Assessing The Impacts of Community-Based Technical Education and Training Projects in Northern Malaysia

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Abstract: Leaving no one behind is the central transformative promise of the 2030 Agenda of Sustainable Development Goals (SDGs). In Malaysia, the formation of the All-Party Parliamentary Group Malaysia on the Sustainable Development Goals (APPGM-SDG) by the Malaysian Parliament has made it possible to localise this SDGs' transformative agenda. Therefore, this paper attempts to discuss the effectiveness of programs conducted by solution providers in the Northern region in managing and conducting projects, the impact of the projects on the beneficiaries, the alignment and mapping of the impact evaluations of the solution providers with the SDG goals and APPGM-SDG modules, and identification of issues and recommended solutions to the projects in the Northern region. Twenty-three (23) APPGM-SDGs projects were implemented from 2021 to 2022, consisting of various programs, mainly entrepreneurship, environment, research and education. As a bipartisan initiative to localise SDG goals in Parliamentary constituencies in Malaysia, it is crucial to analyse the impact of its implementation. Hence, this study has conducted an impact evaluation analysis from October 2022 until January 2023 in seven (7) constituencies in Kedah, Penang and Perak. Using four (4) dimensions of impact analysis framework, which are psychology and knowledge, skills, network, and system of these projects on the beneficiaries to determine the effectiveness of each project. This study has collected data from document analysis, focus group discussion and site-visit to the twenty-three (23) projects in the Northern Region. The findings indicate the programmes were well-implemented and beneficiaries managed to learn new skills and strengthen their networks.

Keywords: APPGM-SDG, Sustainable Development Goals (SDGs), Community-based TVET, TVET

1.   Introduction

Technical and skill-based education is one of the most effective solution programs to empower communities, especially marginalized groups. As noted by Sulaiman and Salleh (2016), technical and vocational education and training programs can provide comprehensive solutions to social and economic problems. Acknowledging the vital role of these programs for society, All Parliamentary Parties Group Malaysia for SDGs (APPGM-SDG) has initiated 23 solution projects to localize SDGs in the Northern Region. 18 out of 23 projects are technical and skill-based education (TVET) projects. The APPGM-SDG projects aim to provide sustainable solutions in three (3) main aspects namely (1) economy, (ii) social, and (iii) environment. The economic solutions aim to create or increase participants' income through entrepreneurial initiatives. While the social solutions cover key national issues and focus on sustainable solutions. Environment solutions, on the other hand, aim for environmental conservation, especially more endangered ecosystems. With a global vision of leaving no one behind, APPGM-SDG managed to implement four (4) phases of program execution starting with; (i) Issue mapping and design, (ii) Capacity Building and planning, (iii) Solutions Implementation and (iv) Impact Evaluation. The

first phase is to ensure a particular project based on the community needs and bottom-up approach Meanwhile, the second and third stages are to strategically plan the most effective measures and implementation. Impact Evaluation is the last phase of APPGM-SDG execution to measure the effectiveness of each solution project. Hence, this article attempts to analyze the effectiveness of technical and skill-based education APPGM-SDG solutions projects in the Northern region implemented in the years 2021 to 2022. Figure 1 indicates the map of parliament constituencies involved in the Northern SDGs projects.

Fig. 1 - Northern SDGs projects 2021/2022 & Parliament constituencies

Figure 1 depicts seven (7) parliament constituencies involved in localizing SDGs in the Northern Region. There are four constituencies in Kedah which are Kubang Pasu, Pendang, Sik and Baling. Meanwhile, only a constituency in Perak, Ipoh Barat and two (2) constituencies in Penang which are Permatang Pauh and Batu Kawan are involved. There are four (4) projects implemented in Kubang Pasu, one (1) project in Pendang, three (3) projects in Sik and three (3) projects in Baling. Meanwhile, in Ipoh Barat, Perak, there are four (4) projects implemented. Penang, four (4) projects in Batu Kawan and four (4) Permatang Pauh.

2.   Methodology

The impact evaluation on beneficiaries is based on four (4) main dimensions which are psychology and knowledge, skills, network and system. The impacts of these projects were evaluated using three (3) methods namely (i) document analysis (DA), (ii) focus group discussion (FGD), and (iii) site visit (SV). Documents related to the projects were derived from three (3) main documents namely (i) Project Proposal, (ii) Monthly Report, and (iii) Final Report. Besides these main documents, the evaluation was also conducted based on the photos and videos attached by the solution provider in the reports. Evaluation through document analysis was conducted on all projects, unfortunately, this impact evaluation phase identified two (2) problematic projects in Permatang Pauh due to falsified report documentation by the solution providers.

