUNITY-DRIVEN: A GRASSROOTS (TABA) MODEL FOR CANCER AWARENESS AND HEALTH ACTION

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**Highlight:** The *"Komuniti Prihatin, Cegah Kanser"* program exemplified a successful student-led, community-driven initiative for cancer awareness using the grassroots (Taba) model. Led by 51 third-year environmental and occupational health students from Universiti Putra Malaysia (UPM), the project effectively bridged academic learning with real-world public health engagement. In partnership with local stakeholders, the programme featured cancer screenings, educational talks, healthy cooking demonstrations and interactive family-orientated activities. All of these are tailored to the needs of the community. This hands-on experience strengthened students' community responsibility, leadership and practical skills while significantly enhancing cancer literacy and encouraging preventive behaviours among participants. The initiative demonstrated the potential of grassroots engagement in transforming theoretical knowledge into impactful community health actions.

**Keywords:** Cancer, Community health, Grassroot (Taba) Model, Preventive behaviours, SDG3

## Introduction

Cancer remains a significant public health concern in Malaysia. According to GLOBOCAN 2022, there were 51,650 new cancer cases reported in Malaysia, comprising 24,892 males and 26,758 females. The age-standardised incidence rate was 142.1 per 100,000 population, with a cumulative risk of 14.4% of developing cancer before the age of 75. The top three cancers in females were breast, colorectal, and cervical, while for males, the most prevalent were lung, colorectal, and prostate cancers (GLOBOCAN, 2022). Despite growing awareness, many individuals are still unaware of the importance of early detection and preventive measures. Therefore, community-level health education and outreach efforts remain crucial in bridging the gap between awareness and behaviour change (Akbar and Abbas, 2025).

In response to these challenges, the Ministry of Higher Education Malaysia introduced the Service-Learning Malaysia – University for Society (SULAM) initiative. This programme aims to enrich student learning experiences while simultaneously addressing real-world societal issues through meaningful engagement with communities (Wahab, 2024). SULAM promotes experiential learning, civic responsibility and societal collaboration whereby has become core values that relevant in addressing public health concerns such as cancer. Moreover, this initiative aligns closely with the Sustainable Development Goals (SDGs), particularly Goal 3 (Good Health and Well-being) and Goal 4 (Quality Education), by promoting equitable health access and inclusive education. To support these educational goals, the grassroots model, also known as the Taba Model, offers a relevant theoretical foundation. Pioneered by Hilda Taba in the 1960s, this curriculum development model champions a bottom-up approach, whereby educators and implementers rather than central authorities design and

tailor learning experiences to meet local community needs (Portillio et al. 2020). In contrast to traditional top-down planning, the Taba Model fosters adaptability and relevance by involving those closest to both the learners and the communities being served. This philosophy resonates strongly with the SULAM framework, which encourages students to design, plan and execute socially responsive activities based on community feedback and realities.

## Background and the Importance of the Project

This SULAM project was conducted as part of the EOH3402: Program Management of Community Health course at the Faculty of Medicine and Health Sciences, Universiti Putra Malaysia (UPM). It involved third-year students (n=51) from the Bachelor of Science in Environmental and Occupational Health programme. Designed to coincide with World Cancer Month in February, the project aimed to turn classroom knowledge into impactful community health actions. It also sought to foster students' civic responsibility through real-world experiences in public health promotion. By adopting a grassroots (Taba) model of health promotion, this project emphasised bottom-up community engagement, cultural contextualisation and the co-development of health messages.

## Description of the Project and Community Engagement

The one-day event, themed "Komuniti Prihatin, Cegah Kanser," attracted over 100 people, including 60 adults and 40 children, and was held at Surau Kg. Sungai Manggis. The program was carried out through collaboration between the Kuala Langat Local Council, Sungai Manggis Local Representatives, the District Health Office (PKD) Kuala Langat, KanWork (an NGO focused on cancer awareness), and the National Cancer Council Malaysia (MAKNA). The activities were developed to be family-oriented, acknowledging the significance of intergenerational learning in enhancing public health education and cancer awareness. Adult participants engaged in various health promotion activities. These comprised educational presentations from MAKNA and PKD Kuala Langat. Health screenings performed by PKD Kuala Langat included colon cancer screening, blood pressure evaluation, blood glucose analysis and body mass index (BMI) assessments. To promote healthier lifestyles, the program also featured a nutritious cooking competition. A soap-making session was conducted to advocate for sustainable, non-toxic personal care goods. This initiative sought to enhance awareness of environmentally sustainable alternatives and offer practical skills for creating chemical-free products. A treasure hunt and a drawing competition, both designed on healthy living, were organised for children.

The programme involved 51 third-year students from the BSc in Environmental and Occupational Health. Fishbone technique and the grassroots (Taba) model were introduced as tools for planning and problem-solving during initial week of academic term. Following the theoretical instruction phase, students developed detailed proposals outlining their planned community health interventions. These proposals were subsequently reviewed and refined in consultation with the project coordinator. To facilitate effective community engagement and programme localisation, the coordinator arranged meetings between the student groups and the local village head (Ketua Kampung) to discuss the feasibility and execution of the proposed activities. A series of coordination meetings involving JKKK Kg. Sungai Manggis, the Kuala Langat Local Council, EOH3402 subject coordinator and student representatives were conducted to align the programme objectives with local governance structures and community expectations. Before the actual event, students conducted a simulation of the programme to practice and improve their delivery.

## Impact of the Project

In the evaluation of Program Prihatin, Cegah Kanser demonstrated a meaningful impact on the Sungai Manggis community and reinforced the educational value of service-learning as a pedagogical approach. Post-event surveys administered to adult participants indicated encouraging shifts in preventative health behaviours. Notably, 80% of participants reported an intention to improve their dietary habits, 70% planned to increase their physical activity, and 60% expressed a commitment to regular health screenings. Figure 1 highlighting the feedback percentage of participants who intended to adopt these health-related practices following the event.
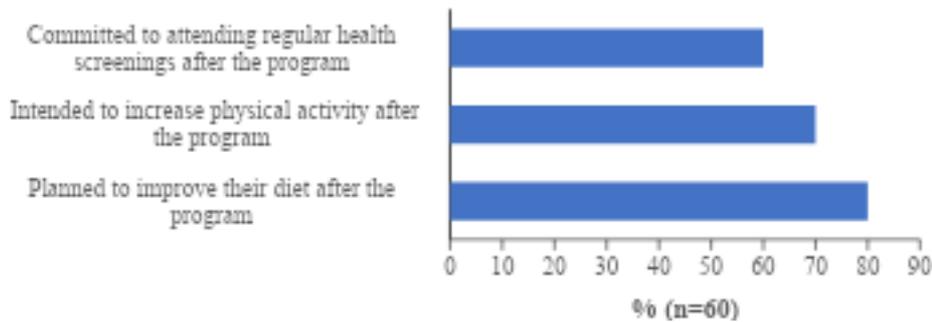
Figure 1: Post-event outcomes from adult participants' feedback (n=60).

The project effectively achieved the intended learning outcomes of the EOH3402: Program Management of Community Health subject. Quantitative feedback from 51 students, measured across five pedagogical indicators, revealed consistently high mean scores (Table 1). Students demonstrated strong understanding of real-world community health issues (mean score: 4.47 out of 5) and applied theoretical knowledge effectively in practice (mean: 2.92 out of 3). Additionally, the students recorded high scores in community problem-solving (2.80), personal development, which includes communication, teamwork, and leadership (2.92), and alignment with the SULAM objective (2.94).

Table 1: Mean outcome scores based on students' feedback (n = 51)

| Outcome Area | Max Score* | Mean Score |
| --- | --- | --- |
| Understanding of real-world community health issues | 5 | 4.47 |
| Application of theoretical knowledge | 3 | 2.92 |
| Engagement in community problem-solving | 3 | 2.8 |
| Personal growth (communication, teamwork, leadership) | 3 | 2.92 |
| Alignment with SULAM objectives | 3 | 2.94 |

* Responses were recorded using Likert scales with maximum scores of 3 or 5, depending on the indicator.

The thematic analysis of student reflections (open-ended responses), as illustrated by the word cloud (Figure 2), highlights recurring terms such as "community", "student", "programme", "communication", "health", and "instructor". The prominence of "community" and "health" reflects the central focus of the project, suggesting that students recognise its relevance to real-world public health challenges. Students not only gained academic knowledge but also valued the collaborative and participatory aspects of the experience. This indicates a meaningful engagement with both the content and context of community health promotion.



Figure 2: Words cloud from students' feedback (n=51).

Notable student reflections included:

**"Implementing the project in real-time was incredibly valuable and gave me a practical foundation for planning similar initiatives in the future." – Student 1**

**"Health education should start from a young age. During the programme, I saw children and adults alike engaging enthusiastically with the speaker from MAKNA." – Student 2**

Several students (Figure 3) shared their experiences on LinkedIn, showing how the program contributed to their personal growth, improved their understanding of community health and supported the development of their professional identities. By engaging with a wider audience, students promote knowledge exchange and meaningful networking, while building important skills such as digital literacy, critical thinking and effective communication, which better prepare them for professional settings (Navarro et al. 2025).
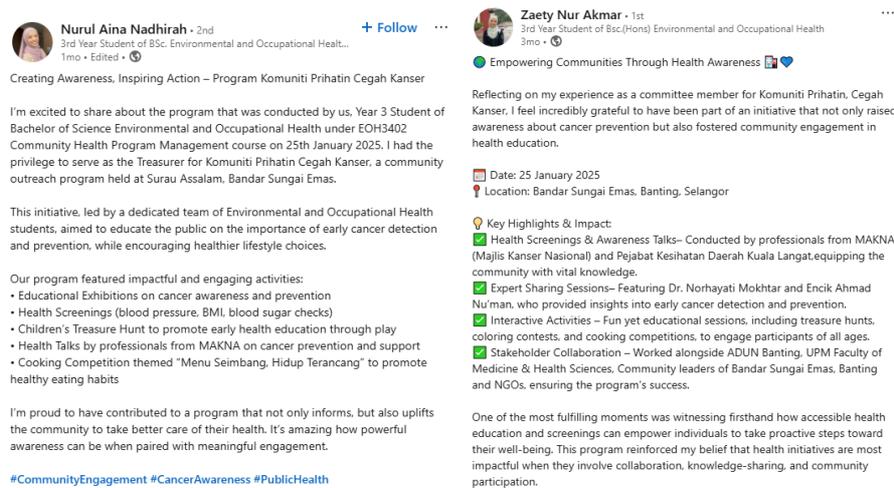


Figure 3: LinkedIn post from two students.

## Conclusion

The student-led, community-driven initiative, anchored in the Taba grassroots model and implemented through the SULAM framework, demonstrates the powerful role of participatory education in addressing pressing public health challenges such as cancer. By combining experiential learning with meaningful community engagement, the project equipped university students with practical skills and a strong sense of civic responsibility. This program also enhanced cancer awareness and encouraged preventive health behaviours within the Sungai Manggis community.

The success of "Komuniti Prihatin, Cegah Kanser" project, highlights the value of bottom-up, culturally relevant approaches to health education that resonate with local communities. Through interactive activities, accessible information and collaboration with local stakeholders, the program promoted a greater understanding of cancer, the importance of early detection and the adoption of healthier lifestyles. Importantly, the SULAM framework amplified these outcomes by fostering a service-learning environment that connects academic knowledge with societal needs. SULAM's emphasis on student engagement, civic responsibility and community partnership empowered students to become active contributors to public health promotion, enhancing both their personal development and the community's well-being. This initiative affirms that student-led service-learning, when grounded in real-world contexts and community input, can effectively bridge the gap between academic learning and public health action. Of these, support national efforts to combat cancer and contributes to broader global goals, particularly the SDG 3 and SDG 4.

To strengthen and expand the impact of such initiatives, several key recommendations should be considered. Firstly, this grassroots, student-led model should be scaled and adapted to other communities, particularly those with limited access to cancer education and early detection services. Universities are encouraged to institutionalise service-learning initiatives like SULAM in their curricula to promote holistic, real-world learning. Building sustained partnerships with local health authorities, NGOs, and community leaders is essential for ensuring continuity and local relevance. Furthermore, the

implementation of structured monitoring and evaluation tools can help measure long-term behavioural changes and guide improvements for future programs.

**Acknowledgement**

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# I AM A MINDFUL DIGITAL CITIZEN

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**Highlight:** The increasing prevalence of digital challenges such as cyberbullying, privacy invasion, and digital addiction among teenagers highlights the urgent need for structured digital citizenship education. This article presents the implementation and impact of a community-engaged SULAM project titled "I Am a Mindful Digital Citizen,". Through problem-based learning and gamified interventions, the project aimed to cultivate cybersecurity awareness, digital responsibility, and ethical online behavior among adolescents. The initiative was structured into multiple phases, including needs analysis, checkpoint development, and impact assessments using pre- and post-tests. Each checkpoint addressed key themes such as password security, digital ethics, misinformation, and cyber threats, using interactive and creative educational tools. The outcomes of this initiative showed meaningful educational, social, and behavioral impacts on both UUM students and the school community. UUM undergraduates gained valuable experience in community service and digital advocacy, while the teenagers developed critical skills to navigate the online world responsibly. The project also demonstrated potential for commercialization through educational kits and digital tools, and offers a replicable model for national-scale implementation. Overall, the project not only fostered digital mindfulness among youth but also reinforced the role of higher education in addressing contemporary societal issues through community-centered learning.

**Keywords:** Digital Citizenship, Cybersecurity Education, Gamified Learning, Teenagers, Service-Learning (SULAM)

## Introduction

The Internet provides vast opportunities for learning, communication, and entertainment; however, it also presents significant challenges, particularly for adolescents. Navigating the digital landscape requires not only technical know-how but also a strong foundation in ethical and responsible online behavior. Among the pressing challenges faced by teenagers in cyberspace are cyberbullying, privacy violations, online predators, exposure to inappropriate content, digital addiction, misinformation, social comparison pressures, cybersecurity threats, academic distractions, and long-term digital footprints (Livingstone & Smith, 2014; Kowalski et al., 2019). To help teenagers cope with these challenges, it is essential to offer comprehensive education on digital literacy, cybersecurity, and responsible online conduct. Recognizing this, we propose a SULAM project entitled "I Am a Mindful Digital Citizen", aimed at empowering young learners with the knowledge and values required to become safe and respectful digital citizens.

