



Exploring The Suitability Between GIATMARA and SBEZ's Development Towards TVET Training

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Abstract: This study investigates and explore how community involvement and engagement through TVET at Special Boarder Economic Zone (SBEZ), Bukit Kayu Hitam through collaboration with one of the TVET educational providers namely GIATMARA. With the tertiary education and skill-based programmes, young community at SBEZ will have a better opportunity for employability and able to meet the demand from industry. This study employs a qualitative method with the information on the course offered by GIATMARA, the demand skills and from SBEZ development and the readiness of the community towards TVET skills around that area. The depth and breadth of the data collected through semi-structure interview with Northern Gateway, GIATMARA and SBEZ community. Building on the analysis, thematic analyses were then undertaken on the data from interviews. In particular, to ensure the successful of SBEZ, the surrounding community needs to be equipped with TVET skills especially related to logistic and supply chain industry. Further, there are nine are of services of logistic and supply chain that are expected to be fulfilled for upcoming demand in SBEZ. It is hope that all TVET institutions including GIATMARA have to ensure that their curriculums are in line with the needs of the industry.

Keywords: SBEZ, tertiary education, graduate employability, socioeconomic, TVET

1. Introduction

Technical Vocational Education and Training (TVET) is of comprehensive educational process involving general education, the study of technologies and related science including the acquisition of practical skills, attitudes, understanding, and knowledge relating to occupations in various sectors of economic and social life. Technical and Vocational Education and Training (TVET) is seen by many to be a combination of formal, informal and non-formal learning that provides young graduates with the required knowledge and skills for employment. The main aim of TVET is to prepare individuals for work either self-employment or employment and as one of the instruments for reducing poverty (Sadekin, Ahamad, & Chowdhury, 2020; Tripney, 2013). TVET programmes in Malaysia are currently being

offered at several educational institutions in collaboration with various agencies including Majlis Amanah Rakyat (MARA), the Rubber Industry Development Authority and the Department of Orang Asli Development.

This research aims to collaborate with one of the TVET educational providers which is GIATMARA Malaysia with the hope that it will enable us to reach out to students from rural areas and those who are interested in pursuing their tertiary education in skill-based programmes. With this skill, the young community at SBEZ including KSTP and KPSBEZ will have proper planning and opportunity to explore skill-based training and fully provide them with the expertise in TVET for job seeking when SBEZ develop in the future. This study embarks on the following objective which is to explore how empowering the community via Technical and Vocational Education and Training (TVET) at Special Border Economic Zone Bukit Kayu Hitam. The paper tried to answer the research questions of to what extent TVET can empower the young community at Special Border Economic Zone Bukit Kayu Hitam.

The 4,395-acre Kota Perdana development being developed by Northern Gateway is one of the components in the State Government's larger agenda on development in the Bukit Kayu Hitam area and has the potential to attract new investment and catalyse the momentum of the economy. SBEZ is a government effort to strengthen trade ties with Thailand through the development of a logistic hub. According to YB Tuan Lim Guan Eng's speech on the 2020 budget, which he delivered in his capacity as finance minister, the government will allocate funds and build crucial infrastructure while the private sector will invest in companies that will stimulate domestic investment and create more jobs for the community.

Based on the Department of Statistics, Malaysia report (2019) indicates Bukit Kayu Hitam is expected to catalyse growth border area and will create 4,460 job opportunities. Thus, SBEZ development offers job opportunities but there has no study been conducted and available data to indicate job skills required and job types matched to available job opportunities in SBEZ. Therefore, this study is significant as it probed into the limitation study, and the result of the research assisted the local authorities and agencies such as GIATMARA in providing appropriate training to Kubang Pasu's youth.

Regarding TVET, there were only approximately 6.6 million TVET graduates in Malaysia in 2015, and that number is projected to rise to almost 8 million in about 30 years, or 7.98 million, by the year 2030 (Ismail et al., 2021). While the rate for public and private institutions stands at roughly 80% and 72%, respectively, the employability of TVET graduates could reach as high as 96%. The current shortage of Technical and Vocational Education and Training (TVET) graduates in Malaysia for various industries has become a notable concern (Ismail et al., 2021). This shortage is primarily attributed to a misalignment between TVET program curricula and the evolving needs of industries, leading to graduates lacking the skills demanded by employers. Additionally, several academic studies have highlighted the existence of untapped talents required by the labour market (Ghani, Rappa, & Gunardi, 2018; Iradah et al., 2019; Rodzalan, 2018; Salleh et al., 2020; Turiman, Abdullah & Noor, 2018; Zahari et al., 2018). In response to this challenge, the present study aims to investigate the demand for skilled labour in the SBEZ Bukit Kayu Hitam development project. This development initiative necessitates a workforce with appropriate skills and qualifications. Hence, this research addresses this gap by assessing the specific industry requirements within the SBEZ Bukit Kayu Hitam area and aligning them with the training programs offered by GIATMARA. The overarching goal is to enhance the Technical and Vocational Education and Training (TVET) opportunities for the youth residing in Kubang Pasu. The study also intends to examine the socio-demographic and socio-economic characteristics of the community within the SBEZ region. Additionally, it seeks to design a TVET training module that serves as a knowledge transfer mechanism from GIATMARA and UUM to empower the local youth in the SBEZ vicinity. Essentially, this research aims to identify the most relevant skills and training programs that can contribute to the socio-economic empowerment of the community surrounding SBEZ.