All the projects were evaluated within months of October until December 2022. Seven (7) technical and skill-based education projects were selected for two (2) focus group discussions (FGD) held in Alor Setar, Kedah and Batu Kawan, Penang. The selection of the projects for the FGD sessions and site visits was based on the analysis of the main documents that were conducted earlier. The purpose of the FGD session is to validate the impact of the projects as stated in the proposal, and monthly and final reports. This FGD session is crucial to further validate the impacts from the beneficiaries' point of view. The FGD sessions were conducted on 11 and 12 November 2022 as illustrated in Table 1.

Seven (7) technical and skill-based projects were selected for FGD sessions, three (3) in Kedah and others in Penang and Perak. Four projects are selected from Penang and Perak, but only three (3) projects can send beneficiaries. Each project was represented by 1-2 beneficiaries and there were eleven (11) beneficiaries involved. Table 2 depicts the project code, name and methods of impact evaluations for TVET-based projects within the Northern Region implemented in the year 2021-2022. This paper will focus on an in-depth analysis conducted on the feedback collected during the FGDs listed in Table 2. A thematic analysis was implemented to identify the existence of four (4) dimensions of the impact analysis framework- psychology and knowledge, skills, network, and system in the feedback. Analysis was done in two layers, which are (1) identification of the dimensions as the broad themes in the analysis and (2) filtering of the broad themes to generate any sub-categories to determine specific themes as the impact of the programs.

Table 1 - FDG session and site visits in Northern region

11 November 2022 (Friday)	
10 am to 12 pm	Site Visit Kubang Pasu beneficiary's business venue.
130 pm to 230 pm	Final Preparation, Blackwood Restaurant Alor Setar Kedah
3 pm to 530pm	Focus Group Discussion with Beneficiaries
530 pm to 7 pm	Discussion with the Solution Provider
12 November 2022 (Saturday)	
10 am to 1 pm	Focus Group Discussion with the Beneficiaries
2 pm to 5 pm	Site visits in Penang
13 November 2022 (Sunday)	
10 am	Site Visits to two (2) Ipoh Barat Solution Providers.

In the first layer, keywords relevant and signifying the dimensions were looked for in the beneficiaries' feedback as cues for the existence of the themes. For example, occurrences of words such as motivation, appreciation and respect in the beneficiaries' feedback are coded as significant to the psychology and knowledge dimension while words such as apply techniques, repair, prepare and build up are coded as reflective of the skills dimension. In the second layer, the feedback identified as significant to the dimensions is categorized to reflect the specific themes deemed impactful to the beneficiaries. For example, feedback containing words or phrases carrying the notions of connecting beneficiaries with authorities or agencies, such as building networks with other agencies, recognizing the local agencies of Perak, young leaders also connected to people are grouped together as being impactful towards enabling the beneficiaries to connect with authorities and agencies. The application of the layering technique has enabled the researchers to (1) determine that there are impacts of the four dimensions in the programs conducted and (2) the specific areas of impact occurring in the dimensions.

Table 2 - Method for impact evaluation

No	Project Code	Project Name	Evaluation Method
1	KP01	Empowering Female Youth in Kubang Pasu, Kedah	DA, FGD, SV
2	KP02	Drug Prevention / Treatment in Kubang Pasu	DA
3	KP03	Development of Senior Citizens, Kubang Pasu	DA
4	KP04	Revitalization Project, Kubang Pasu	DA, FGD
5	P01	Community Business, Pendang	DA, FGD
6	S01	Napier Grass Planting Project, Sik	DA
7	S02	Organic cultivation training, Sik	DA
8	S03	Empowering Women Digital	DA, FGD
9	B01	Empowering Women in Digital Marketing & Finance, Baling	DA, FGD
10	B02	Fertigation Vegetable Growing and Marketing, Baling	DA
11	B03	Sewing Skills Training, Baling	DA
12	PP01	Young Urban Farmer, Permatang Pauh	DA
13	PP02	Smart Sustainable Farming, Permatang Pauh	DA
14	PP03	Agro-Food Waste Smart Composting, Permatang Pauh	DA, FGD
15	PP04	Economic Activities of Permatang Pauh Fishermen	DA
16	BK01	Business Mentoring, Batu Kawan	DA, FGD, SV
17	BK02	Community Farming in Taman Murai Jaya, Batu Kawan	DA
18	BK03	Youth Leadership, Batu Kawan	DA
19	BK04	Refugee Development	DA, FGD
21	IB01	Tiny Steps of Environmental Changemaker, Ipoh Barat	DA
22	IB02	Urban Farming, Ipoh Barat	DA, SV
23	IB03	Smart Car Spa, Ipoh Barat	DA, SV
24	IB04	Agency Dialogue, Ipoh Barat	DA