This project targets secondary school students aged 13 to 15 from Sekolah Menengah Kebangsaan (SMK) Hosba in Jitra, Kedah. It involves 81 students from the School of Multimedia Technology at Universiti Utara Malaysia (UUM), who are enrolled in the STIV3053 Internet Technology Services course, collaborating with the school's administration and teachers. This collaboration offers UUM students a valuable experiential learning opportunity while contributing meaningfully to the school

community. It also enables them to apply their knowledge and skills in addressing real-world issues related to digital engagement. The objectives of this SULAM project are as follows:

1. Promote Digital Responsibility: Educate teenagers about their digital rights and responsibilities, encouraging them to contribute positively to online communities.
2. Enhance Cyber Awareness: Improve teenager's understanding of cybersecurity practices, enabling them to identify and avoid online threats.
3. Foster Thoughtful Engagement: Encourage teenagers to reflect critically on their online behavior and its impact on themselves and others.
4. Develop Digital Ethics: Instill respectful online communication, discourage cyberbullying, and promote constructive digital interactions (Ribble, 2012; Choi et al., 2017).

This SULAM project integrates with the following Course Learning Outcomes (CLOs):

1. Acquire knowledge and skills necessary in Internet technologies and services.
2. Develop awareness of the impact of Internet technologies and services within the community.
3. Write a reflection on the community intervention program, explaining the outcomes.

By engaging with SMK Hosba, this initiative aims to nurture a generation of digitally responsible teenagers equipped to navigate online spaces safely and ethically. As the Internet becomes increasingly embedded in daily life, fostering mindfulness and digital resilience is not only timely but essential for lifelong well-being and responsible citizenship. Throughout this paper, the term "UUM students" will be used to refer to undergraduates enrolled in the STIV3053 Internet Technology Services course, while the term "teenagers" denotes the participating Form 1 to Form 3 secondary students from SMK Hosba.

## Approaches and Strategies of the Project

The "I Am a Mindful Digital Citizen" service-learning project was implemented through a structured, problem-based, and student-driven approach designed to empower secondary school teenagers with essential digital citizenship and cybersecurity awareness. The project unfolded in several strategic phases:

1. **Problem Identification and School Engagement**
   The initiative began with a lecturer-led outreach to SMK Hosba to identify pressing concerns within the school community. During this engagement, the school administration shared parental concerns raised during *Persatuan Ibu Bapa dan Guru (PIBG)* meetings. A major issue highlighted was the excessive screen time and unmindful Internet usage among teenagers, prompting the need for a targeted intervention on digital responsibility and cyber safety.

2. **First School Visit: Needs Analysis and Design Thinking**
   Following the initial problem identification, 81 UUM students conducted a first field visit to SMK Hosba. The students were divided into 9 groups to cater to nine selected classes of Form 1 to Form 3 students. A total of 330 teenagers from SMK Hosba were involved in the study. Each group facilitated a needs analysis within the classrooms, applying design thinking methodology to explore the digital behavior of the school students. They collected feedback, identified key digital challenges faced by the students, and began ideating potential solutions.

3. **Problem Refinement and Solution Development**
   The UUM students returned to campus with the problems gathered during their needs analysis. Through a second round of classroom-based design thinking activities, students collaborated to refine the problem statements and formulate possible intervention strategies. This phase resulted in the development of 9 tailored intervention ideas aligned with the core concepts of Internet of Content, Internet of Services, Internet of People, Internet of Things, and Internet of Everything, as taught in their course syllabus. The class collectively decided to brand the initiative as "I Am a Mindful Digital Citizen."

4. **Designing Gamified Interventions**
   With their intervention concepts finalized, the students proceeded to design gamified learning activities tailored for school implementation. These interactive sessions were crafted to be engaging, practical, and educationally relevant, aiming to promote responsible digital behavior among secondary students. Each group created a distinctive "checkpoint" focused on a

specific aspect of cybersecurity or mindful Internet use. The project ultimately featured nine unique checkpoints, all collaboratively designed and delivered by UUM students. These activities encouraged peer interaction, active participation, and real-world learning, strengthening the impact of the digital citizenship message within the school community.

5. **Second School Visit: Pre-Test and Baseline Assessment**
   To assess students' initial understanding of digital safety and responsible Internet use, the UUM students returned to SMK Hosba for a second visit. A pre-test was administered to measure the baseline knowledge of the teenagers, which would later be compared to post-test results to evaluate the effectiveness of the interventions.

6. **Final Visit: Intervention Delivery and Impact Assessment**
   During the third and final school visit, each UUM student group facilitated their respective checkpoint interventions in SMK Hosba classrooms. A total of nine gamified checkpoints were conducted, combining elements of play, design, discussion, and critical thinking. The interactive nature of these sessions encouraged active participation and peer-to-peer learning. Upon completion of the interventions, a post-test was administered to gauge the improvement in students' understanding and awareness, thereby evaluating the impact of the project (Figure 1).



Figure 1: Gamified Learning Using 9 Interactive Checkpoints

**Checkpoint 1: Cyber Quest – Decode & Defend**
Organized by: CreativityHub (9 UUM Students)

This checkpoint featured an engaging knowledge-sharing session introducing key cybersecurity concepts such as cryptography, network threats, and online safety principles (Figure 2). The teenagers then participated in a team-based puzzle quest, solving cybersecurity challenges collaboratively. This approach encouraged strategic thinking, teamwork, and a deeper understanding of digital risks.

Figure 2: Teenagers engaging in a team-based cybersecurity puzzle quest following a knowledge-sharing session on cryptography, network threats, and online safety.

**Checkpoint 2: Net Warriors – Play Safe, Stay Smart**
Organized by: Net Shielders (9 UUM Students)

Using Google's Interland online safety platform, this checkpoint provided teenagers with a fun, interactive way to learn about phishing, data protection, and ethical sharing online (Figure 3). The teenagers navigated through virtual kingdoms like Mindful Mountain and Tower of Treasure, reinforcing good digital habits in a relatable manner.



Figure 3: Lab activities using Google's Interland platform to teach teenagers about phishing, data protection, and ethical online sharing.

**Checkpoint 3: Cyber Challenge – Hack Attack Showdown**
Organized by: CyberSmart Squad (9 UUM Students)

This high-energy checkpoint combined physical and mental games, simulating real-life cyber threats. Activities such as "Cyber Dodge" and "Hacker Role Play" helped students recognize types of hackers, cyberattack methods, and appropriate defensive strategies in a fun, competitive environment (Figure 4).



Figure 4: Teenagers actively engaged in a high-energy checkpoint featuring "Cyber Dodge" and "Hacker Role Play," combining physical movement and mental challenges.

**Checkpoint 4: Mission – Cyber Shield**
Organized by: Young Explorer (9 UUM Students)

Designed as a multi-station activity, this checkpoint focused on proactive online behavior, including regular data backups, use of antivirus software, and staying informed about current cyber threats (Figure 5). The interactive stations, including a "Finish the Sentence" game, encouraged students to apply preventive digital safety practices.



Figure 5: Activity on proactive online behavior featuring multi-station setups designed to engage teenagers in applying preventive digital safety practices

**Checkpoint 5: Virtual Vault – Defend Your Digital Self**
Organized by: Network Ninjas (9 UUM Students)

Held in a virtual environment (Spatial), this checkpoint introduced students to immersive content on internet privacy, safe browsing, and personal data protection. Through guided walkthroughs, digital games, and video sessions, students learned the importance of protecting themselves in digital spaces (Figure 6).



Figure 6: Immersive virtual learning environment in Spatial for Checkpoint on Internet Privacy and Safety.

**Checkpoint 6: Password Power – Guard Your Privacy**
Organized by: Tech Tribe (8 UUM Students)

This checkpoint focused on data privacy and secure passwords. Students explored how personal data can be misused and participated in a Password Strength Challenge, creating and testing strong passwords using online tools (Figure 7). The session concluded with an interactive Kahoot! quiz covering phishing awareness and privacy settings on social media.



Figure 7: An engaging session focused on personal data protection and password strength.

**Checkpoint 7: Digital Dilemma – Choose Wisely**
Organized by: J.A.R.V.I.S. (8 UUM Students)

Highlighting digital ethics, this checkpoint addressed issues like cyberbullying, plagiarism, and misinformation. Teenagers were guided through real-world scenarios and participated in discussions and group presentations on how to respond ethically (Figure 8). They also crafted and peer-reviewed social media posts using ethical communication practices.



Figure 8: Checkpoint activity that emphasizes digital ethics, where teenagers explored real-world scenarios of cyberbullying, plagiarism, and misinformation.

**Checkpoint 8: Cyber Hunt – Spot the Threat**
Organized by: Smarty Pants (7 UUM Students)

Structured as a cybersecurity scavenger hunt, this checkpoint tasked students with solving clues across multiple stations to identify online threats like phishing, malware, and suspicious links (Figure 9). This approach helped reinforce critical observation skills and threat detection through exploration-based learning.



Figure 9: Cybersecurity scavenger hunt checkpoint engaging teenagers in identifying online threats through clue-based exploration.

**Checkpoint 9: CreateSafe – Design to Defend**
Organized by: Media Ranger (7 UUM Students)

This creative checkpoint began with a short cybersecurity briefing, followed by a Canva workshop (Figure 10). Students learned basic design principles and created posters themed around digital safety. The session concluded with students presenting their posters, promoting digital literacy through creative expression.



Figure 10: Canva workshop session where teenagers designed and presented digital safety posters to promote cybersecurity awareness through creative expression.

These nine strategic checkpoints enabled a comprehensive, engaging, and age-appropriate approach to promoting digital citizenship. Each checkpoint fostered a combination of awareness, application, and advocacy, aligning closely with the Course Learning Outcomes (CLOs) while making a tangible impact on the teenagers.

## Impact of the Project

The "I Am a Mindful Digital Citizen" project generated significant positive outcomes for three key stakeholder groups: the participating UUM students, the local school community, and Universiti Utara Malaysia as an institution.

1. **Impact on UUM Students**
   By linking academic knowledge with real-world application, the "I Am a Mindful Digital Citizen" SULAM project deeply enriched the educational journey of UUM students. Through this initiative, students moved beyond theoretical learning and engaged in meaningful community work, designing cybersecurity modules, facilitating activities, and leading discussions with secondary school students. This hands-on involvement nurtured essential soft skills such as communication, leadership, collaboration, problem-solving, and empathy. Students learned to adapt their approach for younger audiences, manage classroom interactions, and communicate complex topics in age-appropriate ways.

   Furthermore, the project fostered a strong sense of social responsibility. As students engaged with the challenges faced by teenagers online, they became more aware of their own digital behavior and the broader societal impact of technology. They were motivated not only to educate but also to lead by example, modeling ethical digital citizenship in their interactions. Ultimately, the project empowered students to become proactive digital advocates and community builders, skills that will serve them well in both their professional careers and personal lives.

2. **Impact on the Community**
   The project brought immediate and lasting benefits to the local community, particularly the students, educators, and families of SMK Hosba. Through the nine creative and interactive checkpoints, secondary school students aged 13 to 15 developed a deeper understanding of safe online practices, data privacy, digital ethics, and cyber threat awareness.

   This project contributed to youth empowerment, equipping teenagers with the tools to confidently navigate the digital world while avoiding common online risks such as scams, cyberbullying, and digital addiction. It also helped them reflect on the impact of their digital behavior, fostering respect, responsibility, and critical thinking online. At the same time, school leadership and teachers benefited from the educational collaboration, gaining access to well-structured, ready-to-implement cybersecurity education activities that could be replicated or integrated into future digital literacy efforts. Parents, too, became more engaged in their children's digital safety. Through school involvement, they gained insight into the importance of online responsibility and were encouraged to continue guiding digital behavior at home. Overall, the project supported a culture of digital mindfulness in the community, encouraging safe, ethical, and informed digital participation among young people.

3. **Impact on Universiti Utara Malaysia (UUM)**
   The success of the "I Am a Mindful Digital Citizen" project positively reflects on Universiti Utara Malaysia's commitment to community service and experiential education. This SULAM initiative reinforces UUM's mission to blend academic excellence with civic engagement, showcasing its ability to produce graduates who are socially responsible and technologically competent.

   The project enhanced the university's reputation for leadership in digital education and social innovation, earning recognition from stakeholders and community members alike. Moreover, it strengthened ties between the university and the local school system, laying the foundation for future collaborations in research, education, and outreach. By empowering students to lead, teach, and reflect, the project also supports UUM's educational philosophy of holistic development. It provides a practical learning environment where students not only absorb knowledge but also actively apply it to solve real-world problems, preparing them to be thoughtful leaders in the digital age.

## Commercial Value / Marketability of the Project

Although the "I Am a Mindful Digital Citizen" project is primarily designed as an educational and community engagement initiative, it holds considerable potential for commercialization and market expansion. One of the most promising opportunities lies in the replication and licensing of the workshop modules. The gamified checkpoints, each designed to teach a specific aspect of digital citizenship can be packaged into a ready-to-use "Digital Citizenship Workshop Kit." This kit could be marketed and licensed to other secondary schools, district education offices, or NGOs involved in digital literacy, allowing the program to reach a broader audience while maintaining educational consistency.

Another valuable opportunity lies in collaboration with educational technology (EdTech) companies. Selected modules such as "CreateSafe" and "Password Power" have strong potential to be converted into interactive e-learning products or mobile applications tailored for classroom and self-paced learning. These digital tools could include animations, simulations, or gamified quizzes to engage users in learning about cyber safety and ethical digital behavior. In addition, the project's original learning materials such as interactive games, Canva-designed posters, presentations, and quizzes, can be monetized as digital content. These resources could be adapted for use on educational platforms or sold through subscription models to schools seeking engaging, curriculum-aligned content on digital citizenship. With increasing demand for student-focused digital literacy programs, this project offers not only educational value but also scalable and sustainable market potential.

## Future Recommendations

To expand and strengthen the impact of the "I Am a Mindful Digital Citizen" SULAM project, the following practical recommendations are proposed. These suggestions aim to increase community reach, improve project sustainability, and enhance university-community collaboration:

1.  **Wider Introduction to the SULAM Concept**
    Ensure all key stakeholders including school administrators, teachers, students, and parents clearly understand the SULAM philosophy (MoHE, 2019). Promote the idea that university students can contribute meaningfully by applying academic knowledge to real-world digital challenges faced by teenagers. This understanding builds stronger support and long-term commitment to the project.

2.  **Community Profiling and Needs Assessment**
    Before launching future phases, conduct a detailed community assessment to identify the specific digital literacy gaps, cyber safety concerns, and online behavior challenges in the target school. Consider factors such as internet access, social media usage trends, and parental involvement. This ensures that project content remains relevant and impactful.