2. Literature Review

2.1 Development of Special Border Economic Zone (SBEZ)

The history of the development of an SBEZ at Bukit Kayu Hitam is rooted in the strategic location of this border crossing point between Malaysia and Thailand. The development of an SBEZ often stems from bilateral agreements between neighbouring countries. These agreements outline the intention to create a designated economic zone that promotes trade, investment, and economic activities. These agreements may also address regulatory frameworks, incentives, and cooperation mechanisms. The establishment of an SBEZ aims to capitalize on this geographical advantage to promote cross-border trade, economic cooperation, and regional development. Bukit Kayu Hitam is a strategic location situated at the Malaysia-Thailand border, serving as a vital trade and transportation link between the two countries. Its proximity to major urban centers and ports makes it an ideal site for an SBEZ (Najimudin, Md Dahlan, and Md. Nor 2020; Salleh and Ahmad 2022). An SBEZ at Bukit Kayu Hitam could greatly facilitate cross-border trade and economic activities between Malaysia and Thailand. Explore the potential for the efficient movement of goods, services, and people across the border and the impact on bilateral trade relations. The establishment of an SBEZ often aims to diversify the economic activities in the region. This includes attracting investments from various sectors, such as manufacturing, agriculture, logistics, and tourism. The zone provides opportunities for local and foreign businesses to set up operations and contribute to the economic growth of the area. The development of an SBEZ has the potential to support regional

socioeconomic growth in the long run. This can involve boosting local communities' quality of life as well as creating jobs developing skills, as well as enhancing infrastructure and trade volumes.

This is a brand-new development that spans roughly 11,000 acres of land located near the border area of Kedah and Sadao, Thailand. It includes the Kedah Science & Technology Park (KSTP) and Kota Perdana SBEZ (KPSBEZ) (Kassim, Hussain, and Abdul Wahab 2023). The Global Research Centre (GRC) and Modern Industrial Park are the centrepiece of KSTP. This advancement serves as one of Kedah's economic drivers through applied research and development. KSTP is anticipated to boost local employment by 23,424 and contribute roughly RM72.7 billion to Malaysia's GDP (Salleh and Ahmad 2022). With a strong business climate and an emphasis on the development of sustainable and effective logistic chains, clusters and modes of transportation, KPSBEZ is intended to be the region's safest, most effective and sustainable integrated logistics services hub (Syamil & Bassah, 2022) (see Figure 1). The features of KPSBEZ include the services & logistics sector, manufacturing sector, commercial zone, incentive package, and ecosystem. These features could create a huge potential for job creation, especially in terms of technical and vocational education and training. As this new development mega project is expected to create a huge number of new jobs for the locals, it is needed to equip the locals, especially the young community with relevant skills and high-demand job technical skills and have a clear career path in the future along with the development of SBEZ.



Fig. 1 - Bukit Kayu Hitam, Kedah special border economic zone

Source: Northern Corridor Economic Regional (n.a)

2.2 Technical and Vocational Education and Training (TVET)

Technical and Vocational Education and Training (TVET) encompasses a wide range of programs that offer specialized education and training in various technical, skilled, and vocational fields. It includes formal education, apprenticeships, on-the-job training, and other forms of learning that lead to the development of practical skills and competencies (Owais et al. 2020). The primary objective of TVET is to provide individuals with the skills and knowledge needed to enter the workforce and contribute effectively to their chosen industries. It focuses on practical skills that are directly applicable to specific occupations, promoting employability and enhancing career prospects. TVET programs offer a curriculum that combines theoretical understanding with real-world practical application. Students are instructed in technical proficiency, problem-solving strategies, critical thinking, and gaining insight into specific industries. The training is tailored to address the requirements of numerous trades, industries, and professions (Yaakob et al., 2020). The intention behind this initiative is to equip students to become proficient and partially skilled workers, thereby ensuring a sufficient local labour force for the industry (Mohd Sauffie, 2015). Furthermore, TVET is centred around hands-on experiences and encompasses a curriculum that places a strong emphasis on acquiring skills relevant for employment. Consequently, this form of training is well-suited to cultivate a skilled and enterprising workforce, essential for generating economic prosperity and lifting communities out of poverty (Nasir, 2012).

TVET encompasses a broad spectrum of fields, ranging from engineering, healthcare, and agriculture to information technology, construction, hospitality, automotive, and manufacturing. This diversity of specializations allows individuals to select programs that align with their interests and career aspirations. The delivery of TVET programs is versatile and can occur through various channels, including formal institutions like technical schools and community colleges, apprenticeship initiatives, vocational training centres, and online platforms (Shi and Bangpan 2022). This adaptable approach accommodates the diverse learning needs of students. Notably, TVET programs are developed collaboratively with industries and employers to ensure graduates possess the skills demanded by the job market. Partnerships with industries, advisory boards, and input from professionals collectively contribute to the currency and relevance of the curriculum.