SV observations were conducted on selected Batu Kawan, Ipoh Barat and Kubang Pasu solution projects. The purpose of SV observation is further confirming and validating the feedback obtained from the beneficiaries during the FGD session.
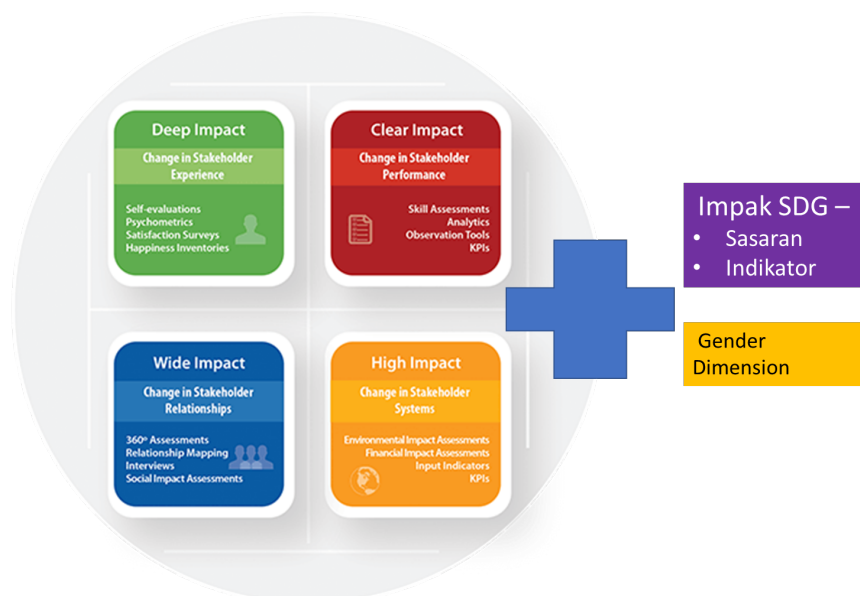

Fig. 2 - APPGM-SDG Meta-Integral framework
Source: Meta-integral (2020), Rashila & Sity (2023)

The impact of the skill-based training programs in this study is evaluated by adopting and adapting the MetaIntegral framework. This framework is a multilayer framework that consists of four dimensions of impact - deep, clear, high and wide. Deep impact refers to the extent of change in humanistic components. This can be observed in the change of the cognitive, behavioural and emotional state of the stakeholders. Examples of impact in this category would be knowledge upgrade, motivational impact and change of behaviour. Deep impact is measured by the improvement in three capitals: knowledge, spiritual and psychological. In the context of this research, evaluators rate the clear impact by identifying at least one element of motivation and perspective shift among the beneficiaries. Secondly, clear impact refers to the skills obtained by the beneficiaries. Instances can include the improvisation of drawing and baking skills. In the context of this research, evaluators rate the clear impact by identifying at least one new skill attained by the beneficiaries. For example, marketing skills for entrepreneurs. Thirdly, the high impact refers to an upgrade of the practice system. For example, the management system of baking supplies. This impact can be measured by looking into improvements in the manufacturer and financial systems. In the context of this research, evaluators rate the high impact by identifying at least one new replicable system that is transferred to the beneficiaries as an outcome of the project. For example, a new accounting system for entrepreneurs. Finally, wide impact refers to the improvement in engagement and collaboration with beneficiaries. This impact can be measured by looking into social and cultural engagement. In the context of this research, evaluators rate the wide impact by identifying new collaboration that is initiated between the beneficiaries and at least one new stakeholder. For example, a new collaboration between entrepreneurs and a marketing agency.

3.   Literature Review

In this study, the aim is to address some of the key issues of evaluating and demonstrating research benefits. Based on an investigation of assessment frameworks from several fields, we propose a comprehensive research impact evaluation category and methodological framework.

Globalization and technical breakthroughs need the pursuit of economic knowledge by countries to ensure their economic survival. One method to achieve this is to actively promote and supply lifelong learning. Malaysia is one of those countries that has been aggressive in this regard. Lifelong learning must be implemented as a New National Agenda to achieve the nation's human capital development to realize Vision 2020. Students participate in the environment of the learning community to develop their human capital. Learning communities put a constructivist approach to knowledge (Cross, 1998, as cited in Yahya, Nor Azlina, Siti Hajar, Ahmad Nabil, Noorminshah, Marzilah, 2017) into effect, in which information is socially constructed rather than simply "discovered." Tinto and Goodsell (1993) as cited in Yahya, Nor Azlina, Siti Hajar, Ahmad Nabil, Noorminshah, Marzilah, (2017) discovered that first-year students at a large public research university who participated in Freshmen Interest Groups (FIGs) comprised of related courses performed better

and were more likely to continue than peers who did not engage in a FIG. As a result, pupils actively develop and assimilate information. As a result, students actively create and assimilate knowledge and students actively develop and digest knowledge in a reciprocal process (Bruffee, 1995; Schon, 1995, as cited in Yahya, Nor Azlina, Siti Hajar, Ahmad Nabil, Noorminshah, Marzilah, 2017). Lifelong Learning has the potential to significantly improve our education and training systems and generate exceptional graduates.