3.  **Introduce Continuous SULAM Activities in Schools**
    Move beyond a one-off event model and establish ongoing digital citizenship programs in schools. These could include monthly workshops, peer mentorship programs, or student-led digital safety clubs, supported by rotating batches of university students through service-learning.

4.  **Develop and Distribute a Digital Citizenship Toolkit**
    Create a standardized, easy-to-use toolkit featuring learning materials, games, posters, reflection prompts, and teacher guides. This allows schools to independently run digital literacy modules even without university facilitators present. This can ensure long-term sustainability.

5.  **SWOT Analysis and Strategic Planning**
    Before expanding to new schools or districts, conduct a SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis to identify potential challenges and growth areas. Use this insight to guide action plans and improve program delivery based on past successes and areas needing improvement.

6.  **Measure and Document Project Effectiveness**
    Introduce clear evaluation metrics such as student engagement rates, pre/post knowledge assessments, behavior change observations, and feedback from teachers and parents. Publishing impact reports or video testimonials can also raise the profile of the project and demonstrate its effectiveness to potential partners or sponsors.

7. **Strengthen Community Engagement and Ownership**
Involve parents, teachers, and school leaders more actively in planning and executing future activities. For example, invite parents to digital literacy talks or collaborate with teachers to embed digital citizenship themes into existing curriculum subjects.

8. **Scale Regionally and Nationally with Institutional Support**
With demonstrated success at SMK Hosba, seek formal endorsement and support from the Ministry of Education, the Ministry of Digital, the Malaysian Communications and Multimedia Commission, local education departments, or Non-Government Organizations specializing in digital safety (MCMC, 2021; UNESCO, 2022). This could open pathways for national replication and funding opportunities.

## Conclusion

The "I Am a Mindful Digital Citizen" project successfully demonstrates how collaborative service-learning initiatives can address real-world challenges while enriching educational outcomes. By targeting digital safety, ethical online behavior, and cyber awareness among secondary school students, the project not only empowered teenagers to become responsible digital citizens but also provided UUM students with meaningful experiential learning. Through carefully designed gamified checkpoints, the initiative created an engaging and age-appropriate platform for knowledge transfer, reflection, and behavior change, directly contributing to youth empowerment and digital literacy in the local community.

Beyond its immediate educational impact, this project sets the groundwork for broader, scalable implementations that align with national priorities in digital citizenship and cybersecurity. The integration of creative interventions, stakeholder collaboration, and real-world application has strengthened community-university ties and showcased UUM's commitment to producing socially responsible graduates. With promising commercial value and potential for national replication, "I Am a Mindful Digital Citizen" is a model of how higher education can meaningfully contribute to building a safer, smarter, and more ethical digital society.

## Acknowledgement

Figure 11: Group photo of SMK Hosba leadership and all SULAM Project "I am a mindful digital citizen" participants

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# PROGRAM APA HABAQ KUALA MUDA: BANTU CEGAH, KOMUNITI SEJAHTERA

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**Abstrak:** Program *"Apa Habaq Kuala Muda: Bantu Cegah, Komuniti Sejahtera"* menonjol sebagai inisiatif berimpak tinggi yang menggabungkan pendekatan kaunseling komuniti, kesedaran jenayah, dan penglibatan komuniti secara inklusif. Melalui pelbagai aktiviti seperti ceramah, bimbingan keluarga angkat, gotong-royong, dan sukaneka, program ini memberi manfaat berganda kepada masyarakat dan pelajar. Masyarakat mendapat pendedahan terhadap isu jenayah semasa serta mengukuhkan jaringan sosial, manakala pelajar meningkatkan kemahiran insaniah dan kebolehpasaran melalui pengalaman lapangan sebenar. Dengan kerjasama pelbagai agensi seperti Yayasan Pencegahan Jenayah Malaysia (MCPF) dan komuniti setempat, program ini berjaya membina sinergi antara universiti dan masyarakat. Tambahan pula, terdapat potensi nilai komersial melalui pembangunan modul intervensi atau aplikasi digital yang boleh digunakan oleh sekolah, NGO, dan agensi kerajaan. Cadangan masa depan seperti peluasan ke komuniti lain dan penetapan program sebagai agenda tahunan menjadikan inisiatif ini relevan untuk diteruskan dan diperluas secara berterusan.

**Kata Kunci:** Kaunseling komuniti, Pencegahan jenayah, SULAM, Intervensi sosial

## Pengenalan

Pelan Pembangunan Pendidikan Malaysia - Pendidikan Tinggi (2015–2025) memperkenalkan 10 lonjakan utama yang bertujuan melahirkan graduan holistik, seimbang dan berdaya saing. SULAM *(Service-Learning Malaysia University for Society)* ialah inisiatif Kementerian Pendidikan yang mengintegrasikan penglibatan komuniti dalam kurikulum IPT bagi melahirkan graduan holistik, seimbang dan berciri keusahawanan selaras dengan Pelan Pembangunan Pendidikan Malaysia 2015–2025. Berbeza dengan khidmat komuniti atau kesukarelawanan biasa, SULAM menekankan keseimbangan antara pembelajaran akademik dan khidmat kepada masyarakat melalui aktiviti yang dirancang secara tersusun dan bermatlamat. Ia bukan sahaja memperkukuh pembelajaran pelajar, malah membina hubungan positif dengan komuniti, serta menyemai nilai kasih sayang, kebahagiaan dan saling menghormati dalam kalangan warga IPT. Dalam konteks pendidikan, SULAM adalah kaedah pengajaran dan pembelajaran (P&P) yang menggambungkan hasil pembelajaran kursus dengan khidmat komuniti di mana nilai kredit dan jam perlaksanaan khidmat komuniti itu dikira dalam jumlah jam pelajar belajar bagi kursus yang berkaitan di institut pengajian tinggi (IPT). Bagi program Ijazah Sarjana Muda Kaunseling di Pusat Pengajian Psikologi Gunaan, Dasar dan Kerja Sosial (SAPSP) telah menetapkan bahawa kursus SULAM untuk program pengajian ini adalah kursus Kaunseling Komuniti. Hal ini memerlukan penambahan aspek SULAM di dalam silibus kursus bagi penilaian formatif iaitu sebanyak 20 jam aktiviti penglibatan dengan komuniti (Kementerian Pendidikan Tinggi, 2021).

## Latar Belakang dan Konteks Program

Program SULAM ini dilaksanakan oleh pelajar kursus SSKCK3733 Kaunseling Komuniti, SAPSP Universiti Utara Malaysia (UUM), sebagai sebahagian daripada keperluan pembelajaran berasaskan komuniti *(Service-Learning Malaysia University for Society)* yang mewakili 40% daripada penilaian keseluruhan bagi kursus ini. Kaunseling komuniti ialah satu bentuk bantuan profesional yang diberikan kepada individu, keluarga, dan kumpulan dalam sesebuah komuniti bagi menangani pelbagai isu psikososial seperti tekanan hidup, masalah keluarga, penyalahgunaan dadah, kemiskinan, pengangguran, dan isu kesejahteraan mental. Sehubungan itu, program ini menyasarkan komuniti di daerah angkat SAPSP iaitu Kota Kuala Muda, Kedah, dan dijalankan dengan kerjasama agensi luar seperti Yayasan Pencegahan Jenayah Malaysia (MCPF), Majlis Kepimpinan Pengakap Kedah, Sekolah Menengah Kebangsaan Kota Kuala Muda serta komuniti setempat. Ia bertujuan untuk menerapkan nilai tanggungjawab sosial dalam kalangan pelajar sambil membantu meningkatkan kesedaran komuniti terhadap isu jenayah dalam kalangan pelajar sekolah di SMK Kota Kuala Muda dan komuniti setempat.

## Kepentingan Program

Isu jenayah seperti buli, gangguan seksual, scammer, dan penyalahgunaan bahan semakin membimbangkan di peringkat komuniti. Program ini penting kerana ia membawa pendidikan kesedaran terus ke akar umbi masyarakat dan menggalakkan intervensi sosial melalui kolaborasi antara pelajar universiti, agensi berkaitan, dan komuniti setempat. Pendekatan ini selari dengan aspirasi universiti untuk membina hubungan lestari dengan komuniti serta memperkukuh kesejahteraan rakyat.

## Penerangan Program

Program ini berlangsung selama dua hari, iaitu pada 12 dan 13 Disember 2024 yang telah melibatkan pelajar Sekolah Menengah Kebangsaan (SMK) Kota Kuala Muda serta keluarga angkat dari Taman Sri Kota, Deraka dan Kampung Sungai Emas. Ia turut disokong oleh pelbagai agensi dan komuniti setempat. Ceramah, sesi bimbingan, dan aktiviti interaktif telah menjadi elemen utama program. Program ini dirasmikan oleh Dato' Dr. Zulkifli Mohamed, Pengerusi MCPF Kedah merangkap Pengerusi Majlis Kepimpinan Pengakap Negeri Kedah. Ceramah bertemakan kesedaran jenayah hari pertama dimulakan dengan ceramah berfokus kepada isu semasa seperti buli, gangguan seksual, dan ancaman komuniti scammer. Para peserta diberi panduan praktikal mengenai cara mencegah dan menangani cabaran ini. Penglibatan komuniti secara langsung sesi pada waktu petang melibatkan pelajar UUM dan keluarga angkat dalam slot "Bimbingan Pencegahan Jenayah" yang bertujuan mengeratkan hubungan serta membina pemahaman mendalam tentang situasi sosial setempat. Antara isu yang dibincangkan adalah berkaitan scammer, buli (fizikal & siber), vandalisme, penyalahgunaan bahan, pornografi, ponteng sekolah, memeras ugut, merempit, dan kecurian.

Seterusnya pada waktu malam, aktiviti bersama keluarga angkat telah dijalankan, di mana para pelajar dan keluarga angkat mereka duduk bersama untuk berbincang dengan lebih mendalam mengenai isu-isu jenayah yang sering menjadi perhatian di media sosial pada masa kini. Perbincangan ini lebih memberi tumpuan kepada punca berlakunya jenayah tersebut, kesannya terhadap komuniti, dan langkah-langkah pencegahan yang boleh diambil untuk menangani isu ini secara efektif. Selain itu, sesi ini juga bertujuan untuk meningkatkan kesedaran dalam kalangan peserta program dan komuniti setempat mengenai kepentingan kerjasama antara keluarga, pihak berkuasa, dan masyarakat dalam mencegah jenayah serta memastikan keselamatan dan kesejahteraan komuniti. Aktiviti ini dapat memupuk nilai kebersamaan, tanggungjawab sosial, dan kefahaman mendalam terhadap cabaran yang dihadapi oleh masyarakat hari ini. Hari Kedua Meriah dengan Aktiviti Interaktif di mana aktiviti diteruskan dengan aktiviti senam robik dan sukaneka oleh pelajar bersama dengan keluarga angkat bagi merapatkan lagi hubungan mereka.

## Impak Program terhadap Komuniti dan Pembelajaran

Program ini memberi kesan positif dalam dua aspek utama:

1. **Terhadap Komuniti**: Peningkatan kesedaran dan kefahaman terhadap langkah-langkah pencegahan jenayah, pembentukan jaringan sokongan sosial, dan pengukuhan semangat kebersamaan.
2. **Terhadap Pelajar**: Memberi pendedahan langsung kepada isu-isu sosial sebenar, mengasah kemahiran komunikasi dan intervensi kaunseling, serta mengukuhkan pemahaman teori melalui aplikasi praktikal di lapangan.

## Nilai Komersial dan Potensi Keuntungan

Walaupun projek ini berteraskan khidmat komuniti dan pendidikan, ia memiliki nilai tidak langsung dari segi kebolehpasaran pelajar UUM. Melalui penglibatan aktif dalam projek seperti ini, pelajar memperolehi kemahiran insaniah dan kepimpinan yang tinggi, yang meningkatkan nilai mereka di pasaran pekerjaan. Tambahan pula, konsep program yang berjaya ini boleh dikomersialkan dalam bentuk modul latihan, program komuniti luar kampus, atau kerjasama antara sektor akademik dan agensi kerajaan/NGO.

*Program Apa Habaq Kuala Muda: Bantu Cegah, Komuniti Sejahtera* memberikan impak yang besar kepada masyarakat terlibat melalui pelbagai nilai yang signifikan. Antaranya ialah peningkatan literasi jenayah dan kesedaran sosial dalam kalangan penduduk tempatan. Masyarakat yang menyertai program ini didedahkan kepada maklumat terkini berkaitan jenayah seperti scammer, buli siber, gangguan seksual, penyalahgunaan bahan, dan vandalisme. Pendedahan ini membantu komuniti lebih bersedia mengenal pasti serta mengambil tindakan pencegahan awal terhadap ancaman yang boleh menjejaskan keselamatan dan keharmonian setempat. Di samping itu, penglibatan komuniti secara aktif dalam pelbagai aktiviti seperti gotong-royong, sesi dialog dan perbincangan bersama keluarga angkat telah memberi ruang kepada penduduk untuk merasa dihargai dan turut sama memainkan peranan dalam pembangunan sosial. Ia memperkasa komuniti untuk menjadi agen perubahan yang lebih peka dan bertanggungjawab terhadap isu keselamatan dan kesejahteraan kawasan mereka. Keseluruhannya, program ini telah menyemai semangat perpaduan, meningkatkan kesedaran sivik, dan membina asas kukuh untuk pembangunan komuniti yang lebih selamat, inklusif dan berdaya tahan.

## Cadangan Masa Depan

Bagi memperluas impak program, beberapa cadangan dikemukakan:

1. Melibatkan lebih banyak komuniti luar bandar di negeri lain dengan kerjasama MCPF.
2. Mengembangkan modul intervensi kepada bentuk digital seperti aplikasi pendidikan jenayah komuniti.
3. Menjalinkan usahasama lebih luas dengan pihak polis, sekolah, dan jabatan kebajikan.
4. Menjadikan program ini sebagai projek tahunan institusi yang mengintegrasi lebih banyak kursus universiti bagi memupuk pelbagai kemahiran multidisiplin dalam konteks komuniti.