2.3 TVET in Malaysia

Technical and Vocational Education and Training (TVET) holds significant importance in Malaysia as it plays a crucial role in addressing the country's economic needs, reducing unemployment, and fostering a skilled workforce. The Malaysian government recognizes TVET as a vital component of the education system. Various policies and initiatives

have been introduced to enhance the quality, relevance, and accessibility of TVET programs. The Ministry of Human Resources (MoHR), the Ministry of Education (MoE), the Ministry of Youth and Sports (MoYS), the Ministry of Regional and Rural Development (MoRRD), the Ministry of Agriculture and Agro-Based Industry (MoA), the Ministry of Works (MoW), and the Ministry of Defence (MINDEF) are the seven ministries that offer TVET programmes (Abd Hamid et al. 2023). TVET institutions in Malaysia include public and private technical and vocational schools, polytechnics, community colleges, and institutes of higher learning. These institutions provide specialized training and education to prepare students for the workforce. These agencies collaborate to ensure the alignment of TVET programs with industry needs. Besides, the Dual Training System (DTS) is an integral part of TVET in Malaysia, allowing students to receive on-the-job training while pursuing their studies. This system fosters a seamless transition from education to employment. TVET in Malaysia offers a wide range of skills development programs that encompass various sectors such as engineering, hospitality, automotive, construction, healthcare, information technology, and more (Ridzuan and Binti Abd Rahman 2022; Shi and Bangpan 2022).

These programs cater to different levels of qualifications, from certificates to diplomas and advanced diplomas. TVET contributes significantly to Malaysia's economic development by producing a skilled workforce aligned with industry demands. It addresses skills gaps, reduces youth unemployment, and supports economic growth. Malaysia's TVET system is recognized internationally for its efforts to enhance skills development and vocational education. The country actively participates in international TVET forums and exchanges best practices with other nations. Technical and Vocational Education and Training (TVET) systems are diverse and multifaceted, varying from country to country based on their educational, economic, and social contexts. However, there are some common features and components that are typically found in TVET systems worldwide. In Malaysia, skill-based learning started in Lower Secondary, which is with exposure to Basic Vocational Education, followed by the Malaysian Vocational Certificate at the Upper Secondary level. Next, Malaysia Vocational Diploma, up to the tertiary education level ie diploma, advanced diploma (see Figure 2)

2.4 Employability Skills in TVET

TVET programs play a pivotal role in equipping individuals with the practical skills necessary for a diverse range of industries. While technical competence is a cornerstone of TVET, the integration of employability skills has gained increasing importance. These employability skills, encompassing various soft skills and competencies, are essential for TVET graduates to effectively navigate the modern job market. This comprehensive exploration delves into the significance of employability skills in the context of TVET, their integration into curricula, their impact on graduates, and the evolving challenges and opportunities they present (Nugraha, Kencanasari, Komari & Kasda, 2020). The integration of employability skills into TVET programs is imperative for producing well-rounded graduates who are not only technically proficient but also equipped with essential soft skills. TVET institutions are actively collaborating with industry partners to ensure that curricula align with the specific employability needs of various sectors.

Besides that, due to rapid technological advancement, increased globalisation, and fierce competition, every applicant and employee must possess strong employability skills (Nugraha, Kencanasari, Komari & Kasda, 2020). Employability entails the ability to recognise, acquire, adapt, and continuously improve the knowledge, abilities, and character traits that increase a student's or graduate's likelihood of locating and generating meaningful paid and unpaid work that benefits the individual, the labour force, the community, and the economy. Graduates benefit from acquiring employment skills. Employers are looking for graduates with the necessary technical capabilities as well as essential employability skills (Pitan, 2016). By incorporating employability skills into the educational process, graduates are anticipated to be prepared for employment by businesses. Educational institutions, which produce graduates, must react swiftly to any changes in the employability of graduates, as well as in the knowledge and skills that are required by the market.

TVET has taken on more significance recently to the organization's operations. TVET system plays a significant role in the economic environment of most nations particularly industrialised industrial nations in solving graduate employability challenges. Data from the Higher Education Department found that the graduate employability rate for 2018 was at 80.2% within six months of graduation, with 58.6% of graduates finding employment in entrepreneurship, 15.7% continuing their education, 1.3% undergoing training to improve their skills and 4.6% waiting for job placements (Graduate Tracer Study, 2019).

