

Bridging Academia and Society: Institutionalizing Service-Learning Malaysia (SULAM) Within Malaysian Higher Education Frameworks

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ABSTRACT

A transformative pedagogy called Service-Learning Malaysia (SULAM) aims to combine academic learning with significant community involvement. SULAM, which is part of Malaysia's higher education reform agenda, seeks to generate graduates who are civically active, socially conscious, and academically proficient. The institutionalization of SULAM inside Malaysian higher education settings is examined in this research, with an emphasis on how it serves to bridge the gap between academics and society. The study examines how SULAM has been applied across universities, how it aligns with curricular objectives, and how it contributes to graduate outcomes and community development through the use of policy reviews, case analyses, and contemporary studies. SULAM strengthens university-community ties while fostering critical thinking, empathy, and problem-solving skills in students, according to findings. However, obstacles including inconsistent application, scarce resources, and varying faculty preparedness prevent its complete integration. The study emphasizes the necessity of regular evaluation procedures, educator training, and more robust policy support. Malaysian universities can be positioned as proactive contributors to societal issues and the advancement of sustainable national development by institutionalizing SULAM.

Keywords: Service-Learning Malaysia (SULAM), Higher Education Reform, Community Engagement, Institutionalization of Pedagogy, Sustainable Development

INTRODUCTION

Service-Learning Malaysia-University for Society (SULAM) is an educational approach introduced by the Ministry of Higher Education Malaysia with the aim to integrate community service with academic learning, focusing on critical, reflective thinking, and personal and civic responsibility. This initiative provides significant benefits to students, universities, and the broader community, fostering a symbiotic relationship that enhances education and societal development (Ministry of Higher Education Malaysia, 2019). SULAM allows students to apply theoretical knowledge gained in the classroom to real-world scenarios (Naufal et al., 2024). This experiential learning helps reinforce academic concepts and improves understanding. For instance, engineering students may work on community projects that require designing and implementing sustainable solutions, enhancing their practical skills and technical knowledge. Next, participation in SULAM activities helps students develop essential soft skills such as communication, teamwork, problem-solving, and leadership. These skills are crucial for their future careers and personal development, making them well-rounded individuals ready to tackle diverse challenges (Johan et al., 2022). Besides, SULAM encourages students to engage with their communities, fostering a sense of civic duty and social responsibility (Yusof et al., 2020). Students become more aware of societal issues and are motivated to contribute positively, developing a lifelong commitment to community service.

SULAM also provides huge benefits to the universities. Integrating service learning into university curricula enriches academic programs, making them more dynamic and relevant. Universities can offer unique, hands-on learning experiences that attract prospective students and improve overall educational quality (Johan et al., 2022). Furthermore, SULAM initiatives strengthen the relationship between universities and local communities, creating opportunities for collaboration and mutual support. Universities can leverage

community partnerships for research, development projects, and practical learning opportunities, benefiting both students and community members (Sathorar and Geduld, 2021). Service learning promotes a culture of engagement and social responsibility within the university community. Faculty, staff, and students are encouraged to collaborate on projects that address community needs, fostering an inclusive and supportive academic environment.

Second, from the society's perspective, the SULAM project can have a huge impact on the target participants. SULAM projects are designed to address specific needs within communities, such as education, health, environmental sustainability, and social welfare (Naufal et al., 2024). By providing valuable services and resources, these initiatives help improve the quality of life for community members. Engaging with universities through SULAM empowers communities by providing access to expertise, knowledge, and innovative solutions. Community members gain new skills, resources, and support, enabling them to tackle challenges and achieve their goals more effectively (Mokthsim, 2023). SULAM fosters social change by addressing systemic issues and promoting sustainable development. Collaborative efforts between universities and communities can lead to significant improvements in areas such as education, healthcare, and environmental conservation.

Service Learning in Malaysian Higher Education

Service learning has long been used as an educational strategy in Malaysia. In 1977, USM launched a pilot project called the Rural Joint Service Plan, which marked the beginning of service learning in Malaysia (Mamat et al., 2019). Universiti Kebangsaan Malaysia (UKM) has copied the service-learning program by implementing a Service-Learning Soft Skills Course (Kursus Kemahiran Insaniah). Communities and external stakeholders, such as local communities, citizens' organizations, and non-governmental organizations (NGOs), are often involved in such projects. Environmental topics are incorporated into service-learning programs at Malaysian universities such as University Malaya (UM) and Universiti Kebangsaan Malaysia (UKM). Furthermore, service-learning programs have been extensively implemented at Universiti Teknologi Malaysia (UTM) since 2009.

As a way to foster students' civic participation and practical problem-solving skills, service learning is gaining popularity in Malaysian higher education. By combining academic learning with useful community service, it allows students to apply theoretical knowledge to real-world situations (Wahab et al., 2019). Environmental service-learning programs sometimes incorporate community recycling workshops, river cleanups, tree plantings, and climate change awareness campaigns. Service learning has become a popular teaching and learning approach in higher education (Salam et al., 2019). In Malaysia, higher education institutions host numerous service-learning events. It covers volunteer work, charitable endeavors, and community involvement. These events are planned by HEIs, and service-learning is carried out in accordance with each HEI's structure, knowledge, and practices.

A few examples of Service Learning are building mini gardens, cooking classes, charity sales, and cleaning the local area, which are based on Service-Learning frameworks by each HEI. In addition to raising awareness of environmental issues, these programs support the Sustainable Development Goals (SDGs) of the UN, especially SDGs 13 (Climate Action) and 15 (Life on Land) (Mohamad et al., 2021). Malaysian academics and students engage together on cross-border environmental projects with their counterparts around Southeast Asia through regional collaborations including ASEAN University Network (AUN) programs. A sense of shared environmental responsibility and regional identity are fostered by such interaction.

Likewise, the ministry of higher education also has its own definition for the SL. According to the Malaysian Ministry of Education (2015), they define SL as an experiential learning process that enquires learners to acquire what they have actually learned to fulfill the demand of the communities' class in a real-world context by taking diverse actions. Throughout the years, the Minister of Education of Malaysia officially launched Service-Learning Malaysia (SULAM) in 2019 with the concept of "University for Society" by sustaining the community's rural livelihoods in parallel with the university and other organizations. The SULAM secretariat was founded by Malaysia's Department of Higher Education and public universities, which led to a growth of SL activities throughout the country (Amran & Che Daud, 2022).

Since the emergence of Covid-19 and the proliferation of open learning courses in Malaysia, most institutions have offered and actively developed various forms of online learning (Kamal et al., 2020; Salleh et al., 2020; Razami & Ibrahim, 2021). Based on the study from Yusuf (2020), the findings were uncovered by claiming that online platforms continue to struggle with a low achievement rate since students rarely engage in real communication with one another while learning. As a result, local universities' educators have been using online platforms for hybrid and integrated teaching with smaller class sizes to increase student engagement (Kalsom Masrom et al., 2019; Low et al., 2021; Sharif et al., 2021).