## Kesimpulan

Secara keseluruhan, Program SULAM *Apa Habaq Kuala Muda: Bantu Cegah, Komuniti Sejahtera* telah berjaya mencapai objektifnya sebagai sebuah inisiatif pendidikan berasaskan komuniti yang memberi manfaat menyeluruh kepada pelajar dan masyarakat. Ia bukan sahaja meningkatkan kesedaran masyarakat terhadap isu-isu jenayah yang semakin meruncing, tetapi turut memupuk hubungan erat antara universiti dan komuniti tempatan melalui aktiviti kolaboratif dan pendekatan holistik. Pelajar pula mendapat pendedahan secara langsung terhadap realiti sosial dan berjaya mengaplikasikan teori pembelajaran dalam suasana sebenar, sekali gus mempertingkatkan kemahiran insaniah dan kebolehpasaran mereka. Tambahan pula, potensi program ini untuk dikembangkan dalam bentuk modul, aplikasi digital, atau kolaborasi antara agensi membuktikan bahawa ia bukan sekadar satu inisiatif jangka pendek, malah mampu memberi impak berterusan jika disokong dan diperluaskan dengan strategik. Oleh itu, program seperti ini wajar diteruskan dan diperluas ke lebih banyak kawasan agar manfaatnya dapat dinikmati secara lebih menyeluruh oleh pelbagai lapisan masyarakat.

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# MEMPERKASAKAN PENDIDIKAN STEM DI PERLIS MELALUI PROGRAM SULAM DI SKIPGM DAN SMK SYED SIRAJUDDIN

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**Abstrak:** *Program Service-Learning Malaysia – University for Society* (SULAM) merupakan inisiatif Kementerian Pendidikan Malaysia yang menggabungkan pembelajaran akademik dengan khidmat komuniti melalui kolaborasi bersama agensi dan industri. Berteraskan prinsip kasih sayang, kegembiraan dan saling menghormati, program ini memberi peluang kepada mahasiswa untuk mengaplikasikan pengetahuan secara praktikal demi melahirkan graduan holistik dan berdaya saing. Melalui tema "Program Jangkauan STEM", satu program komuniti telah dilaksanakan oleh pelajar Universiti Malaysia Perlis (UniMAP) bersama pelajar sekolah rendah dan menengah di dua buah sekolah SKIPGm dan SMK Syed Sirajuddin di negeri Perlis, dengan objektif memupuk kesedaran awal dan minat terhadap bidang Sains, Teknologi, Kejuruteraan dan Matematik (STEM). Pelajar didedahkan kepada pelbagai aktiviti seperti eksperimen fizik dan kimia, rekaan kejuruteraan mudah, robotik asas, serta bengkel teknologi digital. Pelajar dibahagikan kepada kumpulan kecil dan setiap kumpulan akan pergi ke check point dan aktiviti merangkumi STEM. Pelajar UniMAP seramai 50 orang menjaga setiap check point dan memberikan penerangan dan demonstrasi sebelum aktiviti dimulakan. Program ini juga menekankan kepentingan kemahiran abad ke-21 seperti komunikasi, pemikiran kritis dan penyelesaian masalah, di samping memberi pendedahan awal tentang peluang kerjaya dan laluan pendidikan dalam bidang STEM. Kerja berpasukan dan kerjasama di kalangan pelajar-pelajar sekolah rendah dan menengah dapat dibentuk apabila dimainkan dalam pasukan yang dapat menggalakkan kerjasama dan komunikasi. Peserta mesti bekerjasama, berkongsi idea, dan menggabungkan usaha mereka untuk mencapai hasil yang terbaik.

**Kata Kunci:** SULAM, STEM, Komuniti, Kemahiran, Pendidikan

## Pendahuluan

The Service-Learning Malaysia - University for Society (SULAM) merupakan inisiatif kerajaan Malaysia bertujuan memberi pengalaman pembelajaran yang menghubungkaitkan teori dan praktis dengan penyelesaian permasalahan sebenar dalam komuniti serta berteraskan "Kasih Sayang, Kegembiraan dan Saling Menghormati". Dengan berteraskan "Universiti Untuk Masyarakat" program ini dapat membuka peluang kepada mahasiswa untuk mengaplikasikan pengetahuan dan kemahiran di luar, sekali gus melahirkan graduan yang holistik, seimbang dan berciri keusahawanan. Program STEM kali ini suatu program komuniti telah dijalankan oleh pelajar university bersama pelajar-pelajar sekolah rendah dan menengah di dua buah sekolah iaitu Sekolah Kebangsaan Institut Pendidikan Guru Malaysia, Jalan Behor Pulai,Kangar Perlis dan Sekolah Menengah Syed Sirajuddin, Kampung Alor Lanchang, Arau Perlis. Selaras dengan kepesatan pembangunan teknologi dan maklumat ini memerlukan tenaga kerja berpengetahuan dan mahir khususnya dalam bidang berkaitan sains, teknologi, kejuruteraan dan matematik (STEM), pelajar yang bakal bergelar graduan kelak bukan sahaja perlu menguasai kemahiran khusus dalam bidang berkaitan STEM dan mempelajari ilmu pengetahuan baharu, juga perlu menguasai kemahiran abad ke-21 seperti kemahiran komunikasi, penyelesaian masalah, pemikiran kritis dan kreatif.

Objektif projek ini adalah untuk memupuk kesedaran kepentingan pendidikan berasaskan STEM bermula dari sekolah rendah dan sekolah menengah, selain untuk untuk menarik minat pelajar sekolah ini untuk menceburi kerjaya bagi memenuhi tuntutan kerjaya yang menekankan aspek kemahiran STEM. Kesedaran ini timbul apabila statistic menyatakan bahawa hanya 15.2 % pelajar Tingkatan 3 memilih aliran Sains ketika memasuki Tingkatan 4 – iaitu sekitar 62,250 orang pelajar. Kemudian, Lembaga Peperiksaan Malaysia mencatat penurunan calon mengambil subjek sains tulen seperti Fizik, Kimia, Biologi dan Matematik Tambahan antara tahun 2022−2023. Justeru itu, program sebegini adalah salah satu inisiatif untuk memastikan murid dan pelajar dapat merasai pengalaman aplikasi konsep STEM dalam dunia sebenar agar minat terhadap subjek sains tulen dapat dipupuk. Program sebegini pasti akan menekankan kepentingan STEM dalam menyelesaikan masalah dunia sebenar dan mendorong inovasi. Ia menonjolkan sifat interdisiplin bidang STEM dan bagaimana ia memberi kesan kepada kehidupan seharian. Para pelajar turut diperkenalkan dengan beberapa aktiviti yang berkaitan dengan topik-topik sains seperti fizik dan kimia, serta konsep kejuruteraan dan teknologi tambah kat sini contoh nama2 aktiviti kt sekolah. Apa yang lebih menarik, turut diadakan sesi bimbingan peluang kerjaya dimasa akan datang dan laluan pendidikan di menengah tinggi dan universiti dalam bidang STEM.

## Latar Belakang Projek

*Service-Learning Malaysia - University for Society* (SULAM) merupakan satu pendekatan pengajaran dan pembelajaran (PdP) yang mengintegrasikan khidmat komuniti dengan objektif pembelajaran kursus akademik. Pendekatan ini bukan sahaja membolehkan pelajar menerapkan ilmu dan kemahiran yang dipelajari di bilik kuliah universiti kepada situasi dunia sebenar, malah turut memupuk kemahiran insaniah seperti kerja berpasukan, komunikasi berkesan, dan penyelesaian masalah secara kritis. Melalui pelaksanaan projek-projek SULAM, pelajar dapat meningkatkan kesedaran terhadap tanggungjawab sosial dan membina ciri-ciri kepimpinan. Dalam masa yang sama, komuniti setempat memperoleh manfaat melalui penyelesaian praktikal kepada isu-isu yang mereka hadapi. Perkongsian ini mengukuhkan hubungan antara universiti dan masyarakat, serta memperlihatkan komitmen institusi pendidikan tinggi terhadap kesejahteraan masyarakat secara menyeluruh. Ini kerana, matlamat utama SULAM ialah untuk mewujudkan pemindahan ilmu (knowledge transfer) daripada pelajar university kepada komuniti.

SULAM juga memainkan peranan penting dalam meningkatkan kualiti PdP di university, dengan cara memberi peluang kepada pelajar untuk terlibat secara aktif dalam projek komuniti. Maka, universiti bukan sahaja memperkukuh reputasi dan imejnya sebagai institusi yang prihatin, tetapi juga menyediakan platform pengalaman praktikal yang meningkatkan kebolehpasaran graduan. Secara keseluruhannya, SULAM merupakan satu pendekatan PdP yang menyeluruh, berkesan, dan memberi manfaat kepada semua pihak yang terlibat. Ia adalah contoh terbaik bagaimana universiti boleh memainkan peranan aktif dalam pembangunan masyarakat yang mampan, sejahtera, dan progresif.

## Kepentingan Projek ini terhadap Komuniti yang Terpilih.

Projek SULAM menyediakan ruang kepada pelajar untuk mengaplikasikan pengetahuan dan kemahiran yang dipelajari dalam bilik kuliah kepada situasi sebenar di lapangan. Ini membantu pelajar memahami kandungan kursus secara lebih mendalam dan bermakna. Melalui penglibatan dalam aktiviti komuniti, pelajar berpeluang memupuk kemahiran insaniah seperti komunikasi, kerjasama berpasukan, kepimpinan, dan penyelesaian masalah. Ini merupakan aspek penting dalam melahirkan graduan yang holistik dan seimbang dari segi intelek dan emosi. Projek ini meningkatkan kesedaran pelajar terhadap peranan mereka dalam masyarakat. Mereka dapat memahami bahawa, dengan menyumbang tenaga dan idea kepada komuniti, pelajar membentuk sikap prihatin dan bertanggungjawab sebagai warganegara yang aktif dan peduli. Komuniti setempat menerima impak positif daripada pelaksanaan projek ini, khususnya dalam bentuk penyelesaian kepada masalah tempatan, peningkatan kualiti hidup, dan pembangunan sosial yang lebih mampan. Ini menjadikan SULAM sebagai medium efektif dalam memacu perubahan sosial.

Projek SULAM menonjolkan peranan universiti bukan sahaja sebagai pusat ilmu, tetapi juga sebagai agen perubahan sosial. Ia memperkukuh imej universiti sebagai institusi yang bertanggungjawab dan komited terhadap pembangunan masyarakat. Pengalaman praktikal yang diperoleh menerusi projek SULAM menjadikan pelajar lebih bersedia untuk alam pekerjaan. Majikan kini lebih menghargai graduan yang mempunyai pengalaman dunia sebenar dan kemahiran sosial yang tinggi. Projek ini mewujudkan hubungan dua hala yang saling menguntungkan antara universiti dan

komuniti. Komuniti mendapat bantuan dan sokongan, manakala universiti memperoleh maklum balas dan kerjasama yang boleh digunakan untuk penyelidikan, inovasi, dan penambahbaikan kurikulum.

## Diskripsi Projek

Satu projek komuniti yang menggabungkan konsep Service-Learning Malaysia - University for Society (SULAM) dengan aktiviti berdasarkan STEM (Sains, Teknologi, Kejuruteraan, dan Matematik) di adakan sekitar bulan Jun 2024 bertempat di dua buah sekolah yang dilengkapi dengan fasiliti moden, sesuai untuk pelaksanaan pelbagai aktiviti pendidikan dan pembelajaran. Projek ini melibatkan seramai 150 pelajar sekolah rendah dan 130 pelajar sekolah menengah. Penyertaan mereka dalam projek ini adalah satu langkah penting ke arah meningkatkan pemahaman mereka tentang SULAM (Service-Learning Malaysia) adalah sebuah inisiatif pendidikan yang menggabungkan prinsip-prinsip STEM (Sains, Teknologi, Kejuruteraan, dan Matematik) dengan tujuan utama untuk mengembangkan minat serta penghayatan yang mendalam terhadap bidang STEM di kalangan pelajar. Melalui pelaksanaan projek-projek komuniti, SULAM tidak hanya mengajar konsep-konsep teori tetapi juga memberikan peluang kepada pelajar untuk mengaplikasikan pengetahuan mereka dalam konteks dunia nyata.

Pembelajaran berdasarkan pengalaman adalah penting dalam pendekatan SULAM. Pelajar tidak hanya belajar tentang STEM dalam bilik darjah, tetapi mereka juga menghadapi cabaran sebenar untuk merancang dan melaksanakan projek-projek seperti kejuruteraan atau eksperimen sains. Ini membantu mereka mengembangkan kemahiran kritis dan praktikal seperti pemecahan masalah dan kejuruteraan, yang sangat diperlukan dalam industri masa depan. SULAM menggalakkan mereka untuk memberi sumbangan yang positif melalui pengetahuan dan kemahiran STEM mereka. Ini juga membentuk sikap tanggungjawab sosial di kalangan pelajar, menjadikan mereka warga global yang prihatin dan bertanggungjawab terhadap kebajikan masyarakat. Projek ini dilaksanakan dengan pendekatan secara langsung dan kolaboratif untuk memastikan pembelajaran STEM yang berkesan. Berikut adalah nama dua buah sekolah yang terlibat;

1. Sekolah Kebangsaan Institut Pendidikan Guru Malaysia, Jalan Behor Pulai,Kangar Perlis
2. Sekolah Menengah Syed Sirajuddin, Kampung Alor Lanchang, Arau Perlis.

Pelajar dibahagikan kepada kumpulan kecil dan setiap kumpulan akan pergi ke check point dan aktiviti merangkumi STEM. Pelajar unimap seramai 50 orang menjaga setiap *check point* dan memberikan penerangan dan demonstrasi sebelum aktiviti dimulakan. Sepanjang aktiviti, guru, pensyarah dan pelajar unimap memantau dan membimbing pelajar dengan baik. Selepas aktiviti, kumpulan-kumpulan membentangkan hasil kerja mereka, diikuti sesi perbincangan dan refleksi untuk mengukuhkan pemahaman. Penilaian dilakukan berdasarkan kereaktifan, kerjasama, dan kefahaman pelajar. Kaedah ini memastikan pelajar mendapat pengalaman pembelajaran yang menyeronokkan dan bermakna dalam bidang STEM, sambil mengembangkan kemahiran kerja berpasukan, penyelesaian masalah, dan pemikiran kritis.Senarai di bawah adalah aktiviti atau projek yang dijalan kan di kedua-dua buah sekolah;

1. Dinamik Kapal Terbang
2. Roket Air
3. Cabaran Lingkaran Kertas
4. Cabaran Menara Marshmallow
5. Simulasi Letusan Gunung Berapi
6. Tekanan Air
7. Roket Belon
8. Eksperimen Penapisan Air

Pengendalian projek STEM dalam SULAM melibatkan para pensyarah iaitu Dr. Mohd Hafiz Zainol, Dr. Nor Azwin Ahad, Dr. Sinar Arzuria Adnan, dan Dr. Mutmirah Ibrahim. Para pensyarah akan memastikan aktiviti interaktif, praktikal, dan relevan bagi menjadikan projek ini berjaya menambah pengetahuan serta kemahiran praktikal pelajar (Rajah 1).