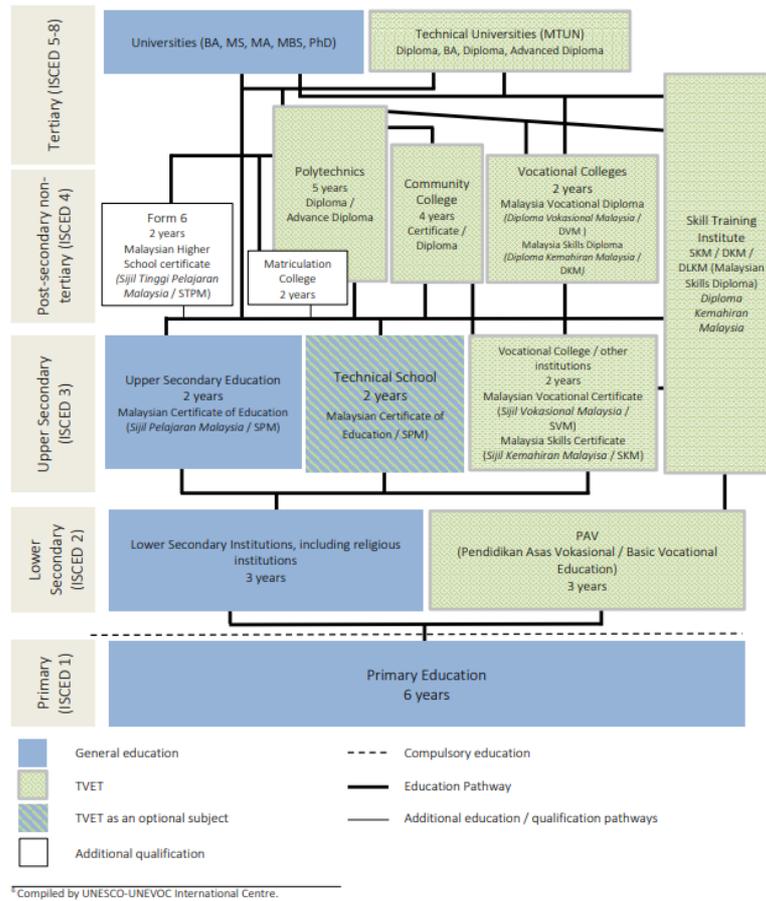


Fig. 2 - TVET system

Graduate employability is one of the top priorities, and the government, as well as other associated ministries including the Ministry of Education, Ministry of Human Resources, Economic Planning Unit, and Department of Skills Development, are extremely concerned about these issues (MQA, 2019). To ensure that graduates fulfil the demands of the job market, the ministries collaborate with higher education institutions, businesses, and other organisations. This is because, even though both public and private universities graduated roughly 29,0282 students in 2018 (Ministry of Education, 2018), with the number of graduates rising yearly the issue is the supply of this skilled labour does not match the demand for it (Ismail, Chik & Hemdi, 2021). The government has expressed concern about this matter since it could contribute to a significant unemployment problem in the nation if the rising number of graduates and the number of jobs created are not in line (Azmi, Hashim & Yusoff, 2018) and subsequently cause an imbalance between the supply and demand of labour (Institute of Labour Market Information and Analysis, ILMIA, 2018; Ministry of Finance, 2020)

There is a huge demand for a professional and skilled workforce to deal with the changes around the world since all new technological advancements are now focused on eliminating jobs and changing the need for skills (Holden, 2004). According to Salina Daud et al. (2012), TVET graduates have value-added traits in the areas of knowledge, skills, abilities, and personality (KSAP). It is also possible to successfully implement strategic plans and reforms for the future development of TVET skills in order to fulfil the demands of industry and thereby contribute to the growth of the country (Syamil & Bassah, 2022). This initiative aims to prepare students to become skilled and semi-skilled workers so that the local industry has enough labour (Mohd Sauffie, 2015). Moreover, TVET is focused on the world of practical and includes a curriculum that emphasises acquiring employable skills and this is why this training is well-positioned to train the skilled and entrepreneurial workforce that is needed to generate wealth and emerge from poverty (Nasir, 2012)

3. Methodology

This study uses qualitative methods to explore the potential of TVET in empowering communities in the SBEZ and to identify the most relevant skills and training programs that can contribute to the socio-economic empowerment of the community surrounding SBEZ. Semi-structured interviews were undertaken to obtain a more precise understanding to achieve the research objective. This study uses an exploratory approach to allow deeper insights into the potential of TVET in empowering the communities in the SBEZ area. Therefore, this study did not intend to test any specific

hypothesis, but to obtain a better understanding of these issues. A literature search and in-depth interviews with subject matter experts are the two main methods of performing exploratory research.

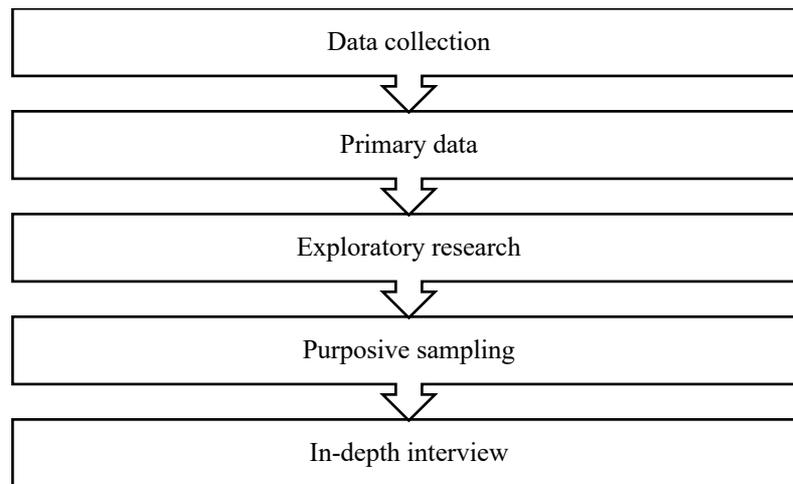


Fig. 3 - Primary data collection

The respondents who could provide in-depth information on the key concerns were chosen using a purposive sample method. By choosing respondents with a specific goal in mind, purposeful sampling increases the effectiveness and efficiency of acquiring the necessary information (Tongco, 2007). To gather comprehensive information about the most pertinent skills and training programmes that can help the community surrounding SBEZ achieve socio-economic empowerment, this study relied on a series of interviews with officers from Northern Gateway and Giat Mara Malaysia. To identify and comprehend how TVET could empower the SBEZ community, in-depth semi-structured interviews were used as a way.

The interviews for this research were arranged after contacting the respondents through e-mails and phone calls: E-mail addresses were acquired from websites. The emails included an attachment with a covering letter explaining the objectives of the study, a consent letter, and an information sheet about the research. Each respondent was chosen due to their direct experience and first-hand knowledge in engaging the development of SBEZ and offering a TVET programme. A face-to-face interview session with each respondent was conducted. The interviewer conducted the interview sessions informally to try to get as much information from each participant while also making them feel relaxed and at ease. The interview session was conducted in Malay translated into English have been recorded using a digital audio recorder. For data analysis, all the data collected from interview transcription were analysed using Atlas ti software and provided several important keywords or coding using the coding process.