E-sulam's components include the Instructional component, the Service component, or both, which are done online. The partners for online community service initiatives may be local, national, or even international. Depending on the intended learning results of the SULAM course, the course may be offered entirely online or partially on-site and partially online. Structured reflection and conversation using asynchronous online blogs or text conversations and synchronous audio or video conferencing. Community members can be reached through the Internet or in-person (Department of Higher Education Malaysia, 2019). Through analyzing the practices of ESL in various countries, the similarity that we can obtain is that ESL brings a positive outcome to educators, learners, and the community. In short, according to research from western countries, Asia countries, and Malaysia, researchers conclude that students who participated in SL experience are able to achieve course learning outcomes it is relevant to the course they are currently enrolled in and able to help them in meeting course goals.

Service Learning in International Perspective

From the worldwide perspective, Corporation for National and Community Service (2008) reported the National and Community Service Act of 1990 established Serve America, currently known as Learn and Serve America, formed in order to educate and promote SL in Kindergarten through 12th grade (K-12), higher education, and nonprofit organizations across the United States (US). In addition, SL was officially recognized as a strategy for achieving the goals of government educational funding in the 1994 reauthorization of the Elementary and Secondary Education Act. Despite the fact that SL chiefly origin from western countries, it is still frequently implemented as a pedagogy in Asia's community and education fields, particularly following the academic conference "Service-Learning in Asia by creating networks and curriculum in higher education" was conducted at the International Christian University in Japan in 2002, resulting in a link between several Asian Higher Education institutions.

The concept of SL has matured to some extent in Asia and has the potential to play a significant role in higher education institutions in guiding and involving youngsters to acquire the skills and knowledge needed to make socially sensible choices at every stage of their development as future leaders of society (Xing & Ma, 2010). The study by Chan et al. (2009) declared that a growing number of students at Asia's top universities and colleges had prompted the establishment of SL centers or courses throughout the year. For instance, Lingnan University was the pioneer in establishing a campus-wide Office of Service-Learning (OSL) by aligning with its motto, "Education for Service," which is reflected in OSL's commitment to a student-centered, holistic approach to education.

From 2006-2009, more than a thousand Lingnan students from fields as diverse as the social sciences, business, and arts took part in one of Lingnan's three central SL programs: the Lingnan Community Care Program (LCCP), Lingnan Service-Learning Evaluation Program (LSLEP) or the Lingnan Healthcare Program (LHCP). To give yet another illustration by Kam Ming et al. (2003) the Youth Expedition Project, organized by the Singapore International Foundation, sent nearly 12,000 students on SL missions around India, Southeast Asia and China for a five-year period (2000-2005). Meanwhile, the community-based instruction program of Hong Kong Baptist University has collaborated with over a hundred local services organizations to carry out over a thousand SL initiatives in Hong Kong and beyond (Powers, 2010). Additionally, 86 out of 146 higher education institutions in Taiwan have made SL an integrated aspect of their curriculum (Yen & Yang, 2010). As a consequence, it is inevitable that SL in Asia has matured, and its place in the Asian academic establishment is now secured.

Theoretical Understanding about Service Learning

Service-learning is an educational approach that combines learning objectives with community service to provide a pragmatic, progressive learning experience while meeting societal needs. It integrates meaningful community service with instruction and reflection to enrich the learning experience, teach civic responsibility, and strengthen communities (Bandy, 2016). This pedagogical model allows students to apply academic knowledge to real-world issues, fostering a deeper understanding of the subject matter and its societal implications (Theledi, 2024). In Malaysia, the Ministry of Higher Education introduced the SULAM program as part of its educational reform efforts to enhance student engagement and societal contribution. The SULAM program was introduced with the primary objective of integrating community service with academic learning, focusing on critical reflective thinking and personal and civic responsibility.

It aims to provide students with experiential learning opportunities that enhance their academic knowledge, practical skills, and social awareness (Ministry of Higher Education Malaysia, 2019). The implementation of SULAM involves collaboration between universities and community organizations, where students participate in projects addressing real-world challenges while earning academic credits. Service-learning has been shown to improve student understanding and retention of academic content. By applying theoretical knowledge to practical situations, students gain a deeper understanding and are more likely to remember and utilize the information learned (Prianto et al., 2022). Participation in service-learning activities helps students develop essential soft skills such as communication, teamwork, problem-solving, and leadership. These skills are crucial for personal development and future career success (Al Asefer and Abidin, 2021).

Service-learning fosters a sense of civic duty and social responsibility. Students become more aware of societal issues and are motivated to contribute positively to their communities, developing a lifelong commitment to community service (Thelma, 2024). Service-learning strengthens the relationship between universities and local communities. It creates opportunities for collaboration and mutual support, benefiting both students and community members (Compare et al., 2022). While the benefits of service-learning are well-documented, several challenges must be addressed to ensure successful implementation. These include logistical issues, such as coordinating schedules between students, faculty, and community partners, as well as ensuring that the service projects align with academic objectives (Naufal et al., 2024). Additionally, there is a need for adequate training and support for faculty to effectively integrate service-learning into their curricula (Smith et al., 2013). Preliminary studies on the SULAM program in Malaysia indicate positive outcomes for both students and communities. Students participating in SULAM have reported improved academic performance, enhanced practical skills, and a greater sense of civic responsibility. Communities have benefited from the innovative solutions and resources provided by university collaborations (Naufal et al., 2024). The SULAM program exemplifies the potential of service-learning to enrich education and promote social good. By integrating community service with academic learning, SULAM fosters a symbiotic relationship between students, universities, and communities, enhancing education and societal development. Future research should focus on long-term outcomes and best practices for implementing and sustaining service-learning initiatives in diverse educational contexts.

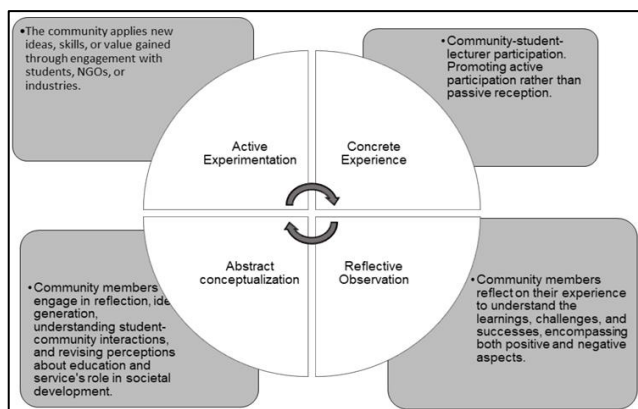


Fig. 1 Community Engagement in Service-Learning: A Kolb's Experiential Learning Theory Approach

Kolb and Service-Learning Theory of Experiential Learning Concrete experience, reflective observation, abstract conceptualization, and active experimentation are the four stages of the learning cycle proposed by Kolb's experiential learning theory (Kolb, 1984). This idea holds that people learn best when they engage in a never-ending cycle of experiencing, thinking, reasoning, and applying what they have learned to novel circumstances. According to this hypothesis, people learn best when they engage in an ongoing cycle of experiencing, thinking, reasoning, and applying what they have learned to novel circumstances. This iterative approach encourages the growth of useful abilities and a more profound comprehension of ideas.