Rajah 1: Foto-foto rakaman lensa sepanjang aktivti di kedua-kedua belah sekolah berlangsung.

## Impak Projek kepada Komuniti

Projek SULAM yang melibatkan pelajar universiti menyampaikan ilmu kepada pelajar sekolah dalam bidang Sains, Teknologi, Kejuruteraan dan Matematik (STEM) memberikan impak yang sangat positif. Pendekatan ini membantu pelajar sekolah memahami konsep STEM dengan lebih jelas melalui aktiviti interaktif dan pembelajaran secara "hands-on: yang dibimbing oleh pelajar universiti. Interaksi ini bukan sahaja menjadikan pembelajaran lebih menyeronokkan dan mudah difahami, malah turut membina keyakinan pelajar terhadap kebolehan mereka dalam subjek-subjek kritikal ini. Pendedahan awal kepada aplikasi sebenar dalam bidang STEM turut membuka minda pelajar kepada potensi kerjaya dalam bidang ini.

Kelebihan lain projek ini ialah ia dapat meningkatkan minat pelajar sekolah terhadap STEM, semasa memasuki alam sekolah menengah (bagi murid sekolah rendah) dan terutamanya dalam kalangan mereka yang masih belum pasti dalam membuat pemilihan aliran dan untuk Tingkatan 4 (bagi pelajar sekolah menengah). Apabila pelajar universiti menjadi contoh dan mentor kepada pelajar sekolah, mereka mampu memberi inspirasi serta motivasi melalui perkongsian pengalaman dan pendedahan kepada dunia pembelajaran di universiti. Ini dapat mengubah persepsi pelajar terhadap STEM sebagai bidang yang mencabar kepada satu bidang yang menyeronokkan, relevan dan penuh peluang masa depan. Justeru, projek SULAM menjadi pemangkin yang berkesan dalam membina generasi muda yang lebih bersedia dan berminat dalam bidang STEM.

Selain daripada itu, jika sorotan di sudut yang lain pula kreativiti dipertingkat dengan bereksperimen dan pelajar sekolah dapat mengembangkan pemikiran kreatif dan kemahiran artistik mereka. Aktiviti ini menggalakkan mereka berfikir di luar kotak dan meneroka penyelesaian yang inovatif. Peningkatan kemahiran menyelesaikan masalah juga dapat menyelesaikan dan memerlukan peserta menggunakan pemikiran kritis dan strategi penyelesaian masalah. Selain itu, kerja berpasukan dan kerjasama dapat dibentuk apabila dimainkan dalam pasukan, cabaran bulatan kertas menggalakkan kerjasama dan komunikasi. Peserta mesti bekerjasama, berkongsi idea, dan menggabungkan usaha mereka untuk mencapai hasil yang terbaik. Aspek permainan ini amat berharga untuk latihan pembinaan pasukan dalam tetapan pendidikan dan korporat. Disamping itu, nilai pendidikan juga dapat dinilai melalui permainan ini.

## Cadangan Pemantapan Program SULAM Akan Datang

Antara cadangan untuk memantapkan lagi pelaksanaan projek SULAM kepada komuniti, tanpa tertumpu kepada bidang STEM Sahaja di mana jalinan Kerjasama strategik boleh diperluaskan dan diperkukuhkan lagi. Kerjasama dengan agensi kerajaan, badan bukan kerajaan (NGO), dan sektor swasta tempatan dapat memperkukuh sumber, kepakaran, dan impak projek SULAM. Kolaborasi ini juga membantu memastikan projek yang dijalankan lebih relevan dan berdaya tahan. Sebelum merancang aktiviti, pasukan pelajar dan pensyarah boleh menjalankan kajian awal atau tinjauan lapangan untuk mengenal pasti isu sebenar yang dihadapi oleh komuniti. Ini memastikan setiap projek SULAM benar-benar memenuhi keperluan setempat dan memberi impak yang bermakna.

160

Selain itu, adalah wajar untuk melaksanakan sistem pemantauan dan penilaian berasaskan indikator yang jelas sepanjang tempoh projek membantu mengenal pasti kelemahan dan menambah baik pelaksanaan. Ini juga penting untuk dokumentasi dan penambahbaikan program pada masa akan datang. Perkongsian hasil dan cerita kejayaan boleh dilakukan dengan mewujudkan platform seperti pameran, laporan media sosial, atau forum komuniti untuk berkongsi kejayaan dan impak projek bukan sahaja meningkatkan kesedaran awam, malah dapat menarik lebih banyak penyertaan serta menaikkan imej institusi.

## Kesimpulan

Secara keseluruhannya, Program SULAM merupakan satu pendekatan pengajaran dan pembelajaran yang holistik, berimpak tinggi, dan selaras dengan keperluan pembangunan masyarakat masa kini. Ia bukan sahaja memperkukuh hubungan antara universiti dan komuniti, malah menjadi platform berkesan untuk pelajar mengaplikasikan ilmu, membina kemahiran insaniah, dan memahami tanggungjawab sosial mereka. Melalui penglibatan secara langsung dalam menyumbang kepada kesejahteraan masyarakat, pelajar dapat berkembang sebagai individu yang lebih peka, berdaya saing dan bersedia untuk menghadapi cabaran dunia sebenar. Aktiviti-aktiviti yang dirancang dalam program ini merangkumi pelbagai bidang Sains, Teknologi, Kejuruteraan, dan Matematik (STEM). Setiap aktiviti yang dijalankan dapat memberikan peluang kepada pelajar untuk belajar melalui pengalaman praktikal dan eksperimen, yang merupakan pendekatan yang sangat berkesan dalam meningkatkan pemahaman dan minat mereka terhadap bidang STEM. Program ini Berjaya menarik minat pelajar sekolah rendah untuk aktif di dalam pertandingan inovasi dan rekacipta. Manakala pelajar Tingkatan 3 semakin berminat untuk mengambil aliran sains tulen. Pelajar sekolah menengah juga terlibat dalam penyertaan inovasi anjuran peringkat sekolah dan negeri. Pelajar sekolah sebagai wakil komuniti juga mendapat faedah dalam konsep pemindahan ilmu sebegini. Oleh itu, program SULAM wajar diperkasa dan diperluas agar manfaatnya dapat dinikmati secara berterusan oleh semua pihak yang terlibat.

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# PERTANDINGAN *MUAMALAT INTERACTIVE GAME* (MIG) PERINGKAT SEKOLAH MENENGAH 2024

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**Abstrak:** Pertandingan Muamalat Interactive Game (MIG) Peringkat Sekolah Menengah 2024 merupakan sebuah platform interaktif yang memberi peluang kepada para pelajar Fakulti Ekonomi dan Muamalat, Universiti Sains Islam Malaysia (USIM) — khususnya pelajar yang mengambil kursus Pengurusan Harta Islam (MBA2023) — untuk berinteraksi secara langsung dengan komuniti setempat di sekitar kampus Nilai, Negeri Sembilan. Komuniti sasaran terdiri daripada pelajar-pelajar sekolah menengah. Penganjuran pertandingan ini bertujuan untuk meningkatkan kesedaran dan kefahaman masyarakat setempat mengenai pengurusan harta menurut perspektif Islam. Melalui pendekatan yang kreatif dan menyeronokkan seperti MIG, mesej-mesej utama berkaitan pengurusan harta dapat disampaikan dengan lebih berkesan dan mudah difahami, khususnya kepada golongan remaja.

**Kata Kunci:** MIG, pelajar sekolah menengah, kesedaran dan kefahaman masyarakat, pengurusan harta Islam

## Pengenalan

*Service-Learning Malaysia – University for Society* (SULAM) merupakan inisiatif Kementerian Pendidikan Malaysia di bawah Pelan Pembangunan Pendidikan Malaysia 2015-2025 (Pendidikan Tinggi) yang menggabungkan pembelajaran berasaskan kursus dengan aktiviti khidmat masyarakat. Inisiatif ini bertujuan meningkatkan kefahaman pelajar terhadap kandungan kursus, di samping memupuk nilai-nilai kemanusiaan, dan tanggungjawab sivik melalui pengalaman sebenar bersama komuniti (SULAM Playbook, Jabatan Pendidikan Tinggi, 2019). Secara tidak langsung, pelajar dapat menyumbang ilmu pengetahuan, kemahiran, dan kompetensi yang telah mereka pelajari di dalam bilik kuliah bagi sesuatu kursus, untuk membantu menyelesaikan masalah atau isu yang timbul dalam komuniti yang disantuni.

Kursus MBA2023, Pengurusan Harta Islam, merupakan salah satu kursus yang didaftarkan sebagai kursus SULAM di Fakulti Ekonomi dan Muamalat, Universiti Sains Islam Malaysia (USIM). Projek yang dilaksanakan bagi memenuhi matlamat SULAM adalah Pertandingan Muamalat Interactive Game (MIG) Peringkat Sekolah Menengah 2024. Modul MIG dipilih kerana ia sangat berkait rapat dengan kandungan kursus MBA2023, khususnya berkenaan kontrak-kontrak muamalat yang turut diajarkan dalam kursus ini. Projek SULAM melalui Pertandingan MIG Peringkat Sekolah Menengah 2024 ini telah melibatkan penyertaan aktif daripada pelajar-pelajar sekolah menengah, khususnya dari sekolah-sekolah sekitar kampus USIM, Nilai, Negeri Sembilan. Seramai 75 orang pelajar daripada sembilan buah sekolah yang berbeza telah mengambil bahagian dalam pertandingan ini.

## Pengenalan *Muamalat Interactive Game* (MIG)

*Muamalat Interactive Game* (MIG) merupakan sebuah permainan pendidikan yang dibangunkan bagi memperkenalkan konsep muamalat Islam iaitu peraturan dan prinsip urus niaga kewangan berlandaskan syariah kepada Masyarakat umum, khususnya pelajar dan orang awam. Permainan ini bertujuan untuk mendidik masyarakat tentang asas ekonomi Islam dan pengurusan kewangan melalui pendekatan yang interaktif dan menyeronokkan. Terdapat tiga objektif pembelajaran utama yang diketengahkan melalui MIG:

1. Memupuk kesedaran terhadap ekonomi dan aktiviti filantrofi Islam seperti sedeqah, derma, dan wakaf, bagi menanam nilai keprihatinan sosial dalam kalangan pemain,
2. Menambah pengetahuan tentang pengurusan kewangan individu secara Islamik, dimana pemain diberikan rekod kewangan untuk mencatat hutang serta aliran tunai mereka, dan
3. Meningkatkan kefahaman tentang aktiviti Muamalat dan produk kewangan Islam yang terdapat di Malaysia dan di pasaran antarabangsa.

MIG direka dalam bentuk permainan papan (board game) yang menyerupai konsep permainan seperti Saidina dan Monopoly, namun telah dimodifikasi agar mematuhi prinsip Syariah serta mengandungi elemen pendidikan, simulasi kewangan, dan strategi pengurusan harta secara Islam. Konsep Muamalat yang diterapkan dalam MIG melibatkan pelbagai kontrak pengurusan harta Islam yang digunakan secara praktikal (hands-on), antaranya ialah Murabahah, Ijarah, Tawarruq, Rahnu (gadaian emas), dan Musharakah Mutanaqisah. Selain itu, kontrak sokongan seperti Kafalah, Wakalah, Ta'widh, dan Gharamah, serta instrumen kewangan sosial seperti sedeqah, wakaf, dan hibah turut diguna pakai secara aktif dalam permainan.

Pendedahan awal kepada konsep filantropi seperti sedekah, wakaf, dan zakat mampu memupuk kesedaran pelajar tentang impak dan kesan amalan memberi terhadap pengurusan kewangan secara holistik. MIG juga menekankan kepatuhan terhadap prinsip muamalat dalam setiap transaksi antara pihak yang terlibat, selaras dengan kehendak Syariah. Melalui simulasi permainan ini, pelajar berpeluang mengalami sendiri aktiviti seakan dunia sebenar dalam industri kewangan Islam sesuatu yang sukar dicapai melalui kaedah pengajaran konvensional semata-mata. Selain itu, MIG turut mempromosikan penglibatan dalam perlindungan Takaful dan pelaburan halal, sekali gus menyemai kesedaran sosial dan tanggungjawab untuk melakukan transaksi kewangan yang selari dengan prinsip Syariah.

Selain daripada simulasi kontrak kewangan dan pengurusan harta Islam, satu lagi elemen menarik dalam MIG ialah aktiviti perekodan kewangan individu. Dalam aspek pemantauan perbelanjaan dan pengurusan kewangan peribadi, MIG memperkenalkan sistem "cash flow" yang mudah dan mesra pengguna. Ilmu asas ini secara langsung memberi kesan positif kepada pelajar, mendorong mereka untuk sentiasa memantau perbelanjaan serta memastikan perbelanjaan tidak melebihi pendapatan. Ia juga mengajar kepentingan disiplin kewangan sejak usia muda. Permainan MIG turut memperkenalkan secara awal kepada pelajar mengenai kontrak fasiliti pembiayaan Islam yang digunakan untuk tujuan pemilikan asset, seperti rumah atau kenderaan. Dalam kehidupan sebenar, kontrak ini biasanya hanya dilalui apabila seseorang telah mempunyai pendapatan tetap. Namun, melalui simulasi MIG, pelajar dapat merasai sendiri proses membuat Keputusan berkaitan pemilikan asset dan keperluan pembiayaan melalui institusi kewangan Islam.

Pemilihan aset yang bernilai tinggi dalam permainan membuka peluang kepada pelajar untuk memahami rasional di sebalik pembiayaan kewangan melalui bank, dan menyedari bahawa ia adalah sebahagian daripada realiti kehidupan yang tidak dapat dielakkan. Apa yang lebih penting adalah kesedaran tentang pemantauan dan pengurusan kewangan yang bijak dan beretika. MIG juga memperkenalkan simulasi pemantauan dan kawalan hutang melaui "asset management record", di mana pemain diwajibkan merekod dan memantau hutang serta asset yang dimiliki sepanjang permainan. Pendekatan ini mendidik pelajar agar memahami bahawa setiap komitmen kewangan memerlukan kawalan dan disiplin. Melalui simulasi ini, pelajar diberi peluang untuk merasai sendiri peranan sebagai pelanggan dalam sistem kewangan Islam yang bertanggungjawab memastikan setiap transaksi dan Keputusan yang dibuat adalah berdasarkan prinsip Syariah dan pengurusan kewangan yang mampan.