3.1 Data Analysis

Using theme analysis, this study uses a deductive approach to investigate problems brought about by the deductive approach. Thematic analysis was done to summarize the data, identify constructs and investigate relationships based on the transcripts. Relevant themes served as a framework for organising and directing the respondents' data. The process of selecting, streamlining, and converting raw data into intelligible data was done through data reduction. This procedure was crucial in managing the volume of data while simultaneously keeping critical points. To make the data easier to interpret, the coding method for this study includes choosing coding units such as words, topics, and phrases. The code units are chosen to represent certain main ideas and subjects in each document.

The transcript was first read during the coding process, and pertinent passages were coded concurrently. Coded passages can be downloaded and inspected frequently using the NVivo software to check for errors or to validate data. Using a data reduction technique to create a theoretical model from the raw data, all the themes in this study were converted into codes in a codebook for later analysis. According to Clarke and Braun (2017), theme analysis is particularly effective in describing the challenges associated with comprehending the meanings contained within textual data sets.

After the data reduction process was finished, the data were presented by structuring the reduced information to make coming to a decision easier. Linkages and related discoveries for this research are displayed in the data. The last phase involved drawing a conclusion from the data collected and presenting it by selecting themes and patterns in the data. The acquired data had to be double and triple-checked to make sure they were accurate and realistic as part of the qualitative data verification procedure.

4. Result and Discussion

4.3 Northern Corridor Economic Region (NCER)

The Northern Corridor Economic Region (NCER) to address regional disparities and foster equitable economic growth throughout the nation, the government created the Northern Corridor Economic Region (NCER) in 2007 as one of five economic zones that would be in place for the duration of the Ninth Malaysia Plan. In NCER, Kedah has the highest proportion of low-income (B40) households about 59.1% in 2016, which is 19.1% higher than the national average. With a mean household income of RM5,928 in 2016, Kedah had the lowest level in the area. Indicating a perceived absence of well-paying occupations for the bulk of the State's people, comparable to Perlis, relative poverty is high. Nearly 80% of Kedah's population is Bumiputera, according to demographic data. This demographic and income mix means that Kedah should receive a larger share of funding for programmes that empower the Bumiputera community.

With a GDP per capita of RM21,410, Kedah is the NCER state with the worst economic performance. Despite the manufacturing sector contributing 29 per cent of GDP, overall worker productivity is 46 per cent below the national average, which is largely to blame. This shows that most of the employment is in low-paying jobs, especially in the agriculture and service sectors, which is related to the smaller number of workers needed in the industrial sector.

Overall, the employment rate in Kedah is higher than that in Perlis and Perak, but it is still lower than that in Pulau Pinang. Kedah's unemployment rate is 2.9 per cent, which is somewhat lower than the national average of 3.3 per cent, while the rate for graduates is 3.3 per cent, which is nearly the same as the 2.6 per cent seen in Pulau Pinang. Women's labour force participation in Kedah is 5.1% lower than the national average, demonstrating the need for human capital development programmes geared specifically toward this demographic. The 11.2 per cent youth unemployment rate highlights a lack of job possibilities generally as well as a mismatch or gap in skill level compared to what is required by the industry.

Over the years 2016 to 2018, Kedah's industrial industry attracted investments of RM1.5 to RM2.2 billion annually. While Kedah has the potential to draw even more investment and benefit from the spill over from Pulau Pinang, which is having difficulties finding land to develop on, even though this investment figure is higher than that of Perak and Perlis. A substantial percentage of the land (76%) in Kedah is designated as Malay Reserve Land, which makes it challenging to draw investors due to its restrictions and bankability. This is an important concern. Initiatives will therefore be planned to deal with this problem and give investors a way to develop the land in Kedah.

4.4 Bukit Kayu Hitam Special Border Economic Zone (SBEZ)

Construction of a manufacturing park with FIZ status, a logistics centre, and mixed development will take place on 11,000 acres of land (residential & commercial). The only border town in Malaysia that is situated on the Asian Highway Network, which connects Singapore and Thailand through Asian Highway 2, is SBEZ, a new development that spans around 11,000 acres of land close to the borders of Kedah and Sadao, Thailand (AH2). The Kedah Science & Technology Park (KSTP) and Kota Perdana SBEZ are the two main developments that constitute SBEZ (KPSBEZ). This new development would act as a spark to boost the northern region's economic growth.

The Global Research Centre (GRC) and Modern Industrial Park are the two components that KSTP focuses on as being the economic engines for Kedah through applied research and development. The project is anticipated to increase local employment by 23,242 and boost Malaysia's GDP by about RM72.7 billion. Several catalytic initiatives have been identified, with the focus on Bukit Kayu Hitam as an SBEZ and KSTP as a component of the surrounding ecosystem, as an essential border gateway for the movement of people and products.

Another important focus area in the services industry is the connectivity and logistics subsector. To ensure that NCER will become a more effective regional actor, this subsector will concentrate on addressing rail bottlenecks as well as strengthening inter- and intraregional connectivity. This subsector's major initiatives include the Kedah Aeropolis, Penang International Airport and Penang Port Expansion, Kota Perdana Special Border Economic Zone, and Perlis Inland Port. By 2025, NCER's logistics and connectivity subsector is expected to draw a total of RM6.5 billion in investment, creating 4,232 new businesses and 16,104 jobs for people. Additionally, the region strives to attain clearance times of less than a day for clearance without physical inspection and within one day for clearance with physical inspection.