As seen in Figure 1, the Kolb Experiential Learning Theory offers a significant framework for encouraging community participation in service-learning initiatives. This method emphasizes the active involvement of community people in collaborating with students and educational institutions when used in community-based learning. Instead of merely getting help passively, it encourages the community to actively participate in the learning process. In order to create a mutually beneficial learning environment where community members and students gain valuable experience and understanding, this involves utilizing their unique abilities, experiences, and insights to address local needs or societal issues.

In Malaysia, volunteerism and community service are not the same as service-learning, or SULAM (Service-Learning Malaysia - University for Society). The SULAM course's primary objective is to enable students to solve local issues by using the knowledge and abilities they have learned in the classroom. Students gain from these selfless programs, according to research. As previously said, not much study has looked at the effects of service-learning on the community, the role of community leaders, and how a community should be empowered utilizing the local context. The difficulties in engaging the community in service-learning initiatives and the ecosystems required to support and maintain SULAM must also be taken into consideration.

Concepts of Sustainability and SD

The results of a study conducted at a public university in Malaysia are presented in this chapter. While this study only covers one university in the nation, it does offer some insight into how sustainability education is developing there. teaching sustainability and raising awareness of the significance of sustainability-related objectives, with a focus on the most recent Sustainable Development Goals (SDGs) of the United Nations (UN) (Quantity Surveying (QS), 2019). Strong opinions exist on sustainability development (ESD) education, and programs employ a variety of pedagogical strategies, including project-based learning and experiential learning. The results suggest that the educational program exhibits resilience with relation to sustainable development (SD) (Folke et al., 2002, p. 437). In other words, the program incorporates the lecturers' knowledge, comprehensions, and awareness of the significance of SD into the curriculum and instruction. Learners' resilience in thinking is therefore encouraged, creating a platform for action and change.

Nevertheless, considering the role that technology plays in sustainable education resources, the study discovered that lecturers faced significant difficulties in extending and consolidating such SD knowledge and understandings due to problems with technology for teaching and management (and/or leadership) for the institutional and wider context. According to Elkington (1994) and Jeronen (2013), sustainability is commonly understood to be support for a particular issue and a framework for thinking about the future that aims for environmental, societal, and economic balance for an enhanced quality of life. According to Ciegis, Ramanauskiene, and Martinkus (2009), SD is a multifaceted and intricate concept that integrates efficiency, equity, and intergenerational equity on social, economic, and environmental levels. For many years, the SD debate has included resilience as a crucial element (Folke, Hahn, Rockstrom, Osterblom, & Walker, 2009) (Perrings, 2006). Resilience as a mindset is viewed as the foundation for creating insights and tactics that facilitate changes, which in turn promote the maintenance of a stable state. Resilience is defined as the capacity to maintain composure in the face of adversity (Folke et al., 2009).

Higher education institutions (HEIs) play a crucial role in forming societies by giving students the knowledge and insights they need to think critically, according to Escrigas (2016). This is the foundation of a sustainable society. Education is the first phase and crucial to a country's potential to achieve SD, particularly socio-economic, according to Escrigas (2016) (Dania, 2016). Although the link is complicated, education has the power to influence people's and societies' perspectives, including in ways that promote long-term SD reform

and are resilient (UNESCO, 2019). "Education for Sustainable Development" (ESD) is the process of imparting new knowledge, insights, and resilience to educators, students, and educational systems. To address future sustainability issues and move toward a socially, economically, and environmentally sustainable society, pedagogically, students acquire and develop skills, competencies, attitudes, and values (Lambrechts & Van Petegem, 2016) that promote optimism and action in the face of uncertainty (Kitamura & Hoshii, 2014). The change that transformative education aims to achieve is the development of resilient students who can create resilient social-ecological systems (Sterling, 2010).

In order to inspire students' resilience and SDs, scholars from all around the world have talked about transforming higher education through sustainability pedagogy and curriculum relevant to SDs. "What content really matters?" is one of the two main epistemological concerns that are brought up by incorporating sustainability into HE curricula, according to Seatter and Ceulemans (2017). (Thomas, 2014); and "how should it be taught?" (Fuentes-Camacho, Graell-Martín, Fuentes-Loss, & Balaguer-Fàbregas, 2019). Ceulemans and Seatter (2017). In order to improve university courses, for example, the Burns Model of Sustainability Pedagogy (Burns, 2009) proposes integrating ecological design, systemic and transdisciplinary learning, different viewpoints, active and engaged learning processes, and place-based learning. Furthermore, the interdisciplinary nature of ESD in HE curricula necessitates a range of educational strategies.

According to Missimer and Connell (2012), problem-based, active/experiential, and transformative learning are all incorporated within SD program design. Because these learning processes encourage cross-disciplinary thinking, ESD is thus best accomplished through "action-oriented processes of learning that take place in regular societal contexts rather than in formal educational settings" (Loeber, van Mierlo, Grin, & Leeuwis, 2007). These strategies are student-activating pedagogies for sustainability, which challenge students' thinking and incorporate case studies and teaching techniques like brainstorming, dialogue, teamwork, and problem-oriented education. They are consistent with the constructivist learning perspective, where students create their own meanings and responses (Seatter & Ceulemans, 2017).

Supporting the attainment of SDGs and promoting national development, HE is crucial and supported by resilient thinking. Inspired by the 2030 global SD agenda plan (General Mills Global Responsibility, 2018), which is based on the UN SDGs from early 2016, the SDGs consist of 169 specific targets and 17 general goals. The 17 universally applicable goals (Fuentes-Camacho et al., 2019) which include eradicating poverty, promoting gender equality, providing inexpensive, high-quality education, promoting sustainable energy, and addressing climate change are shaped by these, which were approved in 2015. Although HE can address all of these aims through the variety of disciplines, Utama et al. (2018) note that HE specifically targets the third goal of education in addition to those for areas like innovation, global partnership, sanitation and the environment, and more (Utama et al., 2018).

SDGs are being incorporated by HEIs worldwide into their commercial operations, research, and curricula, which support their educational objectives. Experienced learning, which offers simulated and real-world approaches in international sustainability studies (Domask, 2007), and projects (Fuentes-Camacho et al., 2019) are two examples of how sustainability competencies addressed through specific learning objectives have been linked to the SDGs. In projects, which are frequently used as a kind of evaluation, students work on an issue that their teacher presents to them over the course of several weeks. Students often work in groups and propose a solution to the issue. Similar to other nations, the Malaysian government has integrated the 2030 Agenda into the nation's planning, development, and monitoring framework.