Meanwhile, Puteh et. al (2012) indicate that young skilled talents in Malaysia tend to migrate due to better career opportunities that are available in other countries. To minimize this occurrence by having a sustainable career advancement for the skill-based talents we developed through our initiatives. Next, there is an effective tacit knowledge transfer in the form of skills towards the beneficiaries. As highlighted by Puteh (2018), tacit knowledge opens the window for job opportunities. Salleh et al (2016) also argued that trainees from this program are prepared to be more agile and highly adaptable people. This is especially beneficial for the underprivileged community that was left out of formal education. Thus, as found in this research, skills and knowledge transfer should be fostered. Furthermore, these communities should also be equipped with entrepreneurship skills so that they can venture the opportunity to produce greater income.

Now, the importance of skill-based training for the community has also been acknowledged worldwide and Malaysia is keeping up with the trend. From entrepreneurship to technical, the skills have demonstrated citizens' socioeconomic status and overall well-being, resulting in vigorous initiatives towards improving the accessibility to skill-based training by fostering collaboration between government, private agencies and non-profit organizations. This is especially true when it comes to marginalized and underprivileged counterparts of the community such as juveniles, rural citizens and single mothers. An effective evaluation study has been conducted regarding skills and vocational training for juvenile students in Kuala Lumpur and Terengganu (Hassan & Minggo, 2022). The in-depth interview conducted with participants from the two rehabilitation centres cultivated three major takeaways: the increase in motivation to complete rehabilitation programs, optimism for life after rehabilitation and the development of a post-rehabilitation life plan. Researchers suggest that those outcomes increase the likelihood for the participants to secure a job after rehabilitation and decrease the risks for recidivism. Puteh et. al (2011), there is an alarming issue of dependency on foreign workers in the food service industry. Therefore, it is important to create more opportunities for Malaysians to be skilful in this service industry.

Another instance of training that benefits underprivileged communities is the entrepreneurship training joined by the head of households among indigenous women (Roddin et al., 2020). In this study, researchers explored the factors of success among indigenous women entrepreneurs. The initiating factors are mostly personal, such as their motivation to outgrow their poverty and deep interest in related lines of business. These personal factors are supported by developmental factors, mainly the facilities and programs provided by the government. This interview discovered that despite the difficulties and poverty, one of the main developmental factors is the availability of upskilling training for the underprivileged community who would have struggled to get proper employment. By joining entrepreneurship, they are able to catch up with the income gap they face due to the lack of formal education. Examples of upskilling training include entrepreneurship training and product development training such as handicraft courses.

Mohd Alif Jasni (2022) in his conceptual analysis highlights the need for upskilling training for the convicts among homeless women as these women are left out of the mainstream education and career opportunities, leaving them vulnerable to sexual harassment, abuse and other crimes. The current statistic displays an increase in the number of homeless women committing crimes and working together with male criminals in the act. Thus, being imprisoned shall be considered an opportunity for them to catch up with the training and education they never had accessed before. The researcher also highlights that the upskilling program conducted must be gender appropriate so that it helps the women to have higher chances of getting employed after imprisonment.

Acknowledging the lack of opportunities, one may have had during adolescence and early adulthood, the Ministry of Education Malaysia introduced the Lifelong Learning Programme (LLP) in community colleges (Abd. Samad et al, 2019). This program allows people regardless of age to reskill themselves in various areas and encourages them to not only depend on employment but also to venture into entrepreneurship opportunities. In this quantitative analysis, the team identifies the level of readiness of the participants to become an entrepreneur as well as the effect of age on the readiness state. Results yield a moderate level of readiness to join entrepreneurship, however, a positive note is expressed since the readiness among participants of the program is not affected by age factor. Readiness, in the context of the research, is measured according to four domains: entrepreneurship knowledge, interest, motivation and ability. While the total score implies a moderate readiness, it is important to note that the participants demonstrate high interest and motivation. The areas of improvement are moderate entrepreneurship ability and knowledge.

A systematic literature review conducted in a global context by Choudhary and Bansal (2022) yields the importance of skill training to close the disparities among different communities in developing countries. To be able to progress in the technical and vocational training that can provide best career opportunities, governments focused on the digital literacy training program (DLTG) for the marginalized community. The initiative is considered a crucial kickstart for the community empowerment, as most of the technical and vocational skills require a minimum of basic digital literacy. Digital literacy also provides the opportunity for entrepreneurs to expand their business and reach a larger segment of the market. While this initiative is seen as the game changer for the marginalized community, there is a concern about barriers

affecting its effectiveness. Among the barriers identified worldwide include the loopholes in evaluating and monitoring the community programs such as lack of evaluation indicators, poor mechanism to collect feedback, and lack of resources to properly evaluate the programs.