4.5 KPSBEZ - Northern Gateway Project

Northern Gateway Free Zone is a subsidiary of Northern Gateway Sdn Bhd, which is the principal operator of the SBEZ. The SBEZ is also a wholly owned entity of the Minister of Finance Incorporated. Major infrastructure development and construction of truck depots and internal clearance at the SBEZ ground logistics already started. To further improve the country's economic growth, Northern Gateway, with the help of the Kedah state government, must concentrate on finding new investment opportunities, particularly in the high-impact secondary economic sector formed at SBEZ. However, to ensure the success of SBEZ, the surrounding community needs to be empowered with TVET. Based on the interview that has been conducted, there are 9 areas of services that are expected for upcoming demand. These are the areas that need to be focused on:

Table 1 - Focus TVET training area at SBEZ Development

No	Area	Details
(i)	Container cargo handling	Container cargo handling services include the loading, unloading, handling, stacking, unstacking, storing or maintaining (including repairing) of containers.
(ii)	Port services	Port services include the receiving, handling, unloading and even additional shipping of clients' products once they arrive at port and come off the ship
(iii)	Cargo consolidation	Cargo consolidation services normally bundles small shipments into a large container for delivery. It involves packaging, or bundling, multiple small shipments into one large shipment for distribution to the same end location. Instead of individual companies paying substantial shipping costs and dealing with slower shipping speeds, cargo consolidation (sometimes also called freight consolidation) puts items from multiple shippers into one shared shipping container.
(iv)	Warehousing (bonded & non-bonded)	Warehousing is the process of storing physical inventory for sale or distribution. Warehouses are used by all different types of businesses that need to temporarily store products in bulk before either shipping them to other locations or individually to end consumers
(v)	Open storage container yard	Open storage container yard services are the land that is used for the storage of products, goods or equipment.
(vi)	Temperature controlled container storage	Temperature controlled container storage service is a type of storage unit that is specially designed to maintain steady temperatures and humidity levels. Typically, the temperature will remain stagnant at between 55 degrees and 85 degrees Fahrenheit.
(vii)	Weighbridge service	Weighbridge service is used to determine the weight of goods bought and sold in quantities expressed in full loads. In that case, the information provided by the weighbridge is an essential element of the commercial transaction.
(viii)	Shipping arrangements	Shipping arrangements services include preparing shipping documents, arranging shipping space and insurance, and dealing with customs requirements.
(ix)	Customs clearance	Customs clearance is the act of taking goods through the customs authority to facilitate the movement of cargo into a country (import) and outside the country (export).

4.6 TVET at GIATMARA

GIATMARA was established to encourage the participation of the Bumiputera community in learning the various disciplines of art with aims to provide technical and vocational skills training to youths in rural areas and in town to enable them to acquire skills as preparation to become skilled workforce and technical entrepreneurs in meeting the needs of the industry and needs of economic development as well as entrepreneurship within local areas and in the country. GIATMARA is placed under MARA which is an agency under the Ministry of Rural Development (Kementerian Pembangunan Luar Bandar, KPLB). The vision of GIATMARA is to be the premier lifelong technical and vocational training centre and recognized at the national and international level while the mission is to provide quality technical and vocational training and meet the requirements of the country to create a skilled workforce and competitive entrepreneurs. The establishment of GIATMARA in January 1986 with the objective to produce skilled workers, creating entrepreneurs and poverty alleviation initiatives.

The courses offered in GIATMARA are closely related to the trade and industry aspects in the short term. At present, GIATMARA offers 69 types of courses under 12 types of clusters namely architectural, mechanical, transportation, manufacturing, electrical, computer and networking technology, electronic and mechatronic, fabric, culinary, hairdressing and cosmetology, printing, and hospitality. GIATMARA also offers a certificate to the Bumiputera community as per below:

- GIATMARA Professional Certificate
- GIATMARA Skills Certificate
- GIATMARA Modular Certificate
- GIATMARA Technology Certificate

- GIATMARA Attendance Certificate
- GIATMARA Heritage Skills Certificate
- GIATMARA Apprenticeship Certificate
- Energy Commission Certificate (PW1/PW2/PW4 & Electrical Chargeman A0/A1 Category)
- Malaysian Skills Certificate

There are certain entry requirements set by GIATMARA for those who are interested to enrol either the courses or certificate including Bumiputera, healthy, can read and has a keen interest (3M), aged from 15 years old and above with no maximum age limit, has an interest in the field applied and completed form 5 and aged 18 years and above is an additional requirement to sit for Energy Commission (ST) competence examination for Electrical Wiring & Electrical Chargeman courses. Financial assistance is provided for those who qualify.

4.7 Module Proposed

The demand for logistics and the supply chain industry has increased especially in vocational education. Quality learning programmes in logistic and supply chain needs to fill the gap existing in TVET institutions as it is a great opportunity for logistics vocational education to prepare students with the required skills that the logistics industry is looking for. Does GIATMARA offer logistic and supply chain management and if yes, what are the current numbers of GIATMARA offering TVET in logistic and supply chain management? If not, it is a huge opportunity to revise and relook again at this area to complete and support the TVET ecosystem. GIATMARA could be one of the training institutions to prepare graduates who are ready to work and have skills according to the needs and demands of the industry especially in the SBEZ area. Due to those reasons, the study would like to propose the following module to be included in one of the GIATMARA programmes.