The SDGs are implemented in all areas of development and are in line with the 11th Malaysia Plan (Zakri, 2018). Because of this, several Malaysian HEIs are demonstrating resilience by incorporating SDGs into their courses and on-campus activities. For example, as part of its goal of "Transforming Higher Education for a Sustainable Tomorrow" (USM Official Website, 2019), Universiti Sains Malaysia (USM) advocates for the SD process to help create a more sustainable future. At Sunway University, as well as throughout Malaysia and Southeast Asia, the 17 UN SDGs are taught and implemented with the help of the "Jeffrey Sachs Centre on Sustainable Development."

Service-Learning Practices from Malaysian Higher Educational Perspectives

Since the 1970s, Malaysia, a developing nation and active participant in this global process, has worked to implement a range of regulatory measures to strike a balance between the objectives of socioeconomic development and the preservation of healthy environmental conditions. The Malaysian Vision 2020, which called for a thorough quantum leap towards a knowledge-based society, and the Outline Perspective Plans both outlined these goals (MOSTI, 2002). The government should give research and development top priority in order to incorporate environmental considerations into development planning, as per the ambitious aim. According to Keoy et al. (2011), coordinated efforts were anticipated to improve the university's management's bureaucratic and hierarchical structure, increase the application of cleaner production principles, and properly assess the potential and limitations of forestry, natural resources, and environmental concerns. In Malaysia, service-learning, also known as SULAM (Service-Learning Malaysia - University for Society), is not the same as community service and volunteering. Allowing students to use the knowledge and skills they have learned in the classroom to solve local problems is the primary objective of the SULAM course. Few studies have looked at the effects of service-learning on the community, the role of community leaders, and how to empower a community utilizing the local context. The difficulties in engaging the community in service-learning initiatives and the ecosystems required to support and maintain SULAM must also be taken into consideration. In Malaysia, service learning was initially used in 1977. The University of Science, Malaysia (USM) spearheaded the creative Learning-Service Plan project with the rural communities. The USM branch in Kubang Kerian, Kelantan, Malaysia, followed suit in the 1980s with a program recognized as a community and family case-study program (Maharam Mamat et al., 2019).

According to a summary of the numerous studies that have been done, the benefits of service-learning implementation are now restricted because the majority of the research was centered on evaluating the efficacy and learning outcomes of service learning. Understanding the mechanics of its execution in relation to the opportunities and problems faced by both professors and students is essential given the novelty of this practice in the Malaysian environment. However, the literature on service learning, both domestically and internationally, indicates that the integration of community service into academic learning is a crucial component of service learning, whereby students and the community develop and collaborate in parallel within a natural ecosystem (Bringle et al., 2016). Additionally, by incorporating the elements of service learning to meet its learning objectives, it emphasizes the importance of pedagogical creativity and efficacy. Reflective practice is therefore essential to ensuring that service learning is implemented successfully. The Accelerated Program for Excellence (APEX) University designation for Malaysia was given to Universiti Sains Malaysia (USM) in 2009. In order to change higher education for a more sustainable future, USM decided to use sustainability as a platform. In a transdisciplinary teaching approach, sustainability is applicable to a wide range of fields, such as economic development, food production, energy, environmental and natural resource management, sociocultural aspects, and lifestyles (Lee, 2009). Through the promotion of values like equity, accessibility, availability, affordability, and quality, USM concentrates its vision of a sustainable future within this framework. Along the way, USM supports the preservation of various ecosystems, resource conservation and restoration, and the growth of human and intellectual capital.

USM is dedicated to using research and education to help the community and the global community, particularly the 385 million people who live on less than \$1 a day. According to a USM survey, 100 courses in all subjects were said to include sustainable components (USM, 2008). The number of publications about climate change and sustainability is likewise on the rise across all departments. The Centre for Global Sustainability Studies (CGSS), a think tank tasked with organizing campus sustainability initiatives, was established at USM in late 2009 (Razak, 2009).

Malaysia's Monash University is well known throughout the world for its creativity and superior research and instruction. Its research contributes significantly to actual, constructive change. The development of novel In Vitro Fertilization (IVF) technologies, research on climate change, and the development of medications to treat influenza and malaria are some of the ground-breaking studies (Academic and Research Strengths of Monash, 2009). The Institute of Research Management and Consultancy was established at University Malaya on October 11, 2000, with approval from the University Board of Directors. Its primary function is to plan, coordinate, supervise, and evaluate research conducted by university researchers. It also helps with technology

transfer and the commercialization of research outputs and products, and it provides consultancy services to both the public and private sectors (UM Achievements, 2009).

The research achievements of INTI University College (INTI-UC) are only beginning. However, the research projects and publications were communicated to all staff members of INTI-UC's branch campuses (INTI University College Achievements, 2009). Hochschule Karlsruhe Technik Und Wirtschaft-University of Applied Sciences (HsKA) in Germany and University Malaysia Pahang (UMP) have teamed up through a student exchange program to cultivate a pool of engineers who will develop green technology that will help protect the environment and natural resources. As part of the collaboration, Malaysian students were urged to study in Germany in order to build a long-lasting relationship as well as to take advantage of its excellent educational system (UMP Achievements, 2009).

Universiti Putra Malaysia (UPM) has filled the highest number of patents, 169 among universities, the highest record for a Malaysian university. Fifteen products have been commercialized so far, which amounted up to RM32 million. Among the notable research breakthroughs is the Fast Target White Spot Virus Detection Kit, which saved the shrimp industry from near collapse in the late 1990s. ZAPPA, the rice seeds germination enhancer, and Vita-Grow, the growth and yield enhancer have together generated about RM23.7 million. In making strides, UPM has quickened the pace of technology transfer to benefit the local industries. A recent innovation, Recombinant Pneumonic Mannheimia Vaccine was sold for RM4 million (UPM Achievements, 2009). UPM and the Malaysian Green Technology Corporation (GreenTech Malaysia) have announced an agreement to build a foundation for cooperation in the creation of a Center of Excellence for the commercialization of discoveries in green technology. Specific areas of collaboration that are in line with the National Green Technology Policy's goal were outlined in the Memorandum of Understanding (MOU). Under this MOU, GreenTech Malaysia played the lead role, in six major sectors of the national economy, namely the energy, construction, water and wastewater, transportation, manufacturing and information technology (Green Tech, 2011).