Thus, this paper attempts to enlighten the effectiveness of community-based training programs under the Sustainable Development Goal (SDG) initiatives, evaluated by utilizing the MetaIntegral framework. Furthermore, the key impacts of the program are also elaborated to allow further understanding on community-based training programs, specifically in Northern states of Malaysia.

4.   Findings and Discussions

A thematic analysis was conducted based upon the input given by the APPGM-SDG beneficiaries during the FGDs whereby keywords that thematically reflect the four (4) dimensions of impact analysis framework- psychology and knowledge, skills, network, and system were looked for as an in-depth indicator of the program's impact.

4.1   Psychology and Knowledge

The programs conducted were influential in bringing about psychological and knowledge impacts upon the beneficiaries. It was made apparent that psychologically the programs affected the beneficiaries through the perspectives of (i) motivation and (ii) respect and understanding. The knowledge domain was enhanced by (iii) interest generation and (iv) enlightenment in the beneficiaries.

Elements and expressions of motivation transpired in the beneficiaries as they indicated that they were moved to act according to their needs upon completion of the program. This is highly apparent in the FGDs for the business mentoring program in Batu Kawan, the beneficiaries indicated that the project has motivated them to understand the Big Why. Similar reactions were given by beneficiaries from Empowering Youth, Sik whereby they highlighted that the project has motivated them to be more empathic and have high awareness. For Community Farming, Batu Kawan found that the project has motivated the beneficiaries to understand and help each other and Smart Sustainable Mixed Farming, Permatang Pauh made the idea clear when the beneficiaries voiced that this project has motivated the beneficiaries to combat their stereotypes. Hence, based on the feedback, it is acknowledged that the APPGM-SDG programs have had motivational impacts that could be a catalyst for change to occur in the society involved.

In terms of respect and understanding, in the Smart Sustainable Mixed Farming, Permatang Pauh, it was noticeable that the project has motivated the beneficiaries to appreciate, respect and protect the senior citizens. Whilst in Youth Leadership, Batu Kawan, it was apparent that the beneficiaries had realized that to serve the communities they need to act by first understanding their potential, worth and worth. The program was founded to allow beneficiaries to understand the purpose of dialogue between Kampung Tai Lee and the crucial role they should play in society. In the context of the environment, beneficiaries involved in Organic Cultivation Training, Sik have significantly stated that they received an opportunity to understand the importance of organic farming and environmental sustainability. They believed that Malaysia needed to manage soil better. They also understand why water management is very important in agriculture. Interestingly, the programs could potentially generate a deeper understanding in the beneficiaries of the need to change as highlighted by a beneficiary in the Consensus of Informal Settlers program, Kubang Pasu stated that he is not happy with no action made by the relevant parties. He expressed disappointment related to the settlers' behaviour that refused to give cooperate. Thus, it is apparent that the APPGM-SDG programs conducted have brought forward possible societal change through individual and communal respect and understanding.

These programs have generated interest among beneficiaries in FDGs from five (5) programs. All indicated that the APPGM-SDG programs they attended have sparked and strengthened their interest and love towards their businesses. While for the beneficiaries from Organic Cultivation Training, Sik realized (that) it is good to start business on organic farming vegetables and inspired to start a new life with income through agriculture. Based on this feedback, it could be determined that the APPGM-SDG programs could be an essential tool for catalysing and directing besides exposing the beneficiaries towards the aims of the SDG. Finally, the projects enlightened and gave opportunities to beneficiaries of new knowledge and to understand 'the big why'. In the Business Mentoring Program, Batu Kawan, it was informed that they gained knowledge that they never thought of learning. While in the Napier Grass Planting Project in Sik, the beneficiaries highlighted their awareness towards the benefits of Napier grass has increased. On a broader scale, in Tiny Steps program Ipoh Barat, the beneficiaries gained awareness on issues related to climate change, community development and social entrepreneurship, while in the Organic Cultivation Training, Sik, beneficiaries were informed that they experienced an increase of knowledge and awareness on SDG. Significantly, the feedback from the beneficiaries has highlighted the potential of the APPGM-SDG programs as a source of knowledge for society delivered through an informal education approach.

4.2   Skills

Analysis on the feedback from the beneficiaries confirmed the success of skills transfer and enhancement during the APPGM-SDG programs as almost all FGDs mentioned of its occurrence. Interestingly, it transpired that the skills transferred are of a variety and highly useful to the beneficiaries. As highlighted by Puteh (2018) sustainability of a