Yang paling utama, melalui MIG, penetapan pemenang ditentukan berdasarkan jumlah harta akhir serta sumbangan kepada aktiviti sosial. Selain itu, kiraan zakat juga diwajibkan sebelum pengiraan harta akhir dibuat untuk menilai kelayakan pemain sebagai pemenang. Meskipun aktiviti ini

163

dilaksanakan dalam bentuk permainan, ia secara asas mencerminkan realiti kehidupan manusia. Dalam dunia sebenar, zakat merupakan kewajipan tahunan yang perlu diselesaikan, manakala pemberian dalam bentuk sedekah, wakaf , dan hibah merupakan antara cara untuk merapatkan jurang ekonomi dalam kalangan Masyarakat. Melalui permainan MIG, para pelajar akan menjalankan simulasi semua elemen ini bukan hanya sebagai aktiviti dalam permainan, tetapi sebagai latihan nilai dan kefahaman praktikal yang diharapkan dapat dihayati dan diamalkan dalam kehidupan sebenar mereka kelak.

Justeru itu, memperkenalkan MIG di peringkat sekolah merupakan langkah yang sangat tepat dan bermanfaat. Selain daripada latihan dan bengkel yang dijalankan, perlaksanaan pertandingan MIG membuka peluang kepada pelajar untuk berinteraksi dan berkenalan dengan rakan-rakan dari sekolah lain yang turut serta, di samping melaksanakan pelbagai simulasi transaksi kewangan dan pengurusan harta secara Islamik.

### Pertandingan MIG Peringkat Sekolah Menengah 2024

Pertandingan MIG ini telah dianjurkan oleh pelajar Tahun 2 daripada program Sarjana Muda Pentadbiran Muamalat dan Sarjana Muda Pemasaran (Perkhidmatan Kewangan), yang melibatkan seramai 150 orang pelajar. Pertandingan ini telah berlangsung pada 11 Mei 2024, bertempat di Dewan Utama, Fakulti Pengajian Bahasa Utama, USIM. Penganjuran pertandingan ini telah mendapat sokongan dalam bentuk tajaan kewangan daripada beberapa pihak, iaitu Pusat Wakaf dan Zakat (PWZ) USIM, Majlis Agama Islam Negeri Sembilan (MAINS), dan Pusat Hal Ehwal Pelajar (PHEP) USIM. Poster program adalah seperti yang ditunjukkan dalam Rajah 1 di bawah:



Rajah 1: Poster Pertandingan MIG Peringkat Sekolah Menengah 2024

Sebanyak sembilan buah sekolah yang telah menghantar penyertaan, yang melibatkan 75 orang pelajar. Sekolah-sekolah yang terlibat ialah Sekolah Agama Menengah Bandar Baru Salak Tinggi, Sekolah Menengah Agama Persekutuan Kajang, Sekolah Menengah Kebangsaan Panchor, Sekolah Menengah Kebangsaan Dato' Haji Mohd Redza, Sekolah Menengah Kebangsaan Seri Pagi, Sekolah Menengah Kebangsaan Agama Putrajaya, Sekolah Menengah Islam Seremban, Sekolah Menengah Kebangsaan Taman Semarak, dan Sekolah Menengah Kebangsaan Persekutuan Labu. Sebelum pertandingan ini berlangsung, pelajar-pelajar yang telibat dalam penganjuran pertandingan ini telah ditugaskan untuk mengunjungi sekolah-sekolah terbabit dalam kumpulan kecil bagi memperkenalkan

MIG serta memberi latihan awal kepada peserta terpilih. Langkah ini bertujuan untuk memastikan peserta memperoleh pendedahan asas mengenai MIG dan lebih bersedia menghadapi pertandingan sebenar.

Dalam pertandingan ini, peserta telah dibahagikan kepada 15 kumpulan, dengan setiap kumpulan terdiri daripada lima orang pelajar dari sekolah yang sama. Pertandingan ini telah berlangsung selama dua jam, dan setiap kumpulan dipantau oleh dua orang fasilitator, di mana salah seorang daripada mereka bertindak sebagai pengurus harta, atau dalam istilah MIG dikenali "wealth manager". Terdapat dua kategori yang dipertandingkan, iaitu kategori sekolah dan kategori individu. Johan bagi kategori sekolah disandang oleh Sekolah Menengah Kebangsaan Persekutuan Labu, Naib Johan disandang oleh Sekolah Menengah Kebangsaan Panchor, dan Tempat Ketiga disandang oleh Sekolah Menengah Agama Persekutuan Kajang. Manakala bagi kategori individu, Johan dan Tempat Ketiga disandang oleh pelajar Sekolah Menengah Kebangsaan Persekutuan Labu, dan Naib Johan disandang oleh pelajar Sekolah Menengah Kebangsaan Panchor.

Diakhir program, pelajar-pelajar MBA2023 turut melaksanakan kutipan data daripada peserta dan guru pengiring bagi menilai impak dan keberkesanan program yang dilaksanakan. Kaedah kutipan data berbeza mengikut kumpulan kerja kursus masing-masing, antaranya melalui borang soal selidik dan temubual.

## Kelebihan Pertandingan MIG Peringkat Sekolah Menengah 2024

Terdapat pelbagai kelebihan dan manfaat yang diperoleh daripada pelaksanaan program ini. Pertama, program ini dapat membina hubungan erat antara pelajar universiti dan pelajar sekolah menengah yang terlibat melalui pendekatan berasaskan pendidikan dan khidmat Masyarakat. Secara tidak langsung, ia turut memperkukuhkan jalinan hubungan antara USIM dan sekolah-sekolah yang terlibat. Kedua, program ini memberikan peluang kepada pelajar USIM untuk mengaplikasikan ilmu pengurusan harta Islam secara praktikal melalui permainan interaktif, iaitu MIG. Penglibatan ini secara langsung menghubungkan teori dan amali dalam bentuk yang menarik dan mudah difahami.

Ketiga, pelaksanaan program ini turut melatih pelajar universiti dalam aspek komunikasi, kepimpinan, kerjasama berpasukan, pengurusan masa, dan penyelesaian masalah, yang merupakan Kemahiran insaniah penting dalam dunia kerjaya masa hadapan. Selain itu, dengan adanya sesi latihan awal MIG yang diberikan kepada para pelajar sekolah, mereka mampu memperoleh asas pengetahuan tentang muamalat dan lebih bersedia dari segi mental dan teknikal untuk menyertai pertandingan. sepanjang pertandingan, pelajar sekolah juga berpeluang menonjolkan potensi dan keyakinan diri dalam menguruskan harta yang diperoleh secara simulasi.

Tambahan pula, memandangkan projek SULAM ini dilaksanakan dalam bentuk permainan interaktif, ia menjadikan pembelajaran ilmu muamalat dan pengurusan harta Islam lebih menarik dan mudah difahami berbanding pendekatan konvensional yang bersifat teori semata-mata. Program ini juga mencerminkan skala pelaksanaan yang luas dan impak yang menyeluruh, dengan penglibatan 150 orang pelajar universiti dan 75 orang pelajar sekolah daripada sembilan buah sekolah yang berbeza. Sokongan dalam bentuk tajaan kewangan daripada PWZ USIM, MAINS, dan PHEP USIM turut menunjukkan tahap keyakinan dan sokongan terhadap keberkesanan program ini. Oleh itu, program ini secara keseluruhannya berjaya menunjukkan keberkesanan pelaksanaan SULAM dalam memberikan pengalaman pembelajaran berasaskan perkhidmatan yang sebenar, bermakna, dan memberi impak kepada pelajar serta komuniti.

## Penilaian dan Cadangan Penambahbaikan

Berdasarkan maklum balas yang diterima daripada guru pengiring yang hadir pada hari pertandingan, rata-rata menyatakan bahawa pertandingan MIG ini sangat bermanfaat kepada para pelajar mereka kerana ia memberikan pendedahan dan kefahaman berkaitan kontrak-kontrak muamalat yang wujud dan boleh diaplikasikan dalam pengurusan harta Islam. Walaupun permainan ini dijalankan dalam bentuk simulasi dan bukan dalam konteks realiti yang sebenar, namun ia tetap menyediakan pengalaman praktikal dalam pengurusan harta Islam kepada para pelajar sekolah. Pendedahan awal ini dianggap penting dalam membantu pelajar dalam memahami prinsip asas muamalat serti kepentingannya dalam kehidupan seharian.

Berdasarkan data soal selidik yang dijalankan dalam kalangan peserta pertandinga seramai 25 orang, hasil dapatan menunjukkan bahawa 92% pelajar (23 orang) mencapai tahap kefahaman yang tinggi (skor 4 dan 5) terhadap pelaksanaan MIG. Sebahagian besar pelajar, iaitu 56% (14 orang) memberikan skor tertinggi (5), menunjukkan mereka sangat memahami konsep MIG setelah menyertai program ini. Data tersebut ditunjukkan dalam Rajah 2 di bawah:
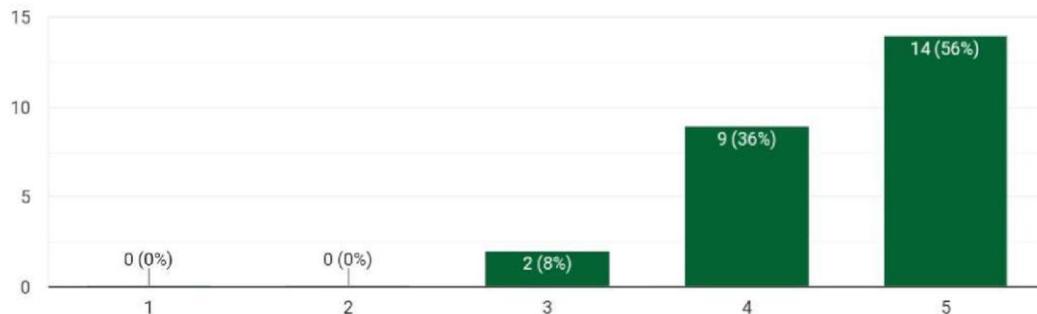


Rajah 2: Kefahaman peserta pertandingan terhadap pertandingan MIG.

Sehubungan dengan itu, sebahagian besar guru turut menyatakan harapan agar pertandingan ini dijadikan program tahunan anjuran USIM, khususnya Fakulti Ekonomi dan Muamalat, bagi memastikan kesinambungan impak dan manfaat kepada golongan pelajar sekolah. Sekiranya berpeluang untuk dianjurkan lagi pada masa akan datang, adalah dicadangkan agar lebih banyak sekolah dari pelbagai daerah atau negeri dapat dijemput untuk menyertai pertandingan ini bagi memperluas jangkauan komuniti, sekaligus meningkatkan impak program dari sudut Pendidikan dan pemerkasaan ilmu pengurusan harta Islam kepada masyarakat.

**Kesimpulan**

Pertandingan MIG berjaya memberikan pendedahan awal dan pengalaman praktikal kepada pelajar sekolah menengah dalam memahami konsep dan kontrak muamalat Islam. Program ini bukan sahaja mengukuhkan hubungan antara USIM dan komuniti sekolah, tetapi turut memberi peluang kepada pelajar universiti mengaplikasikan ilmu secara interaktif. Maklum balas positif daripada guru pengiring menunjukkan potensi pertandingan ini untuk dijadikan program tahunan, dengan cadangan agar lebih banyak sekolah dari pelbagai daerah dilibatkan bagi memperluas impak dan jangkauan pendidikan berkaitan pengurusan harta Islam.

**Rujukan**

SULAM Playbook: Service Learning Malaysia-University for Society. Jabatan Pendidikan Tinggi (JPT), 2019.

# PROGRAM SULAM 2025: INTERNATIONAL ERGOQUIZ@SCHOOL BERTEMAKAN "PROMOTING ERGONOMIC AWARENESS AT SCHOOL" SECARA DALAM TALIAN

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**Abstrak:** Untuk memberi sokongan kepada kesedaran tentang pentingnya prinsip ergonomik di sekolah, adalah menjadi tanggungjawab pihak Universiti Tun Hussein Onn Malaysia (UTHM) dibawah Fakulti Kejuruteraan Mekanikal dan Pembuatan (FKMP) dengan kerjasama Universitas Muslim Indonesia (UMI), Universitas Muhammadiyah Surakarta (UMS), Universitas Putra Indonesia YPTK (UPI YPTK), Universitas AirLangga (UNAIR) dan Universiti Brunei Darussalam (UBD) telah menganjurkan satu program kuiz secara dalam talian iaitu SULAM 2025: International ErgoQUIZ@School yang telah diadakan pada 21 April sehingga 9 Mei 2025 kepada semua pelajar sekolah yang berumur dari 10 tahun hingga 18 tahun di peringkat kebangsaan dan antarabangsa (termasuk Indonesia dan Brunei). Melalui program SULAM 2025: International ErgoQUIZ@School yang bertemakan Promoting Ergonomic Awareness at School adalah bertujuan memberikan pelbagai pengetahuan, kesedaran dan amalan ergonomik kepada pihak sekolah terutamanya semasa dalam sesi pembelajaran di dalam kelas (cara posisi duduk yang betul) dan teknik-teknik mengangkat beg sekolah yang betul dapat membantu untuk melindungi sendi dan mengekalkan postur badan yang betul dan menjadikan badan kurang penat atau sakit serta meningkatkan produktiviti pembelajaran di sekolah serta persekitaran pembelajaran yang kondusif dan berkualiti yang dapat membantu proses pemindahan pembelajaran yang berkesan.

**Kata Kunci:** *International ErgoQUIZ@School, Ergonomic, School*, FKMP, UTHM

## Pengenalan

SULAM adalah singkatan bagi *Service-Learning Malaysia- University for Society*. "SULAM adalah kaedah pengajaran dan pembelajaran (P&P) yang menggabungkan hasil pembelajaran kursus dengan khidmat komuniti di mana nilai kredit dan jam perlaksanaan khidmat komuniti itu dikira dalam jumlah jam pelajar belajar bagi kursus yang berkaitan di institut pengajian tinggi (IPT)". Pelajar akan membuat refleksi ke atas aktiviti dan pengalaman khidmat dan mengaitkan dengan hasil pembelajaran kursus, dimana pelajar akan lebih mendalami kandungan kursus, menghayati disiplin, dan meningkatkan nilai diri dan tanggungjawab sosial dan sivik terutamanya berkaitan dengan Ergonomik@Faktor Kejuruteraan Manusia (Ergonomics@Human Factor Engineering) melalui perkongsian ilmu bersama pelajar sekolah. Secara dasarnya, program SULAMi merupakan salah satu inisiatif kerajaan Malaysia di bawah Kementerian Pengajian Tinggi Malaysia untuk memantapkan kurikulum dengan memperkenalkan Pembelajaran berasaskan khidmat komuniti.