Implementation of sustainability in the Malaysian Universities

In order to distinguish service-learning from volunteerism and community work, the Malaysian Ministry of Higher Education rebranded and reclassified it as SULAM (Service-Learning Malaysia - University for Society) in 2017. A credit-bearing course-structured academic program is service-learning. In order to achieve the desired learning outcomes a deeper comprehension of the course material, a broader appreciation of the discipline, an enhanced sense of personal values, and civic responsibility students engage in an educational experience where they participate in a structured service activity that addresses identified community needs. They also reflect on their experiences and the service activity to achieve the desired learning outcomes (MOE, 2019). SULAM programmes serve to achieve the objectives of various government Ministries as follows: (1) the Ministry of Higher Education (Shift 1: Holistic, Balance and Entrepreneurial Graduates in the Malaysia Education Blueprint 2015-2025), (2) the Ministry of Rural Development, under the National Community Policy (2019); and (3) the Ministry of Housing and Local Governance Malaysia, under 2030 Rural Development Policy (2019). All three ministries share the same vision, mission, and aspiration to support the well-being of a community.

It is thought that the SULAM program can assist future generations in cultivating virtues including leadership, tolerance for variety, social responsibility, and interpersonal and social skills. Students will have the chance to develop academically, intellectually, personally, creatively, and socially as a result of their experiences working on SULAM projects, which allow them to view the real world beyond the classroom and become fully involved in the community. Along with the required abilities, students' civic consciousness and duty can be fostered, generating suggestions for innovative and practical ways to contribute to community improvement. These service-learning initiatives benefit not only the students but also researchers and academics at higher education institutions. They can participate in the social change and learn from communities as well. In higher education, service-learning should ideally integrate with communities to foster learning, creativity, and the application of academy resources to needs identified by the community. Nevertheless, despite the exponential growth in the number of SULAM courses, academic programs, and universities involved in this agenda, the budget has not expanded in proportion. The smooth implementation of

SULAM programs is impacted by this funding deficit, the unclear and ambiguous involvement of the community, companies, and agencies, as well as the uncoordinated role and understanding among those in authority at the faculties and universities.

Prior research has demonstrated the significance of institutional pedagogy and university administration in working with the community to establish a service-learning environment that has an impact (Chng, Leibowitz & Mårtensson, 2020). According to studies, pedagogy, the community, students, faculty, and the university are the five primary obstacles that educational institutions encounter when putting service-learning into practice (Yusof, Tengku Ariffin, Awang-Hashim, Nordin, & Kaur, 2020). Since this pedagogical approach is viewed as the means to achieve the national educational goals of producing graduates with the necessary skills for employability, initiatives to enhance service learning have been included in Malaysia's current educational blueprint (Malaysian Education Blueprint, 2015-2025). According to the Malaysian Ministry of Education (2015), service learning is currently at a point where it has to be integrated into the academic curriculum in a more organized and methodical way.

In order to address the implementation of service-learning in Malaysian institutions, the Ministry of Higher Education has recently created a set of national guidelines called "SULAM" (Service-Learning Malaysia - University for Society) (Department of Higher Education, 2019). Additionally, other universities around the country have created their own special set of service-learning requirements that they believe are better suited to their specific circumstances. This is in line with the Mackenzie, Hinchey, and Cornforth (2019) study's findings, which also indicate that service-learning strategies should concentrate on creating a long-term environment for community and institution engagement. As a result, significant efforts should be focused on how to best incorporate service learning within the academic program.

However, there have been a number of barriers to the actual use of service learning, particularly in Malaysia, as it is a relatively new pedagogical paradigm. These contextual challenges could have limited its impact. The growth of sustainable development in Malaysia was sparked by a work program established by the Institute for Environment and growth (LESTARI) for its inaugural year in 1995. Over the years, LESTARI has represented the interests of the Malaysian government in sustainable development before a number of international organizations, including the United Nations Economic and Social Council for Asia and the Pacific (UN/ESCAP) and the Asian Development Bank (ADB). To encourage sustainable development in Asia and the Pacific, a regional consultative meeting on environmentally sound and sustainable development was organized, according to LESTARI (1995).

As a result, Malaysia has established a policy implementation strategy that sets the country's priorities in line with the agenda 21 needs. The National Education Blueprint, the five-year Malaysia Development Plans, and the longer-term Outline Perspective Plans are all part of this approach. In order to build a more sustainable future in terms of economic viability, environmental purity, and a just society for both the current and future generations, the latter three strategies seek to further the transformation of education (Nordin, 1998).

Malaysia's efforts to achieve its objective of becoming a regional hub for education are based on this concept. The Third Outline Perspective Plan 2001–2010 (OPP3) states that the nation's educational capacities and resolves must be enhanced in order to meet the challenges of the new century (EPU, 2001). It emphasizes lifelong learning to continuously raise the standard of both the workforce and higher education. Distance learning will be created as a major part of educational development plans to provide working adults with an additional educational alternative.

Establishing educational centers of excellence through partnerships with businesses or international partners is constantly encouraged for both public and private colleges. While rural areas will be modernized through the provision of better ICT facilities, labs, classrooms, and physical infrastructure, the government will intensify the use of ICT in all schools and institutions and prioritize improving facilities and infrastructure (MOE, 2001). In order to meet the demands of human resource development and deliver high-quality, easily accessible education at all levels, Malaysia's National Education Policy aims to advance the country's educational system and make it a center of excellence in education (Education Planning, Research and Development, 2007). One of the main uses of the Multimedia Super Corridor (MSC) is the Smart School. The

National Education Development Plan 2001–2010's main goals are to significantly enhance the efficacy and efficiency of education management while also promoting more access, equity, and quality of education in line with the National Education Policy.

To create people who are balanced intellectually, spiritually, emotionally, and physically, as well as to foster creativity and innovation, all schools and institutions will receive the proper distribution of quality inputs, which include providing qualified teachers, sufficient funding, teaching aids, and supporting services (MOE, 2001). The purpose of the Knowledge-based Economy Master Plan was to give the country strategic guidance for transforming into a knowledge-based society over a ten-year period. The National Education Blueprint (2006–2010) has six main areas of focus nation building, human capital development, national school strengthening, closing the educational gap between rural and urban areas, enhancing the teaching profession, and accelerating educational institution excellence. In order to guarantee that Malaysia produces graduates who are both competent to meet the demands of the country and assume responsibilities as global participants, both public and private universities, polytechnics, community colleges, and elementary and secondary schools will be making steady progress. According to Education Planning, Research and Development (2007), the curriculum supplied by higher education institutions is relevant and adapted to the nation's deemed top priorities in order to develop a workforce that is talented, innovative, and healthy. With these new advances and shift towards the specialized informed workforce, education development policies serve to ensure Malaysian professionals remain amongst the best in the world.

Service-learning has obstacles in Malaysia, despite its potential, including a lack of institutional support, insufficient financing, and the need for better integration into academic courses. It is often challenging for environmental service-learning programs to be ongoing and scalable due to administrative and logistical constraints (Rahman et al., 2022). To overcome these challenges, policymakers should set aside funds for sustainability education and offer incentives to institutions to coordinate regionally. By establishing an ASEAN Service-Learning Network focused on climate and environmental challenges, a forum for sharing resources, training materials, and evaluation methods might be created. Collaboration would be institutionalized as well.