technical and vocational education and training (TVET) program relies on the tacit knowledge obtained by the beneficiaries. The skills are (i) hard skills, (ii) business and management skills, (iii) soft and academic skills, (iv)IT and media skills and (v) green skills. At the micro level, the programs were found to be useful in the enhancement of individual's hands-on hard skills/living skills in the beneficiaries. In PP01 (Young Urban Farmer, Permatang Pauh) and PP03 (Agro-Food Waste Smart Composting, Permatang Pauh) beneficiaries admitted that they were able to gain skills in sustainable and urban smart farming techniques. B03 (Sewing Skills Training, Baling) had evidently indicated that the beneficiaries are able to apply all sewing techniques knowledge that they learnt and PP04 (Economic Activities of Permatang Pauh Fishermen) beneficiaries are skilful and able to repair boat engines and become verified helmsmen. In BK02 (Community Farming in Taman Murai Jaya, Batu Kawan), beneficiaries informed that they gained skills on how to prepare and build up a wood fence, in S01 (Napier Grass Planting Project, Sik), beneficiaries gained skills on planting Napier grass, while in IB02, Urban Farming, Ipoh Barat beneficiaries enhanced themselves in skills that are useful for their organic planting.

Business and management skills enhancement surfaced in four (4) solution projects. It has equipped the beneficiaries with skills relevant towards the conduct of business and managing projects. In B02 (Fertigation Vegetable Growing and Marketing, Baling), the beneficiaries gained skills in financial management and developed their skill in *managing business cash flow efficiently.* While in S01 (Napier Grass Planting Project, Sik), the beneficiaries were equipped with management skills such as i) Understanding how to manage the abandoned land for the purpose of agriculture ii) The process of obtaining and getting permission from the landlord for agriculture projects. Besides that, the beneficiaries also developed their skills in marketing and customer service as pointed out in FDGs BK01 (Business Mentoring Batu Kawan), KP01 (Women Entrepreneur Program, Kubang Pasu) and B01 (Empowering Women In Digital Marketing & Finance, Baling). Significantly, it is made apparent that the APPGM-SDG programs could be an essential tool in transferring skills to the beneficiaries.

Soft and academic skills were identified as skills transferred during the APPGM-SDG programs. It was highlighted in Empowering and Mentoring Youth for Academic Success in the District of Sik that the beneficiaries acquired a number of crucial skills such as study skills, soft skills and academic skills. In the Seminar on Managing and Empowering Senior Citizens, beneficiaries acquired several crucial skills that are required in managing senior citizens' facilities, the skills acquired are administrative skills law awareness and research skills. Whilst in the Youth Leadership and Character-Building Empowerment Programme beneficiaries admitted that, the solution providers of the APPGM-SDG programs have enhanced the beneficiaries' goal-setting and communication skills. In FGD with the beneficiaries, it was informed that the beneficiaries were very excited to explain the new skills that they have learnt such as (i) Learning Bahasa and (ii) learning of English and being confident. In line with the present needs and development of societal norms IT and media skills have become a necessity. It is not a surprise that the beneficiaries would report that for KP01 (Women Entrepreneur Program, Kubang Pasu) they gained skills in creating posters for advertisement and independent marketing via social media platforms creating materials needed for business by using Canva such as stickers and name cards to start a business using Shopee. In KP02 (Drug Prevention / Treatment in Kubang Pasu), the beneficiaries were very excited to explain the new skills that they have learnt … positive use of new media - WhatsApp, Google form, Tik Tok and in P01(Community Business, Pendang), beneficiaries informed that they developed skills to developing website and share link website to others in community. Essentially, B01 (Empowering Women In Digital Marketing & Finance, Baling), BK01 (Business Mentoring, Batu Kawan) and KP01 (Women Entrepreneur Program, Kubang Pasu) all gave similar feedback informing that they too developed skills in using IT based software to produce marketing materials and skills to utilize social media positively.

Appropriate to the SDG, analysis done on the FGDs has indicated that beneficiaries were able to gain and enhance 'green skills' relevant and contributing towards sustainability. Generally, the skills are relevant to sustainable agriculture-based activities as highlighted in PPO1 (Young Urban Farmer, Permatang Pauh) as the beneficiaries highlighted that they gained skills to actively work towards adopting sustainable smart farming techniques namely soil management and fertigation. Similarly, in the Smart Sustainable Polyculture program, beneficiaries highlighted that they acquired a number of crucial skills that are required for urban farming. They learned the aquaponic method. For PP03 (Agro-Food Waste Smart Composting, Permatang Pauh), the beneficiaries developed their skills on sustainable practices in farming and the gained skills on, designing and setting up composting machines. While in S02 (Organic cultivation training, Sik) beneficiaries developed the skills on soil categorization, creating compost soils, water management, creating compost fertilizer, organic paddy plantation, soil preparation for vegetable farming, and organic methods to control insects. In FGD with IB01 (Tiny Steps of Environmental Changemaker, Ipoh Barat) the beneficiaries reported that they acquired new skills related to how to be an environmental change maker such as group project planning, brainstorming and presentation skills, community mapping activity to identify environmental solutions i.e., oil recycling, rubbish and food waste problems, recycle and generate new product.