Penggunaan kerusi dan meja yang bersesuaian dengan bentuk fizikal seseorang amat penting bagi mewujudkan keselesaan, malah dapat mengurangkan kemungkinan terdedah kepada risiko ergonomik yang boleh menjejaskan kesihatan. Menurut kajian yang dijalankan, kanak-kanak dan pelajar sekolah terutamanya, seharusnya menggunakan kerusi dan meja yang bersesuaian dengan bentuk

fizikal atau postur badan mereka. Penggunaan kerusi dan meja yang tidak bersesuaian dengan bentuk fizikal badan bagi tempoh jangka yang panjang boleh mengundang sakit Musculoskeletal Disorders (MSDs) iaitu kecederaan yang menjejaskan pergerakan badan atau sistem 'musculoskeletal', yang kebiasaannya akan dirasai apabila meningkat dewasa. Tambahan pula, terdapat kajian yang dijalankan mendapati berat beg yang dibawa oleh kanak-kanak sekolah rendah dan pelajar sekolah di negara ini, adalah lebih 15 peratus daripada berat badan mereka. Beg itu pula ketika di dalam kelas, kebiasaannya diletakkan di bangku atau kerusi menyebabkan ruang untuk duduk pula terhad, yang sekali gus menimbulkan ketidakselesaan kepada pelajar. Namun apa yang lebih penting adalah isu menggalas beg berat di kalangan kanak-kanak dan pelajar sekolah boleh mendatangkan kesan tidak baik pada struktur tubuh khususnya postur. Tidak semestinya tumpuan hanya diberi kepada pelajar-pelajar yang mengidap scoliosis. Ini kerana, pada usia kanak-kanak, tumbesaran sedang aktif berlaku. Beban yang berlebihan berupaya merosakkan tumbesaran tulang dan memberi kesan buruk di kemudian hari. Kanak-kanak dan pelajar sekolah menghadapi risiko jangka panjang dan kerosakan kekal struktur badan jika kerap membawa beban melebihi 10% – 15% dari berat badan mereka. Sindrom ketidakimbangan bahu (shoulder imbalance), membongkok dan masalah kawalan nafas adalah kesan yang boleh berlaku sekiranya kanak-kanak mengalas beg berat setiap hari.

Oleh itu, untuk memberi sokongan kepada kesedaran tentang pentingnya prinsip ergonomik di sekolah, adalah menjadi tanggungjawab pihak Universiti Tun Hussein Onn Malaysia (UTHM) dibawah Fakulti Kejuruteraan Mekanikal dan Pembuatan (FKMP) dengan kerjasama Universitas Muslim Indonesia (UMI), Universitas Muhammadiyah Surakarta (UMS), Universitas Putra Indonesia YPTK (UPI YPTK), Universitas AirLangga (UNAIR) dan Universiti Brunei Darussalam (UBD) telah menganjurkan satu program kuiz secara dalam talian iaitu SULAM 2025: International ErgoQUIZ@School yang telah diadakan pada 21 April sehingga 9 Mei 2025 kepada semua pelajar sekolah yang berumur dari 10 tahun hingga 18 tahun di peringkat kebangsaan dan antarabangsa (termasuk Indonesia dan Brunei).

## Objektif Program

1. Meningkatkan Kesedaran: Memastikan semua pihak di sekolah memahami kepentingan ergonomik dalam sesi pembelajaran di dalam kelas (cara posisi duduk yang betul) dan teknik-teknik mengangkat beg sekolah yang betul.
2. Mengurangkan Kecederaan: Mencegah kecederaan yang berkaitan dengan postur yang tidak betul semasa sesi pembelajaran di dalam kelas dan cara membawa beg sekolah yang tidak betul.
3. Meningkatkan Keselesaan: Membantu pelajar merasa lebih selesa semasa sesi pembelajaran di dalam kelas (cara posisi duduk yang betul) dan teknik-teknik mengangkat beg sekolah yang betul.
4. Pendidikan dan Amalan Ergonomik: Memberikan pengetahuan mengenai prinsip-prinsip ergonomik dan cara menerapkannya dalam sesi pembelajaran di dalam kelas (cara posisi duduk yang betul) dan teknik-teknik mengangkat beg sekolah yang betul.
5. Mewujudkan Persekitaran yang Sihat: Menggalakkan sekolah untuk menyediakan persekitaran yang ergonomik melalui reka bentuk ruang kelas dan penyediaan peralatan yang sesuai.

## Pelaksanaan Program

Untuk pelaksanaan Projek SULAM bagi Semester 2 2024/2025, satu kursus BDD41103 Human Factor Engineering di dalam program Sarjana Muda Kejuruteraan Mekanikal (Kepujian) di bawah Fakulti Kejuruteraan Mekanikal dan Pembuatan (FKMP) telah dipilih sebagai kursus berkredit bagi pelaksanaan program SULAM 2025: International ErgoQUIZ@School. Seramai 25 orang pelajar Tahun 3 dan Tahun 4 Program Sarjana Muda Kejuruteraan Mekanikal (Kepujian) telah terlibat dalam kursus dan perlaksanaan SULAM ini. Program ini berlangsung selama 3 minggu secara dalam talian yang bermula pada 21 April sehingga 9 Mei 2025 kepada semua pelajar sekolah yang berumur dari 10 tahun hingga 18 tahun di peringkat kebangsaan dan antarabangsa (termasuk Indonesia dan Brunei). Program ini mendapat kerjasama dengan beberapa universiti di Indonesia dan Brunei dengan lantikan sebagai jawatankuasa penasihat antarabangsa seperti Universitas Muslim Indonesia (UMI), Universitas Muhammadiyah Surakarta (UMS), Universitas Putra Indonesia YPTK (UPI YPTK), Universitas AirLangga (UNAIR) dan Universiti Brunei Darussalam (UBD). Pembahagian tugas-tugas telah dibuat mengikut program dan aktiviti yang telah dikhususkan bagi setiap kumpulan di dalam program kuiz secara dalam talian ini. Penyelaras kursus akan berperanan sebagai penasihat dan penyelaras program dan pelajar kursus ini berperanan sebagai    jawatankuasa untuk merekabentuk laman sesawang, kuiz secara dalam talian berkaitan ergonomik serta menghasilkan sijil penyertaan secara digital yang
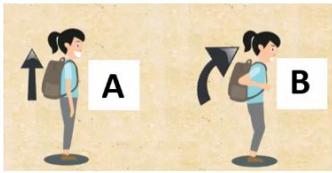
dibangunakan oleh pelajar sendiri kepada peserta kuiz. Senarai aktiviti adalah seperti di dalam Jadual 1.

Jadual 1: Senarai Aktiviti

| Aktiviti | Perincian |
|---|---|
| Aktiviti *ErgoQUIZ@School Program* (secara atas talian yang bermula pada 21 April 2025 dan berakhir pada 9 Mei 2025) | Aktiviti ErgoQUIZ@School Program adalah aktiviti kuiz secara dalam talian di mana terbuka kepada semua pelajar di peringkat kebangsaan dan antarabangsa (termasuk Indonesia dan Brunei) yang berumur dari 10 tahun hingga 18 tahun. 3 langkah mudah untuk menyertai aktiviti ErgoQUIZ@School seperti berikut:- <br><br> · Langkah 1: Isi borang pendaftaran/penyertaan dengan lengkap (contoh: nama, umur, nama sekolah, kod sekolah, negeri) <br><br> · Langkah 2: Tonton dan fahami rakaman video yang diberikan. Selesai menonton rakaman video, jawab 10 soalan kuiz yang diberikan. <br><br> · Langkah 3: Tekan butang Hantar dan dapatkan sijil penyertaan (secara digital; e-certificate). <br><br> Sebagai tambahan, peserta kuiz wajib mendapat jawapan yang betul iaitu 6 daripada 10 soalan kuiz yang diberikan (60% markah lulus), di mana setiap soalan kuiz membawa markah 10% dan jumlah keseluruhan markah adalah 100%) bagi membolehkan para pelajar mendapat sijil (e-certificate). |

Dengan matlamat ini, program SULAM 2025: International ErgoQUIZ@School Program: Promoting Ergonomic Awareness at School diharapkan dapat mengamalkan gaya hidup yang lebih sihat dan mengurangkan risiko kecederaan di sekolah dengan kesejahteraan manusia untuk meningkatkan kualiti hidup secara keseluruhan. Gambarajah 1 menunjukan contoh aktiviti-aktiviti yang dijalankan sepanjang program Program SULAM 2025: International ErgoQUIZ@School.

Rajah 1: Contoh aktiviti-aktiviti yang dijalankan sepanjang program Program SULAM 2025: International ErgoQUIZ@School.

## Impak Program

**Kepada pelajar/peserta:**

1. Dapat meningkatkan pembelajaran pelajar melalui integrasi teori dengan amalan dunia sebenar.
2. Dapat memenuhi keperluan komuniti melalui kesukarelawan menggunakan "kepakaran" pelajar
3. Ia juga dapat memberikan peluang kepada pelajar untuk berinteraksi dengan institusi dan penduduk setempat.

**Kepada universiti / komuniti :**

1. Mengeratkan kerjasama antara universiti, komuniti setempat dan industri.
2. Memberi peluang kepada pelajar untuk berinteraksi dengan institusi dan penduduk setempat dan memberikan impak yang baik kepada universiti atau komuniti tersebut.

**Kepada kelestarian:**

1. Aktiviti berkaitan aplikasi prinsip ergonomik di sekolah (bagi meningkatkan keprihatinan tentang keselamatan dan kesihatan).
2. Melalui aktiviti yang dijalankan ini seperti kuiz secara dalam talian ini, peserta akan dapat tahu lebih mendalam tentang aplikasi prinsip ergonomik secara lebih terperinci.

## Kesimpulan

Oleh itu, untuk memberi sokongan kepada kesedaran tentang pentingnya prinsip ergonomik di sekolah, adalah menjadi tanggungjawab pihak Universiti Tun Hussein Onn Malaysia (UTHM) dibawah Fakulti Kejuruteraan Mekanikal dan Pembuatan (FKMP) dengan kerjasama Universitas Muslim Indonesia (UMI), Universitas Muhammadiyah Surakarta (UMS), Universitas Putra Indonesia YPTK (UPI YPTK), Universitas AirLangga (UNAIR) dan Universiti Brunei Darussalam (UBD) telah menganjurkan satu program kuiz secara dalam talian iaitu SULAM 2025: International ErgoQUIZ@School yang telah diadakan pada 21 April sehingga 9 Mei 2025 kepada semua pelajar sekolah yang berumur dari 10 tahun hingga 18 tahun di peringkat kebangsaan dan antarabangsa (termasuk Indonesia dan Brunei). Melalui program SULAM 2025: International ErgoQUIZ@School yang bertemakan Promoting Ergonomic Awareness at School adalah bertujuan memberikan pelbagai pengetahuan, kesedaran dan amalan ergonomik kepada pihak sekolah terutamanya semasa dalam sesi pembelajaran di dalam kelas (cara posisi duduk yang betul) dan teknik-teknik mengangkat beg sekolah yang betul dapat membantu untuk melindungi sendi dan mengekalkan postur badan yang betul dan menjadikan badan kurang penat atau sakit serta meningkatkan produktiviti pembelajaran di sekolah serta persekitaran pembelajaran yang kondusif dan berkualiti yang dapat membantu proses pemindahan pembelajaran yang berkesan.

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# SERVIS PENGURUSAN SAMPAH LUAR BANDAR DI BACHOK KELANTAN

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**Abstrak:** Konsep kertas cadangan projek ini bertujuan untuk membantu golongan pekerja kontrak pembersihan di jabatan-jabatan kerajaan di sekitar Bachok sebagai projek rintis untuk mendapatkan duit tambahan selaku pekerja pengangkut sampah domestik di kawasan kawasan yang tidak dilalui oleh lori sampah di Kelantan. Secara umumnya, masalah pengurusan sampah merupakan masalah yang tidak pernah selesai di Kelantan. Pemungutan sampah berjadual tidak diuruskan di kawasan luar bandar menyebabkan ada penduduk yang membuang sampah di mana-mana sahaja termasuk sungai. Majlis daerah yang hanya menyediakan tong-tong sampah di jalan utama negeri menyebabkan penghuni kediaman terpaksa membawa sampah mereka di dalam kereta dan membuangnya di tempat sampah yang jauh dari rumah. Hal ini menyebabkan ketidak selesaan di kalangan penghuni dan ada yang mengambil keputusan dengan membakar atau membuang di kawasan umum yang tidak sepatutnya. Hal ini lebih memburukkan lagi apabila sampah-sampah dibakar di kawsan terbuka pada musim kemarau yang menyebabkan pembakaran hutan bakau yang acapkali terjadi saban tahun. Kebanyakan tempat / perumahan tanah lot persendidiran juga tidak mempunyai jalan besar dan tidak dimasuki lori sampah dan ini mengakibatkan sampah domestik tidak dipungut. Malah, di kawasan perumahan yang melebihi 200 unit di taman perumahan besar juga tidak mempunyai lori sampah yang mengangkut sampah dari rumah ke rumah seperti di bandar. Oleh itu, konsep ini menyasarkan idea agar kerja-kerja pemungutuan sampah ini dapat dilakukan oleh pekerja kontrak kebersihan atau penduduk setempat untuk menambah hasil pendapatan mereka yang rata-ratanya merupakan golongan B40.