Table 2 - Module proposed for logistic and supply chain

Module	Title
Module 1	Introduction to logistic and supply chain
Module 2	Introduction to Warehouse and Distribution Centre Management
Module 3	Principles of logistic and operation management
Module 4	Transportation and physical distribution
Module 5	Warehousing and inventory management
Module 6	Warehouse and Distribution Centre Management
Module 7	Logistic network & management
Module 8	Operations management
Module 9	Production, project planning and procurement
Module 10	Inventory management
Module 11	Supply chain design

5. Discussion and Conclusion

Kota Perdana's Special Economic Border Zone (SBEZ) will be developed. Thus, the 1,780-hectare real estate development project in Bukit Kayu Hitam, Kedah would transform the area's reputation as a "lethargic" border town between Malaysia and Thailand to become an important regional hub. The transformation is possible because its strategic location and good road accessibility (Salleh, & Ahmad, 2022). Development initiatives in the SBEZ are anticipated to boost local talent and vendor, create more job opportunities, and assist infrastructure development which contradict to the discussion by Zainuddin, et al. (2021), where they found that economic factor is not significantly related to the community's perception towards the development of SBEZ. Three primary sections of the site, including a more effective ground logistic hub, will be present. One of the SBEZ's major priorities is the logistics centre. The growth of this logistics hub will provide employment opportunities. But the real question is whether these employment prospects match the capabilities that the residents in Kubang Pasu or Bukit Kayu Hitam, in particular. Since there is no prior data that enables information on the types of career prospects in SBEZ and the skills that young people around Kubang Pasu currently possess, this study is in line with the questions that are raised. The researchers were able to provide details regarding the kinds of jobs and skills required by the industry when this study was completed. The community of Kubang Pasu was then polled to gather information about their current skill sets. For the local population, particularly the youth, to fill the employment opportunities supplied by the industries, this endeavour has bridged the gap and found common ground.

After the researchers have successfully determined that logistics and supply chain are the focus in SBEZ, some of the scope and skills of work in this industry are then detailed, along with up to nine service areas that include container cargo handling, port services, cargo consolidation, warehousing (bonded and non-bonded), open storage container yard, temperature controlled container storage, weighbridge service, shipping arrangements, and customs clearance. Based on these nine areas, the researchers have determined the skills and modules required to support these areas, reducing the

likelihood of human resource waste, and boosting industry productivity. The demand for logistics and the supply chain industry has increased especially in vocational education. Quality learning programmes in logistic and supply chain needs to fill the gap existing in TVET institutions as it is a great opportunity for logistics vocational education to prepare students with the required skills that the logistics industry is looking for. After having a discussion with Northern Gateway as one of the main investors and developers in the SBEZ project and GIATMARA as one of the key players in offering TVET training, this study found one significant issue which is Does GIATMARA offer logistic and supply chain management? Does GIATMARA offer logistic and supply chain management and if yes, what are the current numbers of GIATMARA offering TVET in logistic and supply chain management? If not, it is a huge opportunity to revise and relook again at this area to complete and support the TVET ecosystem. Thus, as one of the TVET institutions, GIATMARA should take proactive steps to promote and enhance its TVET programmes (Yusoff et al., 2020).

Basically, GIATMARA doesn't have any specific module or training on logistics or supply chain management. In addition, GIATMARA didn't have any future to offer this field of training as it seems a new area to be explored. However, GIATMARA has other courses that are significant to logistic or supply chain management such as in electrical technology and installation under cluster electrical, electronic industry under cluster electronic and mechatronic, refrigeration and air conditioning technology under cluster mechanical and technology automotive under cluster transportation. A professional workforce with abilities in line with industry requirements and more diverse problems of the times, which continue to shift and develop significantly, is needed in the sector of logistics. Logistics management is the area of supply chain management that organises, carries out, and oversees the efficient, effective forward and reverse flow and storage of products, services, and related information between the point of origin and the point of consumption to satisfy customer needs. Accordingly, the researcher has suggested creating a new module for the study of logistics and supply chains. This module would consist of eleven modules, starting with Introduction to Logistics and Supply Chain and ending with Supply Chain Design. This module can be improved by GIATMARA and has the potential to provide value to GIATMARA's role as a community training provider.

The problems and developments that the logistics business faces must be addressed by vocational education in a timely and effective manner. Vocational education must adapt its curriculum to the needs of the industry and provide graduates with the certification skills they need to succeed in the logistics sector. Graduates of vocational education in the logistics business need to be prepared with the hands-on competencies, soft skills, and other talents workers need. It is a fantastic chance for logistic vocational education to equip the young people in the community with the necessary skills that the logistics sector requires. This requires an upgraded curriculum, updated methods and tools for learning programs that correspond to the skills needed by the logistics industry. GIATMARA could be one of the training institutions to prepare a graduate who is ready to work and have skills according to the needs and demands of the industry especially in the SBEZ area.

There are several limitations to these studies. The sampling used in this study only focused on respondents living in the district of Kubang Pasu. Other districts in Kedah were not included in this study. Apart from that, the study period is too short for the researchers to extend the sampling to the other districts in Kedah. This study was required to be completed within six months. Moreover, this study only relied on one agency namely, GIATMARA to empower the community with TVET. It is expected that future research to include other districts in Kedah to be included as sampling units too. Besides that, the researchers should be given the opportunity to have a longer study period, perhaps 12 months. This is to ensure that the sampling unit can be extended to the other districts in Kedah. Thus, by including more districts in the study, probably will give a better picture of the socio-economic background that represents the population of Kedah. Apart from that, besides GIATMARA, the study may need to investigate a few alternative agencies that could provide TVET to empower the community at SBEZ.