4.3   Network

It is also uncovered that the APPGM-SDG programs are also platforms that allow social networking activities to occur. The FDGs indicated that functionally the networking opportunities would allow beneficiaries to (i) share knowledge and assist one another, (ii)connect with authorities and agencies, (iii) extend mentoring support and (iv) prospect for future

projects. The programs have enabled the beneficiaries to share knowledge and assist one another. In the FGDs (BK01, Business Mentoring, Batu Kawan), KP01 (Women Entrepreneur Program, Kubang Pasu), B01 (Empowering Women in Digital Marketing & Finance, Baling) and P01 (Community Business, Pendang) it was highlighted that the beneficiaries were grateful to be selected as a part of the young women entrepreneur network and sessions for them to share their challenges. After completing their training sessions, they still managed to contact the trainers and each other to further discuss how to improve their business development. While in BK02 (Community Farming in Taman Murai Jaya, Batu Kawan) the beneficiaries reported that the project has empowered residents to work together and help each other to solve their problems.

Beneficiaries in KP02 (Drug Prevention / Treatment in Kubang Pasu) informed that the program allowed them to connect with authorities and agencies as they were able to build networks with other Agencies/Departments, other NGOs, APPGM, Community Leaders, universities and many others. Similarly, S1 (Napier Grass Planting Project, Sik), beneficiaries got to build networks with other Agencies/Departments, other NGOs, Community Leaders, and others. Beneficiaries from FGD IB01 (Tiny Steps of Environmental Changemaker, Ipoh Barat), informed that to be the environmental changemaker, the young leaders also need to be connected to the community. Tend to connect all schools in Ipoh Barat to use waste reduction guidelines. For B03 (Sewing Skills Training, Baling) the beneficiaries highlighted that this project provides a network with related organizations. Participants managed to build a new network and relationship through the APPGM - SDG project.

The programs allowed the possibilities of extended mentoring to occur beyond the programs. The beneficiaries of Smart Sustainable Mixed/Polyculture informed that they would take Think City as a mentor organization as well as a potential collaborative partner for the next programmes. Think City can be an excellent guide for urban farming to enhance the production quality and revenue for the farmers. While for PP03 (Agro-Food Waste Smart Composting, Permatang Pauh), the beneficiaries informed that the participants have access to Urbanist's GreenEdu Center for them to continuously self-update and increase their knowledge skills. For S02 (Organic cultivation training, Sik), the beneficiaries informed that they received opportunities to learn new knowledge from professional trainers.

4.4 System

As the FGD went further investigating the impact of the APPGM-SDG programs, it transpired that they were able to allow systemic enhancements in the beneficiaries' conduct of their activities. It surfaced that system improvements were enabled in the areas of (i) marketing, (ii)finance, (iii) service delivery and (iv) sustainable business environment.

In terms of marketing system, for the beneficiaries in BK01 (Business Mentoring, Batu Kawan), B01 (Empowering Women In Digital Marketing & Finance, Baling), B02 (Fertigation Vegetable Growing and Marketing, Baling) and P01 (Community Business, Pendang) the programs has enabled them to set in place, (1) Marketing materials and platform; (2) Marketing support group; (3) Sharing knowledge platform on new knowledge related to business. Concurrently, the programs conducted have been impactful in ensuring that the finances of the beneficiaries' activities are done systematically by putting in place a financial management system. From the FGDs, B01 (Empowering Women in Digital Marketing & Finance, Baling), and B02 (Fertigation Vegetable Growing and Marketing, Baling), it was exposed that the programs have allowed the placement of systematic financial management. Whilst from the FGDs Smart Sustainable Mixed/Polyculture and Youth Leadership and Character-Building Empowerment Programmes, the beneficiaries are able to understand project management systems and procedures such as budgeting, planning and execution.

From the FGDs conducted, it was also revealed that the beneficiaries were also exposed to service delivery systems through the introduction of systematic methods of delivering their services. In Empowering and Mentoring Youth for Academic Success, Sik, beneficiaries are informed that they are able to understand training systems and module development. They understand the procedure of conducting online learning, challenges, and requirements. For B03, Sewing Skills Training, Baling and PP04, Economic Activities of Permatang Pauh Fishermen, it is noted that this project provides new guidelines/SOP/ TOR and the participants were given proper guidelines on how to create a new system such as how to use a sewing machine and sew according to the time set by them. In addition, by following the module given, they managed to get quick and accurate results.". In addition, the beneficiaries of PP04, Economic Activities of Permatang Pauh Fishermen also revealed that the system could be applied in their daily works which are boat repair courses and helmsman courses."