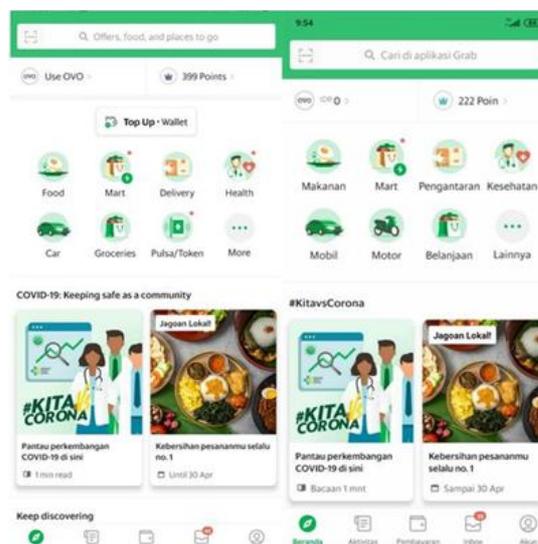**Kata Kunci:** B40, projek komuniti, pengurusan sampah, SULAM

## Pengenalan

Projek komuniti ini dicadangkan untuk menangani isu pengurusan sisa pepejal yang semakin meruncing di kawasan luar bandar, khususnya di sekitar Bachok, Kelantan. Projek ini juga bertujuan untuk membantu golongan B40, terutamanya pekerja kontrak kebersihan atau penduduk setempat, dengan membuka peluang menjana pendapatan tambahan melalui perkhidmatan pemungutan sampah domestik di kawasan yang tidak diliputi oleh sistem kutipan sampah sedia ada. Secara umum, masalah pengurusan sisa di Kelantan masih belum mencapai tahap yang memuaskan. Di kawasan luar bandar, ketiadaan kutipan sampah secara berjadual menyebabkan penduduk tidak mempunyai pilihan selain membuang sampah secara sembarangan termasuk ke dalam sungai atau kawasan lapang. Tong sampah yang disediakan oleh pihak majlis daerah pula hanya terletak di sepanjang jalan utama, memaksa penduduk membawa sampah menaiki kenderaan untuk dibuang di lokasi yang jauh dari kediaman mereka. Keadaan ini bukan sahaja menyusahkan, malah mendorong sebahagian penduduk untuk membakar sampah secara terbuka yang menjadi punca kepada pencemaran udara, serta kebakaran hutan dan hutan bakau, khususnya ketika musim kemarau.

Lebih membimbangkan, terdapat banyak kawasan perumahan jenis tanah lot persendirian dan taman perumahan (melebihi 200 unit rumah) yang tidak mempunyai akses jalan besar dan tidak

dimasuki oleh lori sampah. Ini menyebabkan pengurusan sisa domestik menjadi sangat tidak sistematik dan membebankan penduduk. Melalui cadangan konsep projek rintis ini, pekerja kontrak kebersihan atau penduduk sekitar akan dilatih dan diberi peluang untuk menjalankan tugas pemungutan sampah di masa lapang menggunakan kenderaan kecil atau motosikal roda tiga yang sesuai untuk laluan sempit. Kaedah ini bukan sahaja memberi peluang pekerjaan sambilan kepada golongan B40, tetapi turut menyumbang kepada penyelesaian mampan bagi isu pengurusan sisa di kawasan Bachok.

Bagi pihak UMK, para penyelidik atau pensyarah pula akan bertindak sebagai pereka yang membangun sistem atau aplikasi untuk pengguna kediaman untuk memesan perkhidmatan pemungutan sampah daripada pekerja pemungut sampah yang terlibat dengan cadangan projek ini. Selain itu juga, penyelidik akan bertindak sebagai pereka untuk membangunkan prototaip roda 3 yang egronomik dan sesuai untuk mengangkut sampah domestik, dengan bakul sangkutan yang boleh dicabut apabila tidak digunakan. Selain itu juga, vest khas untuk pekerja pembersihan juga akan mempunyai ciri ciri keselamatan seperti reflector pada vest dan topi keledar untuk menjamin keselamatan mereka jika bekerja pada waktu malam.



Rajah 1: Contoh Apps yang boleh dibangun untuk memesan servis mengangkut sampah di rumah

(Sumber: Kompas.com)



Rajah 2: Motorsikal roda tiga untuk mengangkut sampah

(Sumber: Majlis Daerah Pasir Putih)

### Kepentingan projek kepada masyarakat setempat

Projek komuniti ini dicadangkan untuk menangani isu pengurusan sisa pepejal yang semakin meruncing di kawasan luar bandar, khususnya di sekitar Bachok, Kelantan. Projek ini turut mengambil pendekatan berteraskan konsep *Service-Learning Malaysia – University for Society* (SULAM), yang menggabungkan elemen perkhidmatan kepada komuniti dengan penglibatan aktif tenaga akademik universiti dalam menyelesaikan isu setempat. Melalui pendekatan SULAM, projek ini bukan sahaja memberi peluang kepada tenaga pakar univiersiti untuk terlibat secara langsung dalam usaha membangunkan komuniti, malah memperkukuh nilai tanggungjawab sosial, kemahiran insaniah, dan kepekaan terhadap isu alam sekitar. Universiti berperanan sebagai pemangkin perubahan sosial, bukan sekadar institusi akademik, tetapi juga rakan strategik dalam mencipta penyelesaian lestari untuk komuniti luar bandar.

### Manfaat kepada Komuniti dan Golongan B40

Projek rintis ini dapat membantu golongan berikut;

1. Pekerja kontrak atau penduduk setempat untuk menambah pendapatan sampingan
2. Membantu penduduk setempat untuk membuang sampah dengan lebih mudah
3. Membantu kerajaan tempatan atau majlis daerah untuk menguruskan sampah dengan lebih efisyen

Projek ini juga dapat merealisasikan antara Nilai Teras Malaysia MADANI seperti berikut:

1. **Teras 1**: Kemampanan; membantu menjana pendapatan tambahan untuk golongan B40 yang ditekan oleh masalah kekurangan pendapatan agar dapat menjana ekonomi tambahan
2. **Teras 2**: Kesejahteraan; membantu masyarakat menjalani kehidupan yang lebih sihat dan sistematik dalam mengurus sisa sampah domestik.
3. **Teras 4**: Daya Cipta; menghasilkan sebuah sistem pengurusan sampah yang lebih efektif di luar bandar dan sekiranya berjaya, projek ini dapat diperluaskan di jajahan lain. Selain itu juga, penghasilan roda 3 jenis snagkutan yang khusus untuk mengangkat sampah dapat memberi menafaat sewaan atau sewa beli kepada pengusaha kedai motorsikal juga.
4. **Teras 6**: Ihsan: diharapkan agar projek ini dapat meningkatkan pendapatan golongan berpendapatan rendah di sektor pembersihan kontrak yang dibayar mengikut jam atau hari.

### Manfaat dan Impak Jangka Masa Panjang

Projek ini berpotensi memberi kesan jangka panjang yang signifikan kepada komuniti setempat, alam sekitar, dan institusi pengajian tinggi. Antara lain, ia bermanafaat untuk hal-hal berikut:

1. **Kesan kepada Komuniti Setempat**
   - Peningkatan kualiti hidup: Dengan adanya sistem kutipan sampah alternatif yang lebih tersusun, ia berguna untuk penduduk kawasan kampung yang tidak mempunyai akses kepada lori sampah kerana jalan yang sempit. Ini juga dapat mengurangkan risiko penyakit bawaan sampah seperti kencing tikus, taun dan masalah pencemaran bau.
   - Peluang penjanaan pendapatan: Penduduk khususnya pekerja kontrak kebersihan atau penduduk sekitar daripada golongan B40 berpeluang menambah pendapatan secara tetap melalui pekerjaan sampingan yang bermaruah, selaras dengan agenda pengupayaan ekonomi komuniti luar bandar.
   - Peningkatan kesedaran sivik: Melalui aktiviti advokasi dan kolaborasi bersama universiti, penduduk akan lebih peka tentang tanggungjawab dalam pengurusan sisa sampah secara beretika dan lestari.

2. **Kesan kepada Alam Sekitar**
   - Pengurangan pencemaran: Pengumpulan sampah secara sistematik mengurangkan amalan pembuangan sampah haram dan pembakaran terbuka, sekali gus memelihara kualiti udara dan kebersihan kawasan semula jadi seperti sungai dan hutan bakau.
   - Pencegahan bencana alam: Pembakaran terbuka yang sering mencetuskan kebakaran hutan atau kawasan belukar pada musim kemarau dapat diminimumkan melalui pengurusan sisa yang lebih efisien.

- Peningkatan kelestarian: Projek ini boleh diperluas dengan elemen pengasingan sisa, kitar semula dan kompos, ke arah gaya hidup komuniti yang lebih mesra alam.

3. **Sumbangan daripada Warga Institusi Pengajian Tinggi dan Agensi Kerajaan Tempatan**
   - Pengukuhan peranan universiti dalam komuniti: Universiti bukan sahaja sebagai pusat ilmu, tetapi juga sebagai agen perubahan sosial dan persekitaran melalui pendekatan SULAM.
   - Pemantapan inovasi: Pensyarah dapat memberi perkhidmatan secara terus kepada Masyarakat dalam menangani isu sebenar masyarakat melalui pengalaman sebenar di lapangan.
   - Jalinan kerjasama rentas sektor: cadngan konsep ini membuka ruang kepada kolaborasi berterusan antara universiti, pihak berkuasa tempatan, agensi kerajaan, NGO dan sektor industri dalam menyelesaikan masalah setempat secara kolektif.

## Potensi Projek

i. **Replikasi ke kawasan lain**: Sekiranya projek ini berjaya di Bachok, ia berpotensi menjadi model rujukan untuk kawasan luar bandar lain di Kelantan dan negeri lain yang mengalami cabaran pengurusan sisa sampah yang sama.

ii. **Pemerkasaan ekonomi sosial**: Projek ini boleh berkembang kepada bentuk koperasi komuniti atau perniagaan sosial (social enterprise) dalam jangka panjang, sekaligus memberi manfaat ekonomi yang lebih menyeluruh kepada masyarakat.

## Cadangan Pengembangan dan Pengkomersialan Projek

1. **Penubuhan Koperasi atau Perusahaan Sosial Komuniti**
   Projek ini boleh dijadikan asas kepada penubuhan koperasi komuniti atau perniagaan sosial *(social enterprise)* yang menguruskan perkhidmatan kutipan dan pengurusan sisa pepejal di kawasan luar bandar secara berstruktur. Koperasi ini boleh dikendalikan oleh golongan B40 dengan sokongan daripada universiti dan agensi berkaitan.

2. **Pembangunan Aplikasi Pintar Pengurusan Sisa**
   Sebagai langkah ke arah digitalisasi dan pengkomersialan, projek ini boleh diperkembangkan dengan membangunkan aplikasi mudah alih (mobile app) atau sistem tempahan digital bagi penduduk luar bandar untuk menjadualkan kutipan sampah. Universiti boleh berperanan dalam pembangunan sistem ini melalui penyelidikan dan inovasi pelajar.

3. **Model Francais Sosial**
   Dengan dokumentasi dan SOP yang lengkap, model ini boleh diperluaskan ke daerah atau negeri lain melalui pendekatan francais sosial – di mana komuniti lain boleh mencontohi dan mengadaptasi sistem ini dengan bimbingan daripada pasukan asal projek. Ini akan mewujudkan peluang pekerjaan baharu dan mempercepatkan usaha melestarikan pengurusan sisa di seluruh negara.

4. **Pusat Komuniti Kitar Semula dan Kompos**
   Sebagai tambahan kepada kutipan sampah, projek ini boleh dikembangkan menjadi pusat pemprosesan sisa seperti tapak kompos sisa organik dan pusat pengumpulan bahan kitar semula. Produk seperti baja kompos boleh dijual kepada pekebun kecil dan penduduk kampung sebagai satu bentuk hasil tambahan.

5. **Penglibatan Industri dan Tanggungjawab Sosial Korporat (CSR)**
   Projek ini boleh menarik minat syarikat swasta untuk terlibat melalui program CSR – khususnya syarikat yang berkait dengan alam sekitar, teknologi hijau atau pembangunan luar bandar. Penglibatan ini boleh menjamin kelangsungan dana dan kepakaran teknikal dalam skala yang lebih besar.

6. **Sokongan dan Dana dari Agensi Kerajaan / Antarabangsa**
   Setelah projek ini menunjukkan kejayaan awal, ia boleh dipromosikan untuk mendapatkan dana lanjutan dari agensi seperti Kementerian Kemajuan Desa dan Wilayah, Kementerian Pembangunan Kerajaan Tempatan atau Kementerian Ekonomi, Kementerian Sains Teknologi dan Inovasi bagi memperluas skop dan keberkesanan inisiatif ini ke peringkat nasional atau serantau.

## Kesimpulan

Secara keseluruhannya, projek perintis Servis Pengurusan Sampah Luar Bandar di Bachok, Kelantan ini bukan sahaja menjawab keperluan mendesak dalam aspek pengurusan sisa pepejal di kawasan luar bandar, malah turut membawa pendekatan holistik yang melibatkan kerjasama erat antara komuniti, universiti dan pihak berkuasa tempatan. Melalui konsep *Service-Learning Malaysia – University for Society* (SULAM), projek ini memperkukuh peranan universiti sebagai pemangkin pembangunan masyarakat dan pemeliharaan alam sekitar secara lestari. Di samping menawarkan penyelesaian alternatif yang praktikal terhadap isu kutipan sampah di kawasan yang tidak diakses oleh lori sampah, projek ini juga membuka ruang penjanaan pendapatan tambahan kepada golongan B40 secara sistematik dan beretika. Pendekatan ini mampu meningkatkan kesedaran sivik, mengurangkan pencemaran, dan menjana gaya hidup lebih mesra alam dalam kalangan masyarakat luar bandar.

Dengan perancangan yang teliti dan sokongan berterusan daripada semua pihak, projek ini mempunyai potensi besar untuk diperluas, dikomersialkan dan dijadikan model rujukan kepada kawasan lain di dalam dan luar negeri Kelantan. Ia juga menjadi contoh terbaik bagaimana elemen pendidikan, komuniti dan kelestarian alam sekitar boleh digabungkan dalam satu inisiatif yang memberi impak sebenar kepada masyarakat.

## Penghargaan

## Rujukan

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**APPENDICES**

**LIST OF REVIEWERS FOR e-PROCEEDING SULAM 2025**

1. Assoc. Prof. Dr. Noorshella binti Che Nawi
2. Dr. Noor Janatun Naim binti Jemali
3. Dr. Nazahatul Anis binti Amaludin
4. Dr. Norsuriani binti Samsudin
5. Dr. Shah Iskandar Fahmie bin Ramlee
6. Dr. Hasannuddin bin Hassan
7. Dr. Ruzanifah binti Kosnin
8. Nurul Azwa Mohamed binti Khadri
9. Abdullah bin Muhamed Yusoff
10. Kasmira Gupta A/P Baldev Raj
11. Lee Wan Zhen
12. ChM. Muhammad 'Azim bin Jamaluddin

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*Special thanks and appreciation to:*



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