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References

- Azmi, I. A. G., Hashim, R. C., & Yusoff, Y. M. (2018). The employability skills of Malaysian university students. *International Journal of Modern Trends in Social Sciences*, 1(3), 01– 14.
- Bews, N. F., & Rossouw, G. J. (2002). A role for business ethics in facilitating trustworthiness. *Journal of Business Ethics*, 39(4), 377–390. <https://doi.org/10.1023/A:1019700704414>
- Ghani, E. K., Rappa, R., & Gunardi, A. (2018). Employers' perceived accounting graduates' soft skills. *Academy of Accounting and Financial Studies Journal*, 22(5).
- Graduate Tracer Study. (2019). Department of Statistics Malaysia. Press Release. Retrieved from https://www.dosm.gov.my/v1/index.php/index.phppr=column/cthemByCat&cat=476&bul_id=cDjKZjM5b2hjdjJZMDlvNDlueU54Zz09&menu_id=Tm8zcnRjdVRNWWlpWjRlb mtladk1UT09

- Iradah, Z., Karim, A., & Maat, S. M. (2019). Employability skills model for engineering technology students. *Journal of Technical Education and Training*, 2, 79-87.
- Malaysian Qualifying Agency. (2019). Code of practice for TVET program accreditation. Retrieved at <https://www2.mqa.gov.my/qad/garispanduan/2019/Oct/COPTPA%20241019.pdf>
- Mohd Sauffie, N. F. (2015). Technical and Vocational Education Transformation in Malaysia: Shaping the Future Leaders. *Journal of Education and Practice*, 6(22), 85–89. www.iiste.org
- Ministry of Finance (2020, November). Employability for Malaysians. <http://www1.treasury.gov.my/index.php/ms/>
- Institute of Labour Market Information and Analysis, ILMIA. (2018). Jobs, Salaries and Vacancies 2017. Retrieved from https://www.ilmia.gov.my/ebook/research/ILMIA_ArtcFREP1_2019_NER2018.pdf
- Ismail, J. B., Chik, C. T., & Hemdi, M. A. (2021). TVET graduate employability: mismatching traits between supply and demand. *International Journal of Academic Research in Business and Social Sciences*, 11(13), 223-243.
- Ministry of Education (2018). Graduate Employability. <https://www.moe.gov.my/en/tvet>
- Nasir, S. B. (2012). Strategy to Revitalize Technical and Vocational Education and Training (TVET): Management Perspectives. *Global Journal of Management and Business Research*, 12(23), 1–14.
- Nugraha, H. D., Kencanasari, R. V., Komari, R. N., & Kasda, K. (2020). Employability Skills in Technical Vocational Education and Training (TVET). *INVOTEC*, 16(1), 1-10.
- Pitan, O. S. (2016). Towards Enhancing University Graduate Employability in Nigeria. *J. of Soc. Anthro.*, 7(1), 1–11.
- Rodzalan, M. M. S. (2018). A mixed-method analysis on students’ critical thinking and problem solving skill development in Malaysian public universities A mixed-method analysis on students’ critical thinking and problem solving skill development in Malaysian public universities. *Journal of Physics: Conference Series*, 012015(1049).
- Sadekin, M. N., Ahamad, K. M. U., & Chowdhury, N. F. H. (2020). Technical and Vocational Education and Training (TVET) in South Asia. In *Decent Work and Economic Growth* (pp. 1039-1050). Cham: Springer International Publishing.
- Salina Daud. (2012). Efficient human resource deployment technique in higher education: A standpoint from Malaysia. *African Journal of Business Management*, 6(25), 7533–7547. <https://doi.org/10.5897/ajbm11.558>
- Syamil, A., & Bassah, H. (2022). The issues and challenges of TVET in Malaysia: from the perspective of industry experts. *The Online Journal for Technical and Vocational Education and Training in Asia*, 1(18), 1–15.
- Salleh, N. M., Siti, S., Mat, S., Nur, S., Syed, N., & Ibrahim, I. H. (2020). Formulating a long-term employment strategy for construction workforce in Malaysia. 00053(2016).
- Tripney, J., Hombrados, J., Newman, M., Hovish, K., Brown, C., Steinka-Fry, K., & Wilkey, E. (2013). Technical and vocational education and training (TVET) interventions to improve the employability and employment of young people in low-and middle-income countries: A systematic review. *Campbell systematic reviews*, 9(1), 1-171.
- Turiman, S., Abdullah, N., & Noor, N. M. (2018). Spoken meta discourse in Malaysian ESL job interviews. *GEMA Online Journal of Language Studies*, 18(3), 135-150.
- Winberg, C., Bramhall, M., Greenfield, D., Johnson, P., Rowlett, P., Lewis, O., Waldock, J., & Wolff, K. (2020). Developing employability in engineering education: A systematic review of the literature. *European Journal of Engineering Education*, 45(2), 165–180. <https://doi.org/10.1080/03043797.2018.1534086>
- Zahari, A. R., Tamyez, P. F. M., Azizan, N. A., & Hashim, F. (2018). Student spin-off intentions in Malaysian higher educational institutions: Founders’ characteristics and university roles. *J. of Entrepreneurship Edu.*, 21(Special Issue), 1-15.