It was also revealed that the programs exposed the beneficiaries to develop a sustainable business environment by developing a business-friendly ecosystem. S01(Napier Grass Planting Project, Sik) revealed that, beneficiaries can create and implement new mediums and techniques to ensure the project is a success such as the process of obtaining the land and the rotation of workers for the whole process of planting Napier grass. IB01(Tiny Steps of Environmental Changemaker, Ipoh Barat) revealed that the beneficiaries were exposed on how to systematically plan, mapping and implement a program. Other FGDs revealed that they were exposed to a more comprehensive system for their activities. FGD Smart Sustainable Mixed/Polyculture revealed that, "…beneficiaries can understand project management systems and procedures such as budgeting, planning and execution. They also learn the hydroponic-aquaponic farming system. While for the Management and Empowerment of Senior Citizens programme, the beneficiaries revealed that they are able to understand the management system of senior citizen hostel development. They also received recommendations of a documentation system for crowdfunding proposals from the experts. S02, Organic cultivation training, Sik informed that

the beneficiaries were able to create; (i) their own organic farming, whereby the demand and price of organic vegetables are increasing; (ii) Know how to manage soils, water, fertilizer and insects; (iii) their own business plan to market their organic product; and (iv) no chemical-based food resources.

5.   Recommendations and Conclusion

Evaluations based on main documents, beneficiary feedback from FGD sessions, and on-site observations conducted by APPGM-SDGs impact evaluators yielded benefits that could travel a long way ahead. This article indicates the majority of the APPGM-SDG programmes in the Northern area managed to empower the beneficiaries in terms of psychology and knowledge, skills, network and system. Most beneficiaries feel motivated and attained their understanding of the 'big why'. Secondly, the basic skills attained from these projects can be a kickstart for the beneficiaries to obtain income and outgrow poverty. The solution providers trained the beneficiaries with relevant skills and character-building. Some of these programs have the potential to enhance the chances to attain jobs and improve incomes. Some programmes even managed to empower the beneficiaries and lead the knowledge transfer. This is to allow sustainability in the knowledge transfer and provide greater opportunities for the skilled worker to become trainers. Thirdly, it is observed that most programmes managed to strengthen the networks and connect beneficiaries to agencies and relevant stakeholders. In terms of the project's implementation, evaluations based on main documents, beneficiary feedback from FGD sessions, and on-site observations conducted by APPGM-SDGs impact evaluators have also provided valuable insights for future improvement in solution projects. It is important to carefully select honest and competent solution providers among consultants, NGOs and universities. Based on the impact evaluation activities, solution providers from universities have demonstrated the most effective and systematic projects. Additionally, a well-defined SOP and criteria for beneficiary selection can help ensure efficient budget utilization and avoid biases. Extending the evaluation duration and incorporating SV and FGD sessions will lead to more comprehensive and fair assessments. Emphasizing SDG awareness among beneficiaries will foster a deeper understanding of project objectives. Refining the reporting format, encouraging face-to-face interactions, and considering online options will enhance project transparency and accessibility. Follow-up training and networking initiatives, such as an SDG Alumni network, can sustain the projects' impact and knowledge transfer. Lastly, rewarding top-performing solution providers with future budget allocations will motivate continued excellence in project organization and execution, contributing significantly to the realization of sustainable development goals.

Acknowledgement

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Assessing The Impacts of Community-Based Technical Education and Training Projects in Northern Malaysia

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Abstract

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Abstract

Leaving no one behind is the central transformative promise of the 2030 Agenda of Sustainable Development Goals (SDGs). In Malaysia, the formation of the All-Party Parliamentary Group Malaysia on the Sustainable Development Goals (APPGM-SDG) by the Malaysian Parliament has made it possible to localise this SDGs' transformative agenda. Therefore, this paper attempts to discuss the effectiveness of programs conducted by solution providers in the Northern region in managing and conducting projects, the impact of the projects on the beneficiaries, the alignment and mapping of the impact evaluations of the solution providers with the SDG goals and APPGM-SDG modules, and identification of issues and recommended solutions to the projects in the Northern region. Twenty-three (23) APPGM-SDGs projects were implemented from 2021 to 2022, consisting of various programs, mainly

entrepreneurship, environment, research and education. As a bipartisan initiative to localise SDG goals in Parliamentary constituencies in Malaysia, it is crucial to analyse the impact of its implementation. Hence, this study has conducted an impact evaluation analysis from October 2022 until January 2023 in seven (7) constituencies in Kedah, Penang and Perak. Using four (4) dimensions of impact analysis framework, which are psychology and knowledge, skills, network, and system of these projects on the beneficiaries to determine the effectiveness of each project. This study has collected data from document analysis, focus group discussion and site-visit to the twenty-three (23) projects in the Northern Region. The findings indicate the programmes were well-implemented and beneficiaries managed to learn new skills and strengthen their networks. © Universiti Tun Hussein Onn Malaysia Publisher's Office.

Author keywords

APPGM-SDG; impact evaluation; Kedah; northern; Parliament of Malaysia; Penang; Perak; Sustainable Development Goals (SDGs)

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