Additionally, by integrating local populations and indigenous knowledge systems, service-learning programs can enhance cultural relevance and sustainability. For instance, including the environmental practices of the Dayak and Orang Asli people in East Malaysia can provide valuable ideas for resource conservation and climate adaptation. Malaysia's involvement in regional cooperation on climate change, natural resource management, and environmental challenges can be significantly enhanced via a robust service-learning framework.

Case study 1

“EarthSOS: Our Planet, Our Future” is an environmental awareness campaign that is aimed at empowering the younger generations through the choices they make against climate crisis with the adoption of the 5 R's of sustainability: Refuse, Reduce, Reuse, Repurpose, and Recycle.

The campaign leverages hands-on initiatives, social media engagement, interactive activities, and digital storytelling to encourage the primary school students to learn how small actions can lessen the harmful effects of climate change. The goal is to foster a deeper understanding of the importance of combating the climate crisis, and the role of students can play in reducing waste and promoting sustainability within their schools and communities.

The course PBK4204 Strategic Communication and Event Management is executed as a SULAM project because it is a field that equips students with the skills to communicate effectively in a dynamic and rapidly evolving environment. By evaluating one of the Course Learning Outcome, which focuses on demonstrating to the public, the campaign can gauge the effectiveness of the student's communication and comprehension skills, essential for addressing the identified issues and achieving the goals. The objectives of the campaign are to raise awareness and educate primary school students about the environmental impacts of human action and the after effects on climate; encourage primary school students to adopt eco-friendly practices and take small,

actionable steps that contribute to reducing waste in their schools and communities and foster creativity and innovation by encouraging students to come up with new and practical ways to repurpose and recycle materials to reduce their environmental footprint.

There are few impacts of the campaign to the community as it i) increase students' understanding of climate change, its causes, and effects, thereby fostering a more environmentally conscious school community capable of making informed decisions on sustainability; ii) through the adoption of the 5 R's, communities can experience a noticeable reduction in waste generation, contributing to cleaner neighborhoods and a healthier environment and iii) through educational initiatives and hands-on activities, students will adopt more effective recycling practices, which can lead to reductions in waste both within the school and their households.

The project was officially launched at Sekolah Kebangsaan Rakyat, Kuching, Sarawak with a welcome speech from the organizing committee. All educational materials were ready for distribution. On 2nd January 2025, the event started with student registration, followed by the arrival of VIPs and invited speakers. The awareness campaign, "EarthSOS: Our Planet, Our Future," officially began with the National and State Anthems, the school song, Doa recitation, and a welcoming speech from the headmaster. A video showcase featured promotional ads and a public service announcement (PSA). Next, a keynote speaker delivered a speech on the campaign theme. The event then moved into group activities led by crew members, including an egg carton chair-building activity and a DIY banner project. To conclude, a sharing session was held, where students and teachers provided feedback, and the event closed with a ceremony.

Case study 2

Cyberbully cases, especially on social media, are on the rise and a cause for concern, particularly involving teenagers and young people in Malaysia. Cyberbully is the act of threatening, embarrassing, or intimidating someone through electronic media such as email, social networking sites such as Facebook, messages, or online games. The purpose of the Campaign on Cyberbully Among Secondary Students is to raise awareness among secondary school students about the threat of cyberbully. Additionally, this campaign can educate secondary school students about their rights and how to protect themselves from cyberbully. Furthermore, this campaign aims to help secondary school students who are experiencing in cyberbully situations to find solutions.

The course PBK4202 Strategic Communication and Event Management is executed as SULAM project because it is a field that able to equips students with the skills to communicate effectively in a dynamic and rapidly evolving environment. By evaluating one of the Course Learning Outcome, which focuses on demonstrating to the public, the campaign can gauge the effectiveness of the student's communication and comprehension skills, essential for addressing the identified issues and achieving the goals. The objectives of the campaign are to raise awareness among secondary school students about the threat of cyberbully; Educating secondary school students about their rights to protect themselves from cyberbully and assisting secondary school students facing cyberbully situations to find better solutions. There are few impacts of the campaign to the community as it i) reduce the number of cyberbully incidents in the community and lead to a safer and respectful online environment for everyone; ii) Empower the growing community to be more resilient and confident in the face of online threats and iii) encourage the community to seek help and offer support to one another in addressing cyberbully related issues.

The project was officially launched at Sekolah Menengah Kebangsaan Lundu, Sarawak Malaysia with a welcome speech from the organizing committee. All educational materials were ready for distribution. The cyberbully awareness talk was conducted for 1 hour and was followed by a Question-and-Answer Session. The recorded Public Service Announcement (PSA) videos were displayed to the participants. During the sharing sessions, participants shared their personal experiences with cyberbullying and created a sense of empathy among each other. Love notes and positive messages were shared. The workshop on bully prevention methods equipped participants with strategies to combat cyberbullying. Participants engaged in a reflective session to share their thoughts on the campaign's impact.

Case Study 3

In Malaysia, bullying continues to cast a long shadow over the lives of children in school, our project, "Be A Hero, Not A Bully" emerges as a beacon of hope. The harrowing emotional, psychological, and even physical impacts of bullying resonate deeply within Malaysian communities. This project was conceived out of an unwavering commitment to addressing this issue. This project aims to seek shed light on the dark corridors of bullying, nurture empathy, and instigate proactive measures to eradicate it from our midst. Up until today, the incidence of bullying has been looming amidst our society. The mission is to arrest this troubling trajectory by illuminating the gravity of the issue and advocating for proactive solutions.

Bullying wreaks havoc on the mental well-being of its victims, pushing them into abysses of despair, depression, and anxiety. It was aspired to diminish the occurrence of such heart-wrenching consequences by offering solace, resources, and a community committed to empathy and respect. Ignorance often perpetuates the cycle of bullying. This project function as an educational pillar, enlightening students, parents, and educators on the many facets of bullying from recognition to prevention and resolution. Armed with knowledge and strategies, aim to empower individuals to stand against this scourge. The fight against bullying demands a collective front. Project aim to weave a tapestry of students, teachers, parents, and concerned citizens in shared mission to combat bullying-related issues.

It is understood that true change requires a shift in perspective.

The project is rooted in the principle of inclusivity and empathy. And seek to help students recognize the beauty of diversity and dismantle the barriers that lead to discrimination and bullying. The early intervention and prevention by starting awareness campaigns in primary schools allows for early intervention and prevention of bullying behaviors. By teaching children about what constitutes bullying and how to recognize and respond to it helps in curbing bullying incidents before they escalate. Bullying awareness campaigns teach students empathy and compassion towards their peers. Understanding the impact of their actions on others fosters a sense of responsibility and consideration for the feelings and well-being of fellow students. By educating children about bullying, the campaign can equip them with conflict resolution skills. Teaching constructive ways to address conflicts and disagreements helps in reducing instances of bullying and encourages open communication. A school environment free from bullying is essential for effective learning. An awareness campaign helps create a safer, more inclusive environment where children can focus on their studies without the fear of harassment or intimidation.

Bullying can have long-lasting negative effects on mental and emotional well-being. Teaching students about the harmful effects of bullying can help them recognize when they are being bullied or when others are experiencing it, promoting mental health and emotional well-being. Bullying awareness campaigns emphasize respect and tolerance for diversity. Students learn to appreciate and value differences among themselves and their peers, reducing instances of bullying based on race, gender, ethnicity, or other factors. It also encouraging students to be active bystanders who stand up against bullying helps create a network of support. The campaign empowers students to intervene and report bullying incidents, fostering a collective responsibility for creating a bully-free environment. A bullying awareness campaign can extend beyond the school to involve parents and the community. Parents are educated on signs of bullying, how to support their children, and how to communicate with the school to address any issues effectively. Early education about the consequences of bullying sets the stage for a more respectful and compassionate society. Students carry these lessons into adulthood, fostering a culture of kindness, understanding, and empathy. Many educational institutions and legal frameworks mandate anti-bullying initiatives. Conducting a bullying awareness campaign ensures compliance with these standards and demonstrates a commitment to creating a safe and supportive learning environment.

In summary, "Promoting Anti-Bullying Awareness" is answer to the pressing need to tackle the menace of bullying in primary education institutions. By raising awareness, imparting knowledge, and fostering community engagement, that aim to create a safer, more compassionate world. Through holistic approach, we hope to address the root causes of bullying and mitigate its heart-wrenching impact on individuals and society as a whole.

Challenges in the Implementation of SULAM in Higher Education in Malaysia

In 2019, the Ministry of Higher Education (MOHE) Malaysia introduced the innovative Service-Learning Malaysia – University for Society (SULAM) educational framework, which aims to connect academic learning with community service. In accordance with the Malaysian Education Blueprint 2015–2025 (Higher Education), SULAM promotes experiential learning by integrating planned community service into academic curriculum (MOHE, 2019). The major goal is to create graduates that are complete, balanced, and entrepreneurial through practical problem-solving and civic participation. There have been numerous barriers to SULAM's successful implementation at Malaysian colleges, despite the program's enormous potential to generate graduates who are socially conscious. These include faculty commitment, student involvement, community collaboration, program sustainability, and institutional readiness.

Institutional and Policy Challenges

The lack of support systems and institutional readiness is one of the biggest barriers to SULAM's successful implementation. Many universities still require clear frameworks or standards in order to successfully integrate SULAM into their current academic institutions. According to Shafie et al. (2020), the absence of a dedicated administrative body or unit to oversee service-learning programs usually results in scattered efforts. Additionally, the lack of institutional incentives or recognition for teacher participation limits the adoption of SULAM. Many colleges continue to view service learning as a component of research production and academic performance (Aziz & Said, 2021). Universities' differing views of SULAM's objectives and the MOHE's inconsistent enforcement of the policy are other factors that contribute to uneven implementation. Even though the policy emphasizes the importance of experiential and community-based learning, different institutions have different approaches to implementing it, which results in differences in quality and results (Rahim & Ishak, 2022).

Faculty Commitment and Capacity

The educators, who are in charge of curriculum creation, community engagement, and student assessment, are primarily responsible for SULAM's success. However, many academics find it difficult to commit to the meticulous planning and execution required for SULAM projects due to time constraints and heavy workloads (Shukor et al., 2021). Preparing students for community service, communicating with others, and integrating reflections into academic content are time-consuming processes that might not be compatible with conventional teaching approaches. Additionally, a large number of faculty members lack the training and pedagogical expertise required for service learning. Some educators struggle to develop assessment tools that measure academic and civic outcomes (Hashim & Embong, 2020). Faculty may carry out service-learning projects in a tokenistic or shallow way without proper training and capacity-building initiatives, which would undermine SULAM's goals.

Student Engagement and Motivation

Another significant barrier is the desire and participation of students in SULAM events. While some students appreciate the opportunity to engage with real-world issues, others view service learning as an additional burden, especially when it is a requirement for a degree. Students usually exhibit reluctance because they think service learning has little to do with their academic performance or career goals, according to Mohamad et al. (2020). The students' various backgrounds and level of preparation may also have an effect on participation. Kids from wealthy, metropolitan communities may have a different perspective on community service than kids from poor or rural communities. If students are not properly oriented and supported, they may lack the empathy and cultural sensitivity needed for meaningful relationships with community members (Yusof et al., 2021).

Community Collaboration and Stakeholder Engagement

Strong partnerships between institutions and community groups are essential to SULAM's success. However, there are challenges involved in forming and sustaining these partnerships. In many communities, the service-learning concept is not fully understood, which could lead to misconceptions or unreasonable expectations

(Zainal et al., 2022). Short-term initiatives that don't have long-term benefits might also make some communities feel exploited. Finding committed and qualified community partners might be difficult from the institution's perspective. Effective teamwork requires frequent communication, shared goals, and mutual trust, all of which take time and effort to build. If SULAM does not have ongoing commitment and mutually beneficial collaborations, it could become a top-down project instead of a community-driven initiative.

Assessment and Outcome Measurement

Assessing how SULAM affects students and communities is still a challenging and undeveloped field. The abilities that service learning seeks to foster, such as empathy, critical thinking, and social responsibility, are not adequately captured by traditional academic examinations (Aziz & Said, 2021). In order to gauge the depth of learning, some teachers turn to crude evaluation methods like attendance or reflective journals. Research pointed evaluation and Assessment: Sustained funding enables regular evaluation and assessment of service-learning initiatives. By monitoring the outcomes and impact of these projects, funding can be directed to areas where it is most needed and where the initiatives have the greatest potential for success (Mohd Naufal, Syed Aris, Wahi, Mohamed, Zulkipli, Awang Hashim, & Mohd Yusof, 2024). Furthermore, it is challenging to compare the efficacy of SULAM nationally due to the absence of uniform assessment instruments throughout institutions. In the absence of unambiguous measurements and indicators, educators and policymakers encounter difficulties in enhancing and expanding the program (Rahim & Ishak, 2022).

Sustainability and Institutionalization

Another recurring issue is making sure SULAM activities are sustainable. A lot of initiatives are one-time, short-term endeavors motivated by course requirements or academic calendars. These models impede the continuation of student learning and restrict the long-term effects on communities (Hashim & Embong, 2020). SULAM needs to be incorporated into the university's mission and backed by long-term plans, resources, and collaborations in order to be viable. Many SULAM efforts have also been impacted by the COVID-19 pandemic because of limitations on in-person interactions. Although several colleges tried virtual service learning, implementation was made more difficult by issues with digital infrastructure and community access (Shukor et al., 2021). Rethinking delivery methods and making sure service learning is still applicable and flexible in hybrid settings are necessary for post-pandemic recovery. SULAM, which connects academic learning with community engagement, is an innovative approach to higher education reform in Malaysia. Even though there have been many difficulties in putting it into practice, including as institutional inertia, faculty capacity constraints, student disengagement, and brittle community partnerships, these hurdles are not insurmountable. The full potential of SULAM can be achieved by Malaysian higher education institutions by tackling these problems with organized assistance, training, and cooperation. By doing this, they will create graduates who are not just academically strong but also socially conscious individuals who can make significant contributions to both national and international development.

Future Directions for Malaysian Service Learning

It is more important than ever to match Malaysia's Service-Learning Malaysia – University for Society (SULAM) program with local environmental objectives. Southeast Asia is among the most susceptible areas in the world to the effects of climate change, such as resource scarcity, deforestation, biodiversity loss, and rising sea levels (ADB, 2021). Therefore, strengthening Malaysia's position in collective environmental governance can be achieved through improving regional collaboration through service learning. The future directions for incorporating regional environmental cooperation into the SULAM framework are examined in this section.

Integrating ASEAN environmental frameworks into SULAM project issues, such as the ASEAN Working Group on Climate Change and the ASEAN Agreement on Transboundary Haze Pollution, is a promising approach. By exposing students to regional concerns such as biodiversity corridors, shared river basin governance, and haze management, this integration can promote cross-border ecological thinking (ASEAN Secretariat, 2020). To foster understanding of environmental issues, academic institutions can create cooperative fieldwork or joint courses with universities in nearby nations.

Regional service-learning partnerships may emerge at SULAM in the future, bringing Malaysian academics and students together with communities throughout Southeast Asia to address common environmental concerns. Projects could involve replanting in transboundary forest reserves, cross-border waste management solutions, or cooperative mangrove restoration in coastal areas. In addition to improving experiential learning, these programs would strengthen regional unity in addressing common issues (Nguyen et al., 2022). Project size and sustainability can be improved by establishing multi-institutional service-learning networks with partners such as the National University of Singapore, Chulalongkorn University, and Universitas Indonesia. The United Nations Sustainable Development Goal 17: Partnerships for the Goals is likewise in line with this kind of regional cooperation (UNDP, 2023).

Virtual exchange programs provide a scalable means of fostering environmental cooperation in light of post-pandemic changes in education and technological breakthroughs. Through the use of digital service-learning platforms, Malaysian students can work together with peers from other countries in Southeast Asia to exchange indigenous knowledge, analyze environmental data, or jointly create strategies for climate action (Tan et al., 2021). Among the many forms that can enhance cross-border learning without the carbon footprint of travel are digital storytelling, virtual ecosystem tours, and online symposia on environmental justice. The e-learning infrastructure of the ASEAN University Network (AUN) can help support these projects.

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SULAM ought to function as a forum for youth-led climate policy advocacy in ASEAN. Malaysian students can interact with politicians on climate justice and natural resource equality, add to regional environmental white papers, and take part in ASEAN+3 youth forums (Kaur & Othman, 2021). Service-learning that incorporates policy analysis can foster civic agency and environmental citizenship in the local community. By taking this approach, colleges can serve as intermediaries between local communities and regional decision-making organizations, ensuring that local environmental issues are taken into account when developing more comprehensive climate initiatives. SULAM has to be incorporated into ASEAN academic institutions like the Southeast Asian Ministers of Education Organization (SEAMEO), the ASEAN University Network (AUN), and SEAMEO in order to maintain regional cooperation. For regional SULAM programs, this may entail uniform evaluation procedures, cooperative funding options, and cross-border recognition of service-learning credits (UNESCO Bangkok, 2022). Malaysian universities may guarantee quality and encourage wider participation by setting up regional accreditation and benchmarking systems for environmental service-learning programs.

Strategies to Overcome Challenges in Implementing SULAM

In order to successfully integrate Service-Learning Malaysia (SULAM) in higher education, certain tactics are needed to solve pedagogical, operational, and institutional issues. Policy and Institutional Difficulties The lack of established institutional frameworks and support systems is one of the main obstacles to SULAM. In order to get around this, academic institutions should set up explicit rules and regulations that incorporate SULAM into all faculty courses, with the help of specialized administrative departments to manage projects. Adoption can also be reinforced by offering institutional incentives and acknowledging service-learning in systems of faculty promotion and appraisal (Bringle & Hatcher, 1996; Jacoby, 2015). According to Rahim and Ishak (2022), the Ministry of Higher Education (MOHE) could establish more robust monitoring and enforcement systems to guarantee uniform application of policies across all institutions.

The dedication and ability of the faculty are essential to SULAM's success, although they frequently deal with workload demands and lack service-learning pedagogy training. According to Butin (2010) and Bringle & Hatcher (2009), faculty capacity can be improved through peer mentoring, communities of practice, and

ongoing professional development initiatives. Universities should also acknowledge the contributions of SULAM in workload models and offer administrative assistance for project logistics so that faculty can concentrate on teaching and student involvement (Jacoby, 2015).

Students' impression of SULAM as an extra load rather than a learning opportunity is a persistent problem with student engagement and motivation. According to Eyler and Giles (1999) and Kuh (2008), educators should integrate reflective techniques to link community experiences with academic learning while also clearly communicating the transferable qualities acquired, such as civic responsibility, teamwork, and leadership. Additionally, gamification techniques, awards for achievement, and the connection between SULAM results and employability can all improve engagement and motivation (Felten & Clayton, 2011).

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Assessing and measuring learning outcomes both academic and civic remains a challenging task. Faculty can more successfully record learning gains by creating digital platforms, reflective journals, and standardized rubrics (Ash & Clayton, 2009). Additionally, to ensure that SULAM results are recorded beyond the current semester, institutions ought to implement longitudinal assessment frameworks to track both student growth and community impact (Gelmon et al., 2018).

Future Direction

Future Directions, Institutionalization, and Sustainability SULAM needs to be connected to employability objectives, graduate qualities, and the Sustainable Development Goals (SDGs) of the UN in order to be sustained over the long run. SULAM can be further institutionalized with the help of cross-disciplinary partnerships, sufficient finance, and policy alignment with national education blueprints (UNESCO, 2017). Research on the long-term effects of service-learning in Malaysia, inter-university collaborations, and scaling successful models should be the main goals of future initiatives.

CONCLUSIONS

In order to address common environmental concerns, regional cooperation has been strategically and morally incorporated into Malaysian service learning. Malaysian higher education can take the lead in producing a generation of graduates who are environmentally conscious and involved in the region by integrating cross-border cooperation, using digital tools, encouraging regional alliances, and aligning SULAM with ASEAN environmental priorities. These potential future directions highlight SULAM's potential as a pedagogical innovation as well as a means of promoting sustainable development and climate leadership in Southeast Asia.

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